



MANAGEMENT EFFECTIVENESS EVALUATION (MEE) OF TIGER RESERVES IN INDIA



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Site Evaluation Reports 2014



भारतीय वन्यजीव संस्थान
Wildlife Institute of India

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प्रकाश जावडेकर
Prakash Javadekar



राज्य मंत्री (स्वतंत्र प्रभार)
पर्यावरण, वन एवं जलवायु परिवर्तन
भारत सरकार

MINISTER OF STATE (INDEPENDENT CHARGE)
ENVIRONMENT, FORESTS AND CLIMATE CHANGE
GOVERNMENT OF INDIA



Message

The Management Effectiveness Evaluation (MEE) process is a global framework to evaluate the performance of protected areas. I am very happy to note that India is among the select countries in the world that has institutionalized the MEE process for its network of protected areas. India has not only independently assessed the effectiveness of 28 tiger reserves in 2005-2006, but has taken this process forward, by extending this evaluation in 2010-11 to all 39 tiger reserves and in 2014 to all 43 tiger reserves. The outcomes of these assessments are encouraging and despite all odds, our park managers and front-line staff are putting up a valiant effort to conserve our natural heritage. There has been an overall improvement in the overall MEE score of all 43 tiger reserves from 65 percent in 2010-11 to 69 percent in 2014, for which I would like to compliment all concerned. I understand that better protection is required for the five tiger reserves, located in the 'Red Corridor'. This is a daunting task, and I urge all sections of society to cooperate with us and support our forest and field staff.

I urge the field managers of all tiger reserves to closely monitor the performance of the 31 'headline indicators' customized around the conservation needs of India, to ensure the long-term conservation of our magnificent tigers and the biological diversity that tiger reserves harbour.

I take this opportunity to compliment the National Tiger Conservation Authority (NTCA), Wildlife Institute of India (WII), Chief Wildlife Wardens of all Tiger Range States and above all the park managers and the front-line staff for their valuable contribution in securing the conservation of our national animal.


(Prakash Javadekar)

ACKNOWLEDGEMENTS

We would like to thank a large number of officers and managers for providing support for the evaluation of 43 Tiger Reserves across the country.

We are grateful to the officials and staff of the National Tiger Conservation Authority (NTCA), Ministry of Environment, Forest and Climate Change (MoEF&CC) for providing technical guidance and financial assistance to accomplish this exercise.

We would like to specially thank to Chief Wildlife Wardens of all 17 Tiger States and all the Field Directors and frontline staff of 43 Tiger Reserves for their valuable contribution in carrying forward the Management Effectiveness Evaluation (MEE) process.

We express our sincere appreciation for the professional support and untiring efforts of the Independent teams (Chairman's and members) constituted by the MoEF&CC for the five clusters for the evaluation of Tiger Reserves (2013 to 2014).

We are especially indebted to the faculty and staff of the Wildlife Institute of India for their valuable support in accomplishing the task.

The Team

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Results at Glance: 2014

MEE Abstract

	Category			Total no. of Tiger Reserves Evaluated
	Very Good	Good	Fair	
Rating	17	16	10	43
Percentage	40	37	23	100

Overall MEE score of Tiger Reserves: **69.63%**

MEE Scores and Rating of Individual 43 Tiger Reserves

S. No.	Tiger Reserves	States	MEE score (%)	MEE rating
1.	Pench	Maharashtra	78.23	Very good
2.	Corbett	Uttarakhand	76.61	Very good
3.	Tadoba	Maharashtra	75.81	Very good
4.	Melghat	Maharashtra	75.00	Very good
5.	Pench	Madhya Pradesh	89.52	Very good
6.	Kanha	Madhya Pradesh	87.90	Very good
7.	Satpuda	Madhya Pradesh	78.23	Very good
8.	Valmiki	Bihar	75.81	Very good
9.	Periyar	Kerala	91.13	Very good
10.	Parambikulam	Kerala	86.29	Very good
11.	Mudumalai	Tamil Nadu	80.65	Very good
12.	Anamalai	Tamil Nadu	79.84	Very good
13.	Kalakad-Mundanthurai	Tamil Nadu	79.84	Very good
14.	Nagarhole	Karnataka	79.03	Very good
15.	Bandipur	Karnataka	78.23	Very good
16.	Sundarbans	West Bengal	85.48	Very good
17.	Panna	Madhya Pradesh	78.23	Very good
18.	Ranthambore	Rajasthan	71.77	Good
19.	Dudhwa	Uttar Pradesh	70.97	Good
20.	Sahyadri	Maharashtra	69.35	Good

S. No.	Tiger Reserves	States	MEE score (%)	MEE rating
21.	Bandhavgarh	Madhya Pradesh	72.58	Good
22.	Sanjay Dubri	Madhya Pradesh	70.16	Good
23.	BRT	Karnataka	70.97	Good
24.	Dandeli-Anshi	Karnataka	70.16	Good
25.	Bhadra	Karnataka	66.13	Good
26.	Sathyamanglam	Tamil Nadu	61.29	Good
27.	Dampa	Mizoram	68.55	Good
28.	Buxa	West Bengal	66.94	Good
29.	Kaziranga	Assam	61.29	Good
30.	Manas	Assam	60.48	Good
31.	Pakke	Arunachal Pradesh	60.48	Good
32.	NSTR	Andhra Pradesh	68.55	Good
33.	Sariska	Rajasthan	73.39	Good
34.	Mukundara	Rajasthan	52.42	Fair
35.	Kawal	Andhra Pradesh	58.87	Fair
36.	Achanakmar	Chhattisgarh	54.03	Fair
37.	Satkosia	Orissa	53.23	Fair
38.	Nameri	Assam	51.61	Fair
39.	Namdapha	Arunachal Pradesh	48.39	Fair
40.	Similipal	Orissa	58.06	Fair
41.	Palamau	Jharkhand	54.03	Fair
42.	Udanti-Sitanadi	Chhattisgarh	50.81	Fair
43.	Indravati	Chhattisgarh	45.16	Fair

Cluster: I

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Management Effectiveness Evaluation (MEE) of Dudhwa Tiger Reserve

1. Context

1.1 Are the values of the TR well documented, assessed and monitored?

Condition	Category* ✓	Reference document(s)	Remarks
Values not systematically documented, assessed and monitored.	Poor	1. Draft Tiger Conservation Plan 2011-16 2. Field visits and discussion with field staff 3. Research papers in academic journals and research reports as Annexure 1	<p>The values of Dudhwa Tiger Reserve have been described in chapter 2 in the draft TCP. Dudhwa Tiger Reserve is the only TR in the country representing the Terai Bhabar Biogeographic sub-division of upper Gangetic Plain. Characteristic complex of Sal forests, tall grasslands and swamps maintained by periodic flooding, is one of the most threatened ecosystems in India. It holds good population of tigers, leopards and the prey base, including swamp deer (<i>Cervus duvauceli duvauceli</i>). Of the 7 species of deer found in the country, 5 occur in the reserve. The Great Indian one horned Rhinoceros has been successfully re-introduced and presently 30 individuals occupy a part of the park and rigorously monitored.</p> <p>Studies on the flora and fauna and the unique habitat of terai grassland and woodland have been done by research organizations like. BSI, WII, AMU, ZSI, BNHS, WWF, WTI etc. A list of major studies is attached as Annexure 1.</p> <p>Apart from biological and ecological values, which have been systematically documented in the TCP, the hydrological values have also been documented. Accordingly, the DTR falls in the catchment area of Ghaghra Saryu Sharda River System with command area covering most of eastern UP. In terms of landscape values, the TCP describes Katarniaghat Wildlife Sanctuary of DTR as offering connectivity with Bardia National Park Nepal.</p> <p>The monitoring of values is through all India Tiger Census, which monitors prey and predator status periodically. The Rhino rehabilitation area is regularly monitored using elephants and the monitoring data is maintained on daily basis. Ghariyal and Dolphin monitoring and monitoring of Ghariyal nest is periodically conducted on Gerua and Kaudiala rivers in Katarniaghat WLS.</p>
Values generally identified but not systematically assessed and monitored.	Fair		
Most values systematically identified, assessed and monitored.	Good✓		
All values systematically identified, assessed and monitored.	Very good		

1.2 Are the threats to TR values well documented and assessed*?

Condition	Category* ✓	Reference document(s)	Remarks
Threats not systematically documented or assessed.	Poor	1. Draft Tiger Conservation Plan 2011-16 (Part) 2. Discussion with Field officers and staff	The threats are well documented in chapter 3 and Chapter 5 of draft TCP. The threats include disturbances to the habitat by local communities for extraction of natural resources, poaching of herbivores on festive occasions, porous international Indo-Nepal border , which makes the area more vulnerable; especially to the extremists and poachers. Occasional fishing in Suheli, Nakaua and Sharda River is also a threat. The DTR becomes vulnerable especially during Monsoon when the access to the northern boundary becomes difficult. In the past, DTR was reported to be a safe hideaway and transit zone for extremist and antisocial elements. While it is under control now, the threat continues for which the park is ever vigilant. Destruction of habitat by flash floods also poses serious threat. Irrigation department releases the water from Girjapuri barrage, which affects the aquatic life. Roads and Railway lines passing through the TR are major threats. Man-animal conflict also poses threat to the area. Presence of 1 tribal village, namely Surma in the core area is a threat to the long term sustainability of DTR. Katerniaghat WLS also has a long international boundary with Nepal and the threat there has been recognized by the management.
Threats generally identified but not systematically assessed.	Fair		
Most threats systematically identified and assessed.	Good✓		
All threats systematically identified and assessed.	Very good		

*This assessment should be based on number, nature and extent of threats

1.3 Is the 'Core Area' of TR free from human and biotic interference?

Condition	Category* ✓	Reference document(s)	Remarks
The 'Core Area' has extensive human and biotic interference.	Poor	1. Draft Tiger Conservation Plan 2011-16 2. Discussion with Field officers and staff	1093.79 sq km area of the DTR has been notified as the Critical Tiger habitat, which includes 490.29 sq km in Dudhwa NP, 203.41 sq km in Kishanpur WLS and 400.09 sq km in Katernighat WLS. An old tribal village named Surma, with about 289 families, exists in the core area of the DTR. They use about 250 ha of forest land for cultivation and grazing their cattle. Similarly, within the Katerniaghat WLS, there are about 10 villages inside the core area. The movement of people and cattle causes biotic interference to a limited extent. In the buffer area of the Tiger Reserve, there are Tharu Tribal villages that impact the zone of influence. However, the core and buffer are under unified control of the Field Director, which helps in keeping the core zone almost free from biotic interference. A railway line about 65km long cuts through the DTR as also presence of international road linking India to Nepal.
The 'Core Area' has some human and biotic interference.	Fair✓		
The 'Core Area' has little human and biotic interference.	Good		
The 'Core Area' has no human and biotic interference.	Very good		

*This assessment should be based on existence and the efforts made by TR management to address issues related to human settlements/ villages inside the core area; livestock grazing, cultivation, encroachments etc, resource extraction/ livelihood dependence of local communities and should reflect the overall interference due to all the above factors. The issue of 'Unified Control' of the 'Core' and 'Buffer' zones by under the Field Director would also be taken into account.

1.4 Has the TR complied with the four Statutory* Requirements (SR) along with Tripartite MoU and three Standard Operation Procedures (SOP)?

Condition	Category* ✓	Reference document(s)	Remarks
None of the four SR, no compliance of Tripartite MoU and three SOPs met	Poor	1. Notification No. 1505/14-4-2010-872/2007 dated 9th June 2010 for core and notification no. 1176/14-4-2012-825/2009 dated 20 July 2012 for buffer zone	Boundaries of core and buffer have been duly notified vide reference no. 1 and delineated on ground. DTR has a total core area of 1093.79 sq km. and buffer area of 1107.98 sq km.
Two of the four SR, 50% conditions of the Tripartite MoU and SOPs complied	Fair	2. State Level Steering Committee has been constituted vide notification no. (1034/14-4-2009-822/2009 dated 15/7/2009).	Vide reference 2, the state level steering committee under the chairmanship Chief Minister has been constituted.
Three of the four SR, 75% conditions of the Tri-partite MoU and SOPs complied	Good✓	3. Tripartite MoU signed on 31 August 2009	The TCP for DTR was finalized and submitted to NTCA. NTCA has suggested certain revisions and supplements, which are being taken up by DTR and the final draft is likely to be submitted to NTCA by June 2014. Tripartite MoU has been signed.
All four SR, 100% conditions of the Tripartite MoU and SOPs complied	Very good	4. Draft Tiger Conservation Plan (2011-16) Part I and II. 5. Communication with NTCA regarding supplementary document for preparing TCP with letter no. 1-14/2011-NTCA (Part I) 6. 3 SOPs received by NTCA 7. Discussions with field officers and staffs of DTR	Tiger conservation foundation has not been constituted as yet. However, a Tiger Conservation Society with Prl. Secy. Forests as Chair and CWLW as Member Secy is in place since 2004. It has been given a corpus amount of Rs. 13 crore by the Government of UP. The three SOPs have been received and are being translated into vernacular languages for wider use.

***Statutory requirements are (1) Legal delineation and notification of Core and Buffer Areas; (2) Establishment of Tiger Conservation Foundation; (3) Development of a Tiger Conservation Plan; and (4) Constitution of a State-level Steering Committee under the Chairmanship of the Chief Minister. TA refers agreement between Field Director, State Government and NTCA. The 3 SOPs are on (i) Straying of Tiger in human dominated landscape, (ii) Tiger Mortality and (iii) Disposal of Carcasses**

2. Planning

2.1 Status of Tiger Conservation Plan (TCP)*?

Condition	Category* ✓	Reference document(s)	Remarks
No TCP in place.	Poor	1. Draft Tiger Conservation Plan (2011-16) Part I and II.	TCP is under preparation. A draft TCP has been already prepared and submitted to NTCA for approval. However NTCA has suggested certain revisions and supplements vide letter no. 1-14/2011 dated 2 nd April 2014, which is being taken up by DTR and the final draft is likely to be submitted to NTCA by June 2014.
TCP is under preparation	Fair	2. NTCA letter no. 1-14/2011 dated 2 nd April 2014	
TR has a relevant TCP	Good✓		
TR has a comprehensive and relevant TCP, duly approved by the NTCA	Very good		

***The scientific content and the participatory processes used in preparation of the TCP will be taken into account in assessing the quality of TCP.**

2.2 Does the TR safeguards the threatened biodiversity values?

Condition	Category* ✓	Reference document(s)	Remarks
TR does not safeguard the threatened biodiversity values.	Poor	1. Draft Tiger Conservation Plan (2011-16) Part I and II. 2. Management Plan	<p>Dudhwa Tiger Reserve faces many threats and challenges for the safeguard of biodiversity. The threats include disturbances to the habitat by local communities for extraction of natural resources, poaching of herbivores on festive occasions, porous international Indo-Nepal border, which makes the area more vulnerable, especially to the extremists and poachers. Occasional fishing in Suheli, Nakaua and Sharda River is also a threat. The DTR becomes vulnerable especially during Monsoon when the access to the northern boundary becomes difficult.</p> <p>In the past DTR was reported to be a safe hideaway and transit zone for extremist and antisocial elements, while it is under control now, the threat continues for which the park is ever vigilant. Roads and Railway lines passing through the TR is a major threat because accidental killings have been reported. Man-animal conflict also poses threat to the area.</p> <p>To meet these challenges a strategy has been formulated to prevent cross-border intrusions by setting up a network of anti-poaching/patrolling camps all along the border. A total of 42 anti-poaching camps in 16 ranges continuously help in protection. Zone plans for core, buffer, tourism and theme plans of the TCP deal separately on these issues.</p> <p>A special force of 62 PRD called Para Raksha Dal (Home Guards), including 25 women has been employed to safeguard the area. Protection work is based on foot and vehicular patrolling by the front line staff with strict supervision by senior officers. A total of 240 officers and staff (1 FD, 1 DD, 3 ACF, 10 RFO, 47 Foresters, 36 Wildlife Guards and 35 Forest Guards) frontline staff, with 283 protection mazdoors constantly patrol on foot, vehicles and elephants. For protection, the park is provided with following equipments 35 fixed wireless stations, 19 mobile and 38 walkie talkies. 24 Diesel Jeeps, 6 Gypsies, 23 tractors (chain tractors not working), 1 minibus, 1 ambulance, 2 trucks, 3 water tanker and 44 motorcycles. 6 Motor boats and 3 country boats. 70 rifles of 315 boar, 119 of 12 Boar and one 375 Magnum. 6 tranquilizing guns 25 digital camera and common user group (CUG) mobile phones. 52 checkposts and barriers, both manned and unmanned. 31 temporary protection camps, mostly along Indo-Nepal border.</p> <p>Strict vigil is kept over the international boundary and the areas adjoining human habitations. Most of the</p>
TR safeguards a few threatened biodiversity values.	Fair		
TR safeguards a large number of threatened biodiversity values.	Good✓		
TR safeguards all threatened biodiversity values.	Very good		

			<p>daily wagers belong to adjoining areas and they serve as informers also who give vital information to the reserve administration and suitably rewarded with the help of NGOs.</p> <p>Safeguarding biodiversity from fire is attempted by creating 666.92 .km of firelines (30 m and 16.5 m) and their regular maintenance.</p> <p>The introduced rhino are kept in a large enclosure and constantly watched.</p> <p>Despite all those efforts, apparently more than 25 camera traps which were put within the core area of Dudhwa TR for tiger estimation exercise during 2012-2013 by NGO partners, were reportedly lost. This further requires improving the protection strategy.</p>
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***Remarks need to elaborate on the kind of safeguards and how they work or are intended to work**

2.3 Are stakeholders given an opportunity to participate in planning process?

Condition	Category*	Reference document(s)	Remarks
Little, if any opportunity for stakeholder participation in planning.	Poor	1. Discussion with park officials	<p>While DTR principally follows a strictly protection oriented approach of management, stakeholders are involved in EDC micro planning process. During the India Ecodevelopment Project, 62 EDCs were formed, which are still in the records. In chapter 5 of the draft TCP, discussions on various issues with the stakeholders have been given. The two GOs enable park managers to solicit participation in management.</p> <p>There is a District Coordination Committee comprising of various departments under the District magistrate to extend support to the TR in the field of animal husbandry, public health, education and tourism. The district administration is represented by District magistrate at district level and sub-divisional Magistrate at Tehsil level.</p> <p>The Panchayats are also involved in village development works. For a cluster of villages, SDO/DFO conducts meetings, whereas at the level of individual villages, RO conducts the meetings.</p> <p>The NGO's like WWF and WTI are involved in planning and implementation of protection related activities and mitigation of human-wildlife conflict.</p> <p>The TCP, especially the buffer plan received inputs from local villager and staff.</p> <p>A novel concept of nominating local villagers as Tiger Guardians has been initiated which is likely to improve stakeholder participation in management.</p>
Stakeholders participate in some planning.	Fair	2. Meeting with EDC members on 10 th April 2014	
Stakeholders participate in most planning processes.	Good✓	3. GO no. UO-84/14-PB-99-63/97, dated 21.5.99.	
Stakeholders routinely and systematically participate in all planning processes.	Very good	4. GO no. 1753/14-PBV-99-63/97, dated 30.8.99	
		5. Progress Report, DTR, March 2013	
		6. Draft TCP 2011-2016	

***The result of participation must show in the field and not merely reported as a routine exercise.**

2.4 Are habitat management programmes systematically planned, relevant and monitored, and contribute effectively to Tiger and other endangered species conservation?

Condition	Category* ✓	Reference document(s)	Remarks
Habitat management programmes are entirely adhoc.	Poor	1. Draft Tiger Conservation Plan (2011-16) Part I and II. 2. Discussion with park officials and staff.	Owing to its habitat diversity, DTR has been well studied and the management uses research findings, especially in case of grasslands and wetlands for their management. Management of woodlands, grasslands and wetlands in Core Zone has been discussed in draft TCP, Chapter 7. Similarly, in Chapter 8 of Buffer Zone plan grassland management has been given prominence. About 66% of the area is woodland, wherein habitat management includes fire management, harrowing of fire lines, removal of Lantana and Tiliacora. About 22% of the grasslands (phanta), identified into 9 types are major habitat for swamp deer and hog deer. Efforts to provide strategic inputs in management of grasslands were initiated about 10 years ago. Control burning of grasslands is done in February March. Grassland manipulation by combinations of cutting, harrowing and burning has been initiated in recent past. Reduction in grass height, increased availability of palatable grasses and increased use of site by various species such as Swamp deer, Chital, Hog deer have been recorded. Wetland constitutes the 3 rd major habitat type, which includes rivers, streams, lakes and marshes. Weeds like Water Hyacinth, Ipomoea, Typha etc. are periodically removed. Opening of Girjapuri barrage twice a year results in low availability of water in river Girwa, and management is concerned about it, especially as the river has reportedly good population of crocodiles, ghariyals and dolphins. There is a vast network of 666.92km of fire lines, which are cut and maintained annually. Fire watchers are employed from 15 Feb to 15 June every year for working as firefighting crews. Fire detection and response is improved with good mobility. Water management is another important aspect of habitats, for which water points have been mapped with seasonal availability. There are 3 rivers, 9 nallahs and 88 natural ponds, in addition to 6 reservoirs on various rivers and 4 natural swamps in DTR. There are also about 60 artificial water holes, many of whom have dried and based on the availability of funds, annual desilting of ponds and waterholes, channel cleaning, plugging in of ponds and bunds etc. is undertaken.
Limited planning and monitoring programmes are in place for habitat management.	Fair		
Habitat management programmes are generally planned and monitored.	Good✓		
Habitat management programmes are thoroughly planned and monitored.	Very good		

***This assessment should be primarily based on habitat management programmes in relation to habitats for species that are threatened (IUCN categories), are habitat specialists, subjected to seasonal movements, wide ranging with emphasis on the breeding and rearing habitat and may include factors such as food, water, shelter (all connotations).Habitat structure, composition, unique patches of vegetation and sensitive sites, sources of water and their distribution are integral. Corridors within buffer zone are critically important. For example, all riparian habitats. Have these been addressed? Is their a planning process in place? The management practices dealing with invasive species such as Lantana, Michania etc. would be examined.**

2.5 Does the TR has an effective Protection Strategy (PS)* and Security Plan and Security Audit (SA) in place?

Condition	Category* ✓	Reference document(s)	Remarks
TR has little or no PS and SA.	Poor	1 Draft TCP 2011-16 2 Discussion with park officials	Theme Plan 3 of Chapter 10 of the draft TCP prescribes for protection and intelligence gathering.
TR has an adhoc PS and SA.	Fair		The threats to DTR include disturbances to the habitat by local communities for extraction of natural resources, poaching of herbivores on festive occasions, porous international Indo-Nepal border, which makes the area more vulnerable, especially to the extremists and poachers. Occasional fishing in Suheli, Nakaua and Sharda River is also a threat. The DTR becomes vulnerable especially during Monsoon when the access to the northern boundary becomes difficult.
TR has a generally relevant PS and SA but is not very effective.	Good✓		To meet these challenges a strategy has been formulated to prevent cross-border intrusions by setting up a network of anti-poaching/patrolling camps all along the border. A total of 42 anti-poaching camps in 16 ranges continuously help in protection.
TR has a comprehensive and very effective PS and SA.	Very good		<p>A special force of 62 PRD called Para Raksha Dal (Home Guards), including 25 women has been employed to safeguard the area. Protection work is based on foot and vehicular patrolling by the front line staff with strict supervision by senior officers. A total of 240 officers and staff (1 FD, 1 DD, 3 ACF, 10 RFO, 47 Foresters, 36 Wildlife Guards and 35 Forest Guards) frontline staff, with 283 protection mazdoors constantly patrol on foot, vehicles and elephants. For protection, the park is provided with following equipments</p> <p>35 fixed wireless stations, 19 mobile and 38 walkie talkies.</p> <p>24 Diesel Jeeps, 6 Gypsies, 23 tractors (chain tractors not working), 1 minibus, 1 ambulance, 2 trucks, 3 water tanker and 44 motorcycles.</p> <p>6 Motor boats and 3 country boats.</p> <p>70 rifles of .315 bore, 119 shotguns of 12 bore and one .375 Magnum rifle.</p> <p>6 tranquilizing guns</p> <p>25 digital camera and common user group (CUG) mobile phones.</p> <p>52 checkpoints and barriers, both manned and unmanned.</p> <p>31 temporary protection camps, mostly along Indo-Nepal border.</p> <p>Strict vigil is kept over the international boundary and the areas adjoining human habitations. Most of the daily wagers belong to adjoining areas and they serve as informers also who give vital information to the reserve administration and suitably rewarded with the help of NGOs. The STFP has not been constituted so far, as the proposal is pending with NTCA, as reported by the field officers.</p> <p>GPS logs on patrolling have not started and the park officials informed that they would start M-STRIPE based monitoring soon. In absence of a strong Law Enforcement Monitoring module, and with inadequate civil society support towards protection of the Park, this area needs further improvement.</p>

			While in the past many cases of illegal entry, illegal cutting of wood and hunting of wild animals were reported, no case of substance was reported during the last 2-3 years. A number of offenders involved in wildlife crime have been prosecuted in the court and 114 (2011-2012), 82 (2012-13), 155 (2013-14) have been convicted and given imprisonment. There are 25 cases related to illegal trade in wildlife from 1-7-86 to 6-10-2006 in which a number of people have arrested and charged in the CJM court. The convictions are pending.
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***This assessment takes inter-alia into account the nature of threats, the number and location of patrolling camps and foot and mobile patrolling, needs that relate to available manpower, terrain difficulties, practicability of area coverage, readiness to contain specific threats with necessary support and facilities. The constitution and functioning of Special Tiger Protection Force (STPF), Number of offences reported, arrests made, prosecution initiated and conviction achieved will be taken into account.**

2.6 Has the TR been effective in the mitigation of human-wildlife conflicts?

Condition	Category* ✓	Reference document(s)	Remarks
Human-wildlife conflicts are significant but poorly addressed.	Poor	1. Draft TCP 2011-16 2. Discussion with park officials 3. GO letter no. 2384/14-4-96-836/92 dated 6 Dec 1996 4. Official document of Crop raiding cases	Due to presence of humans and their cattle in and around DTR, human wildlife conflict cases, such as crop raiding, human attacks etc. have been recorded. The tribal village Surma, with about 350 families, using about 250 ha. of forest land for cultivation and grazing their cattle, exists in the core area of the DTR. In the Katarniaghat WLS, there are about 10 villages inside the core area. In the buffer area of the Tiger Reserve, there are Tharu Tribal villages that impact the zone of influence. DTR management tackles these issues by giving compensation. In the Draft TCP- buffer zone plan, 2. Ecodevelopment, strategies for mitigating human wildlife conflict have been elaborated, which include declaration of ecodevelopment zone extending to 5 km beyond the boundary of DTR; construction of game proof trench, cattle immunization and payment of compensation. WTI has provided a vehicle for operation of a Rapid Response Unit, which is well equipped with tranquilization equipment and staff. Local villagers are also used in primary response functions. According to GO referred as 3, the amount of compensation has been fixed by the Government. It is Rs. 1 lakh for human killing, Rs. 50,000 for serious injury and 10,000 for minor injury; Rs. 1,500 for cow killing, Rs. 3,000 for Buffalo killing; Rs. 3,000 for crop raiding of one acre of Sugarcane, Rs. 2,500 for cereal crop and Rs. 1,250 for other crops. As interim relief, Rs. 10,000 is given in case of death and Rs. 5,000 on injury. The procedure of compensation payments take 3 to 6 months as final approvals are to be obtained from CWLW, Lucknow. For human death, an amount of Rs. 7 lakh was paid as compensation in 2010-11 and Rs. 3 lakh in 2011-12 against 10 cases of Tiger kill. Rs. 1lakh in 2010-11, Rs. 1.5 lakh in 2011-12 and Rs. 1 lakh in 2012-13 was paid against 7 Leopard kill cases @ Rs 50,000 per kill. Rs. 1 lakh given in
TR has been able to mitigate few human-wildlife conflicts.	Fair		
TR has been able to mitigate many human-wildlife conflicts.	Good✓		
TR has been effective in mitigating all human-wildlife conflicts.	Very good		

		<p>2011-12 for 1 Crocodile kill and Rs 20,000 for 2 cases of injury. Rs. 10,000 was paid for injury by Elephant in 2013-14.</p> <p>An amount of Rs. 65,175 paid in 2010-11 (79 kills) and Rs. 66,900 (67 kills) paid in 2011-12 for livestock kill. An amount of Rs. 2,89,316 has been paid as compensation during last 3 years against the crop raiding of 103.75 acres of 124 villagers.</p> <p>WWF-India with DTR has had a number of consultation meeting with forest officials and villagers for formation of anti depredations squads (ADS). In 3 villages namely Bhagwantnagar, Gulra Tanda and Bhadia kalan, villagers have been trained to watch elephant movement in their areas which help in timely driving of elephants back to the forest.</p> <p>WTI has been working in association UP Forest Dept. on human wildlife conflict and has given camera trap trainings to 23 forest staff during 2011-12. They have also conducted 12 awareness programs addressing human wildlife conflict from Feb 2011 to March 2012.</p>
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***The assessment will take into account the number of incidences reported and payment of compensation made and its timeliness.**

2.7 Is the TR integrated into a wider ecological network/ landscape following the principles of the ecosystem approach?

Condition	Category*	Reference document(s)	Remarks
TR not integrated into a wider network/ landscape.	Poor	1. Draft TCP 2011-16	<p>The corridors have been identified. WWF-India, under their Terai Arc Landscape is working on corridors related to DTR. The Corridor Zone Plan is discussed in detail in Chapter 9 of the draft TCP.</p> <p>The Dudhwa NP, Kishanpur WLS, Katarniaghat WLS forest complex in DTR exemplifies a fragmented landscape. The effects of fragmentation on mammals are apparent in the distribution of large mammals in the region. Kishanpur WLS and South Khiri Forest Division towards southern side and Katarniaghat WLS towards eastern side link with Royal Bardia National Park, Nepal and Pilibhit Forest Division towards western side links with Shukla Phanta Wildlife Sanctuary, Nepal.</p> <p>Although there is no connecting forest corridor between Dudhwa NP and Kishanpur WLS, it appears that the Sharda river, which flows along the eastern boundary of the Kishanpur WLS and a few of meandering nalla's and drainages with an east west orientation may serve as corridors for tiger between these two PAs.</p> <p>Katarniaghat-Dudhwa corridor has two pathways: a) along Mohana in the north and b) along Suheli river in the south. However, functionality of those connectivity is not known presently.</p>
Some limited attempts to integrate the TR into a network/ landscape.	Fair	2. The Trans-Boundary Khata Corridor: a valuable wildlife area and an ecologically sensitive zone; WWF, Terai Arc Landscape Report, 2013.	
TR is generally quite well integrated into a network/ landscape.	Good✓	3. Note on Human Wildlife Conflict mitigation works in Dudhwa TR by WWF India	
TR is fully integrated into a wider network/ landscape.	Very good	4. Annual report on UP Tiger Conservation Project in Dudhwa Landscape Forest Dept. UP and WTI 2011-12	

			<p>There are two trans-boundary corridors: a) Khata corridor and b) Basanta and Laljhadi corridor. Khata corridor connects Katarniaghat WLS and Royal Bardia National Park Nepal. Basanta Laljhadi connects western part of Dudhwa NP and Shukla Phanta WLS in Nepal.</p> <p>Unstructured dialogues between various stakeholders have been initiated in respect of corridors and their management.</p>
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***Assessment needs to consider the scope of opportunities on the landscape scale that exist. Consider whether any attempts have been made and what are these? Have all the important corridors been identified? What actions are planned/implemented for their security? Have the Forest Working Plans and Forest Development Corporation Plans within the identified landscapes taken cognizance of such new requirement? These should have been reflected in TCPs. Is there is any effort to rationalize landuse around TR? Is any effort being made to plan and use 'Smart Green Infrastructure'?**

3. Inputs

3.1 Are personnel adequate, well organized and deployed with access to adequate resources in the Tiger Reserve (TR)*?

Condition	Category* ✓	Reference document(s)	Remarks
Few, personnel explicitly allocated but poorly supported for TR management.	Poor	<ol style="list-style-type: none"> Draft TCP 2011-16 Discussion with Park officials 	<p>A total of 240 officers and staff (1 FD, 1 DD, 3 ACF, 10 RFO, 47 Foresters, 36 Wildlife Guards and 35 Forest Guards), with 283 protection mazdoors constantly patrol on foot, vehicles and elephants. A special force of 62 PRD called Para Raksha Dal (Home Guards), including 25 women has been employed to safeguard the area. Protection work is based on foot and vehicular patrolling by the front line staff with strict supervision by senior officers. Total of 52 checkpoints and barriers, both manned and unmanned; 31 temporary protection camps, mostly along Indo-Nepal border.</p> <p>There are 2 vacancies of ROs, 9 vacancies of Deputy ROs, 61 vacancies of Wildlife Guards and 21 vacancies of Forest Guards in DTR at the time of committees visit. Against the total sanctioned 242 posts of frontline staff, only 143 are filled and 99 posts are vacant.</p> <p>The large number of vacancies in DTR is a cause of concern.</p> <p>162 staff from among the available staff are aged between 40 to 60 years demanding fresh recruitments for effective management.</p>
Some personnel explicitly allocated for TR management but not adequately supported and systematically linked to management objectives.	Fair		
Some personnel with fair support explicitly allocated towards achievement of specific TR management objectives.	Good✓		
Adequate personnel appropriately supported and explicitly allocated towards achievement of specific TR management objectives.	Very good		

***This assessment should inter-alia be based on number of personnel allocated for attainment of TR objectives at the Range , Round, Beat and Patrolling camps levels or as relevant to the needs (sanctioned posts vis- a- vis existing personnel and needs beyond the sanctioned strengths. It is possible that posts have last been sanctioned several years back that do not now account for the current needs)**

3.2 Are resources (vehicle, equipment, building etc.) adequate, well organized and managed with desired access?

Condition	Category* ✓	Reference document(s)	Remarks
Few, if any, resources explicitly allocated for TR management.	Poor	1. Draft TCP 2011-16 2. Discussion with Park officials	The park has been provided with following equipments: 35 fixed wireless stations, 19 mobile and 38 walkie talkies. 24 Diesel Jeeps, 6 Gypsies, 23 tractors (chain tractors not working), 1 minibus, 1 ambulance, 2 trucks, 3 water tanker, 44 motorcycles and 400 Cycles. 6 Motor boats and 3 country boats. 70 rifles of .315 bore, 119 of 12 bore shotguns and one .375 Magnum rifle. 6 tranquilizing guns 25 digital camera and common user group (CUG) mobile phones. 22 GPS 50 PDA There are 394 buildings including 257 residential buildings. The Dudhwa Complex has recently been developed with new buildings for camp of field director and DCF and also for tourism purpose. The resources have been judiciously deployed. However in view of issues related to protection of international border with Nepal, additional resources are required. Advanced equipments for strengthening the protection such as, E-EYE, Thermal sensing device, Remote surveillance equipments etc. are required.
Some resources explicitly allocated for TR management but not systematically linked to management objectives.	Fair		
Some resources explicitly allocated towards achievement of specific TR management objectives.	Good✓		
Adequate resources explicitly allocated towards achievement of specific TR management objectives.	Very good		

* These form a variety of resources. These may be segregated into immovable (structures) and movable categories and each further may be considered under the essential and desirable categories. It is best to start with what are the minimum needs to attain each objective, what is available and manner of use/deployment. The proportions of the 'essentials' and 'desirables' along the importance gradient of objectives would serve as pointers for score categories. Specific remarks would be vitally important.

3.3 Are financial resources other than those of the State linked to priority actions and are funds adequate, released timely and utilized?

Condition	Category* ✓	Reference document(s)	Remarks
Resource allocation is adhoc, funds are inadequate and seldom released in time and not utilized.	Poor	1. Annual Progress reports 2. Discussion with park officials	DTR receives regular funds from NTCA as central support to the Tiger conservation. During 2011-12, NTCA provided Rs. 434.52 lakh which was completely utilized by the TR. During 2012-13, NTCA provided Rs. ? lakh which was completely utilized by the TR. As a state policy the finance controller under PCCF and HOFF provides quarterly authorization and controls expenditure through Cash Credit Limit (Letter of Credit), however DTR did not report any difficult in receiving and utilizing the funds.
Some specific allocation for management of priority action. Funds are inadequate and there is some delay in release, partially utilized.	Fair		
Comprehensive planning and allocation that meets the most important objectives. Generally funds released with not much delay and mostly utilized.	Good✓		
Comprehensive planning and allocation of resources for attainment of most objectives. Funds generally released on-time and are fully utilized.	Very good		

*Obtain details of funds released by NTCA and their utilization by TR in the last 3 years and indicate them under 'Remarks'. Also comment on the problems associated with fund allocations and their utilization.

3.4 Are financial resources from the State linked to priority action and funds adequate, timely released and utilized for the management of Tiger Reserve?

Condition	Category* ✓	Reference document(s)	Remarks
Resource allocation is adhoc, funds are inadequate and seldom released in time and not utilized.	Poor	1. Discussion with park officials	The state share to match the central grant through NTCA was Rs. 198.51 lakh which was fully utilized during 2011-12
Some specific allocation for management of priority action. Funds are inadequate and there is some delay in release, partially utilized.	Fair		During 2013-14 DTR received Rs. 31.09 lakh towards protection of TR and spent Rs. 29.12 lakh.
Comprehensive planning and allocation that meets the most important objectives. Generally funds released with not much delay and mostly utilized.	Good✓		As a state policy the finance controller under PCCF and HOFF provides quarterly authorization and controls expenditure through Cash Credit Limit (Letter of Credit), however DTR did not report any difficult in receiving and utilizing the funds.
Comprehensive planning and allocation of resources for attainment of most objectives. Funds generally released on-time and are fully utilized.	Very good		

***Obtain details of funds released by State and their utilization by TR in the last 3 years and indicate them under 'Remarks'. Also comment on the problems associated with fund allocation and their utilization.**

3.5 What level of resources are provided by NGOs?

Condition	Category* ✓	Reference document(s)	Remarks
NGOs contribute nothing for the management of the TR.	Poor	1. Draft TCP 2011-16 2. Discussion with Park officials 3. Note on Human-Elephant conflict mitigation work in Dudhwa TR, WWF, 2013 4. Annual Report on UP Tiger Conservation Project, UP Forest Department and WTI, 2011-12. 5. Project – UP Tiger Conservation Project: Brief report on biological aspects, WTI, 2013 6. Draft TCP 2011-16	NGOs such as WWF, WTI are actively involved in assisting the tiger reserve for infrastructure support, support for human-wildlife conflict and awareness generation. WWF India has helped DTR by donating patrolling vehicles, patrolling kits, field gears, and communication equipments. For last many years WWF India has been operating the ex-gratia scheme for human cattle killing and mauling cases. WWF-India, under their Terai Arc Landscape project is working on corridors related to DTR and has given a research management document to connect Khata Corridor between Katarniaghat and Royal Bardia NP Nepal. WWF-India with DTR has had a number of consultation meeting with forest officials and villagers for formation of anti depredations squads (ADS) for protection purposes. WTI has conducted capacity building programs, provided accident insurance, conflict mitigation training and estimation of tiger density and is also helping in wildlife rescue cases and emergencies. They studied the dietary composition of existing predators, condition of prey population, predator occupancy in relation to prey abundance and human disturbances of DTR. They are also involved in planning and implementation of protection related activities and mitigation of human-wildlife conflict. WTI has been working in association UP Forest Dept. on human wildlife conflict and has given camera trap trainings to 23 forest staff during 2011-12. They have also conducted 12 awareness programs addressing human wildlife conflict from Feb 2011 to March 2012. The Rhino rehabilitation plan is also assisted by WTI. There are other NGO's, viz. Dudhwa foundation, Katarniaghat Foundation, Terai Nature Conservation Society and Wildlife Conservation Trust, INTACH, The Tiger Haven Trus, Rana Tharu Vikas Samiti and Born Fee Foundation which are supporting the Tiger reserve in various ways, notably in community mobilization and working out alternative means of income generation to local communities, including the tribals.
NGOs make some contribution to management of the TR but opportunities for collaboration are not systematically explored.	Fair		
NGOs contributions are systematically sought and negotiated for the management of some TR level activities.	Good		
NGOs contributions are systematically sought and negotiated for the management of many TR level activities.	Very good✓		

4. Process

4.1 Does the TR have manpower resources trained in wildlife conservation for effective TR management?

Condition	Category* ✓	Reference document(s)	Remarks
No trained officers and frontline staff in the TR.	Poor	1. Discussion with Park officials 2. Official list of trainings 3. Booklet-Hindi translation of Wildlife Protection Act 1972	The Field Director has attended population estimation training workshop in Smithsonian Institute, USA. Several training courses for short duration have been organized on forest management, wireless handling, GPS training, anti-poaching, wildlife enforcement, eco development, man-animal conflict, poverty alleviation, Indo-Nepal cooperation, capacity building, ecosystem management etc. by WWF, JICA, UP Forest Department, WTI, TPS, FTI, JIA, WCCB, etc. However, structured and strategic training as well as refresher courses have not been attended by the staff members of Dudhwa. 55 trainings were conducted during 2011-12, in which 1342 staff participated and 42 training during 2012-13, in which 3667 participants attended. During 2013-14, 23 training programmes were conducted benefiting 2313 staff. The Forestry Training Centre at Kanpur is used for specialized trainings in wildlife management. With support from WTI, one week refresher course is given to frontline staff every year. Almost all the frontline staff and officers have undergone short term trainings on various aspects of wildlife management. However, senior officers and Range Officers have not undergone professional training on wildlife management, neither Diploma Course nor Certificate Course in WII.
Some trained officers and few trained frontline staff, posted in the TR.	Fair✓		
All trained officers and and fair number of trained frontline staff posted in the TR.	Good		
All trained officers and most of the trained frontline staff is posted in the TR.	Very good		

**Indicate % of trained staff in various categories. The number and thematic areas of the 'Internal Training' programmes organized in the TR in the last 3 years may be taken into account. Has the TR prepared a 'Staff Development Plan'? Is it being implemented?*

4.2 Is TR staff management performance linked to achievement of management objectives?

Condition	Category* ✓	Reference document(s)	Remarks
No linkage between staff management performance and management objectives.	Poor	1. Discussions with TR officials 2. Letter from Rober B Zoelick dated 18 Jan 2012. The World Bank.	The promotions are governed by State policy, which is normally linked to seniority of staff and officers. However due to excellent work in protecting the park, various awards have been received by the Field Director as well as Frontline Staff. The president of the World Bank vide reference 2 had commended the leadership of Field Director, Shri Shailesh Prasad to save wild tigers and wilderness. The park staff has been awarded Billy Arjun Singh Award on Wildlife Conservation. RO Bankati and Shri C.K.P Chaudhary were given CMs award during 2013 for Wildlife protection and Conservation. In the year 2012 Shri Anil Tripathi was also awarded.
Some linkage between staff management performance and management objectives, but not consistently or systematically assessed.	Fair		
Management performance for most staff is directly linked to achievement of relevant management objectives.	Good✓		
Management performance of all staff is directly linked to achievement of relevant management objectives.	Very good		

4.3 Is there effective public participation in TR management* and does it show in making a difference?

Condition	Category* ✓	Reference document(s)	Remarks
Little or no public participation in TR management.	Poor	<ol style="list-style-type: none"> 1. Discussion with DTR officials 2. Meeting with EDCs on 10th April 	Public Participation in TR management is confined to NGOs support in protection and awareness creation, and local community participation in EDC programmes.
Opportunistic public participation in some of the relevant aspects of TR management.	Fair✓		There are few NGOs operating in and around the Reserve, the most prominent are WWF, Terai Nature Conservation Society, INTACH, The Tiger Haven Trust, Rana Vikas Tharu Samiti and the Born Free Foundation.
Systematic public participation in most of the relevant aspects of TR management.	Good		Of these Rana Tharu Vikas Samity has involved itself in ecodevelopment through village level micor-planning and the Terai Nature Conservation Society has only recently expressed desire to participate in this programme. WWF has been working with the Tharu community around the park.
Comprehensive and systematic public participation in all important and relevant aspects of TR management.	Very good		<p>The rest have been involved in providing assistance in other management activities such as support in protection, communication and amenities to staff.</p> <p>The management is protection centric and addresses participation issues in ecodevelopment and environmental education programmes. During the World Bank project, 64 EDCs were constituted, but now there are only 34 EDCs. However, there are 66 SHGs operating in the area. Enhanced participation of NGOs in ecodevelopment and other conservation activities is to be encouraged. The involvement of NGOs has been prescribed at all stages of ecodevelopment through village level micro planning, however it is limited to a few discussions.</p> <p>Participation of line agencies and representatives of local governments is attended to through meetings in District Level Coordination Committee chaired by the District Collector.</p> <p>The international border issues are discussed in an international trans-boundary coordination committee including forest officials, NGOs and representatives of civil society from Nepal and DTR.</p> <p>Participation of civil society representatives, especially local communities in Park Management was not reported. This calls for further improvement.</p>

**The involvement of NGOs/ NGIs in population estimation may be taken into account*

4.4 Is there a responsive system for handling complaints and comments* about TR management?

Condition	Category* ✓	Reference document(s)	Remarks
Ad-hoc approach to handling complaints.	Poor	Discussions with DTR officials	Complaint registered is maintained and complaints attended to in a time bound manner. However, if there is any complaint or news regarding DTR protection and conservation in the media, it is responded to within 24 hours.
Complaints handling system operational but not responsive to individual issues and with limited follow up.	Fair		
Coordinated system logs and responds effectively to most complaints.	Good✓		
All complaints systematically logged in coordinated system and timely response provided with minimal repeat complaints.	Very good		

***Does the TR maintains 'Suggestions Register'? What actions are taken to deal with suggestions?**

4.5 Does TR management address the livelihood issues* of resource dependent communities, especially of women?

Condition	Category* ✓	Reference document(s)	Remarks
No livelihood issues are addressed by TR management.	Poor	<ol style="list-style-type: none"> Discussions with DTR officials Draft TCP 2011-16 Progress report on Ecodevelopment, March 2013 Project for the Development of Ecotourism in UP (2012-13 to 16-17) GO UO84/14PB-99-63/97 dated 21.05.99 GO 1753/14-PBV-99-63/97 dated 30.08.99 	<p>In Chapter 8 of Draft TCP on Buffer zone management, ecodevelopment has been discussed in detail. An ecodevelopment zone has been conceived upto 5 km from the boundaries of DTR. Based on the resolution on Eco-development and guidelines on implementation of Ecodevelopment as in ref 5, ecodevelopment committees have constituted. For protecting the croplands of villagers a game proof trench 5 km long has been dug the at forest-crop land interface. Immunization of cattle in the ecodevelopment zone is a regular feature. While the EDCs are not very actively managed, yet the committee noted in the meeting with EDC that there is community development fund generated during India Eco-development project and 3 participating EDCs namely Parsia, Moura and Mudnachari have been in existence since 2001 with CDF amount of Rs 4.54 lakh, 4.51 lakh and 2.5 lakh respectively. The CDF amount has been used as microfinance, wherein a lone amount of 3,000 to 5,000 Rs. can be given to the EDC members.</p> <p>Through the micro finance some of the members of EDC were able to open up cycle repair shop, purchase buffalos and sewing machines and gas cylinders have been distributed to about 100 families at subsidized cost. The committee felt that the EDC require committed inputs from park management for enabling local villagers to better their lives and to participate in DTR contribution. While, the strongly protectionist approach is required for protecting DTR, especially in view of the notorious history of illicit activities in the past; additionally, a compassionate approach towards human livelihood issues needs further encouragement.</p>
Few livelihood issues are addressed by TR management.	Fair✓		
Substantial livelihood issues are addressed by TR management.	Good		
Livelihood issues of resource dependent communities especially of women are addressed effectively by TR managers.	Very good		

***The number of mandays generated in the last 3 years may be taken into account. Are funds received from District Agencies and other sources? Provide details of funds received in last 3 years.**

4.6 Has the TR planned and implemented the voluntary 'Village Relocation' from the Core/ Critical Tiger Habitat (CTH)?

Condition	Category* ✓	Reference document(s)	Remarks
No planning and no implementation	Poor	1. Discussion with Park Officials	<p>The issue of relocation of Surma village in the core area with 289 families is pending for a long time. There has not been much progress since the last evaluation in 2010. Similarly for the 10 villages in the Katarniaghat WLS there has not been significant progress since 2010.</p> <p>However the DTR management has been successfully evacuating in 2011-12, 600 families of Gauri Phanta which have encroached Park premises at Indo-Nepal border. Furthermore encroachments in the seed farms in Katarniaghat WLS were also vacated in 2013. Village relocation requires serious attention.</p>
Plans have been made but no implementation	Fair		
Plans have been made and some implementation is in progress	Good✓		
Plans have been made and are being actively implemented/ no human habitation in the CTH	Very good		

***Assessment will look into the village relocation planning process including availability of manpower, financial resources and NGO support, if any. Is there a mechanism to address the complaints received in respect of relocation process? Effort must be made to assess post-relocation success or otherwise.**

5. Output

5.1 Is adequate information on TR management publicly available?

Condition	Category* ✓	Reference document(s)	Remarks
Little or no information on TR management publicly available.	Poor	1. www.dudhwatiger.com 2. Discussion with park Officials	<p>The TR has an exclusive website where TR values and Tourism related information are available on public domain. This is a forward movement from the previous assessment.</p> <p>The Suheli interpretation centre is being developed and now has good information and guides. Brochures on DTR, on the birds, including one on Vulture and on Tiger Protection Society are available at the DTR information centre Suheli. Information brochure on Forest festival, annual reports, world Environment day, Fire etc. are available for UP State as whole.</p>
Publicly available information is general and has limited relevance to management accountability and the condition of public assets.	Fair		
Publicly available information provides detailed insight into major management issues and condition of public assets.	Good✓		
Comprehensive reports are routinely available in public domain on management and condition of public assets.	Very good		

5.2 Are visitor services and facilities appropriate and adequate?

Condition	Category* ✓	Reference document(s)	Remarks
Visitor services and facilities do not exist.	Poor	Discussion with Park Officials	On an average DTR receives about 10,000 visitors per year. The visitor complex at Dudhwa has been upgrade and modernized and the facilities are appropriate and adequate. For visitors to move into the tourism area, 23 gypsies have been introduced with local guides. There is also one 18 seater canter, which also takes visitors to the tourism zone. An eco awareness centre at Girjapuri barrage is being developed with few cottages and ecotourism programmes. From among the Tharu community, women tourist guides are also promoted. The committee met one such guide (Ram Pati Rana) on 15 Nov 2014. There is enthusiasm among guides for potential of ecotourism for better livelihoods. Suheli Interpretation center is being developed for better interpretation facilities for DTR. TR related brochures are available. An interpretation center at Kishanpur has been setup and including Katerniaghat WLS there are 19 Forest Guest Houses and 2 Tharu huts for the visitors.
Visitor services and facilities are very basic.	Fair		
Visitor services and facilities are monitored from time to time and are fairly effective.	Good✓		
Visitor services and facilities are conscientiously maintained, regularly upgraded and monitored for visitor satisfaction	Very good		

***Include the existence and quality of visitor and interpretation centers, including skills and capabilities of personnel manning these, TR related publications, films, videos; arrangements of stay (including places serving refreshments and food owned and managed by TR), watch towers and hides including safety factors, vehicles assigned for visitors including riding elephants, if any and their deployment, drinking water, rest rooms, garbage disposal, attended and self guided services in the field, visitor feedback on the quality of wilderness experience.**

5.3 Are research/ monitoring related trends systematically evaluated and routinely reported and used to improve management?

Condition	Category* ✓	Reference document(s)	Remarks
Little or no systematic evaluation or routine reporting of trends.	Poor	1. Draft Tiger Conservation Plan 2011-16	Studies on the flora and fauna and the unique habitat of terai grassland and woodland have been done by research organizations like. BSI, WII, AMU, ZSI, BNHS, WWF, WTI etc. A list of major studies is attached as Annexure 1. The Rhino rehabilitation area is. Ghariyal and Dolphin monitoring and monitoring of Ghariyal nest is periodically conducted on Gerwa and Kaudiala rivers in Katerniaghat WLS. As per TCP part II Annexure 14, animal populations have been monitored from 2001-2009. The methodology has not been described; therefore it is difficult to make comments on the results. However the results indicate an increasing elephant population from 4 in 2001 to 70 in 2009, Sloth Bear from 82 in 2001 to 132 in 2009, Swamp Deer from 1808 in 2001 to 2998 in 2009, Barking Deer 751 in 2001 to 937 in 2009, Rhinos from 18 in 2003 to 28 in 2009. Additionally in Katerniaghat WLS, the estimation data are available from 1999 to 2013. Rhinos were reintroduced in 1984 and are regularly monitored using elephants and the monitoring data is maintained on daily basis. The monitoring of values is through all India Tiger Census, which monitors prey and predator status periodically. However the FD expressed his reservations on the methodological aspects of NTCA WII estimation. M-Stripes is not applied so far. Similarly, vegetation monitoring plots and protocols are not in place.
Some evaluation and reporting undertaken but neither systematic nor routine.	Fair	2. Field visits and discussion with field staff	
Systematic evaluation and routine reporting of trends undertaken.	Good✓	3. Research papers in academic journals and research reports as Annexure 1	
Systematic evaluation and comprehensive reporting of trends undertaken and attempts made at course corrections as relevant.	Very good	4. Project: UP Tiger Conservation Project: Brief report on Biological aspect WTI 2013.	

***Not all TRs attract projects and researchers and with exceptions, little research takes place on the TRs own steam because of systemic limitations. However, monitoring of some critical issues is expected e.g. population of tiger, co-predators and prey with insights into their demography and distribution (some opportunistic sampling by sightings, signs and spatial distribution during assessment would be extremely useful in terms of expert**

impression and as a pulse), monitoring incidence of livestock grazing, fires, weeds, sources of water, a variety of illegal activities typically associated with the reserve, wildlife health (e.g. epidemics, immunization of livestock) regeneration and change in vegetation, visitors and their activities, offence cases, ex-gratia payments etc. Efforts must be made to assess the planning and implementation of Phase-IV monitoring protocols and the success of implementation of M-Stripes (wherever applicable). Are the 'Sykes and Horill' monitoring plots maintained and data analyzed?

5.4 Is there a systematic maintenance schedule and funds in place for management of infrastructure/assets?

Condition	Category* ✓	Reference document(s)	Remarks
No systematic inventory or maintenance schedule.	Poor	1. Draft TCP 2011-16 2. Discussion with Park Officials	All the standard registers for financial management, assets management and maintenance of stores and assets are maintained.
Inventory maintenance is adhoc and so is the maintenance schedule.	Fair		
Systematic inventory provides the basis for maintenance schedule but funds are inadequate.	Good✓		
Systematic inventory provides the basis for maintenance schedule and adequate funds are made available.	Very good		

***Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

6. Outcomes

6.1 Are populations of threatened species declining, stable or increasing?

Condition	Category* ✓	Reference document(s)	Remarks
Populations of key threatened/ endangered species are declining.	Poor	1. Draft TCP 2011-16 Part II 2. Discussion with Park Officials	As per TCP part II Annexure 14, animal populations have been monitored from 2001-2009. The methodology has not been described; therefore it is difficult to make comments on the results. However the results indicate an increasing elephant population from 4 in 2001 to 70 in 2009, Sloth Bear from 82 in 2001 to 132 in 2009, Swamp Deer from 1808 in 2001 to 2998 in 2009, Barking Deer 751 in 2001 to 937 in 2009, Rhinos from 18 in 2003 to 28 in 2009. Additionally in Katarniaghat WLS, the estimation data are available from 1999 to 2013. In the discussion with Park Officials, it was informed that during 2013 the total counts of some wild animals were made and the population of Swamp Deer is now more than 5000, Hog Deer more than 3500, and Rhinos is 30. Furthermore 42 Nest of Vultures have been counted; 12 Bengal Florican were seen by Dr. Rahmani of BNHS; About 300 Gharial, and unknown population of Dolphin is also reported. Overall the Park shows stable or increasing trend of threatened species in DTR.
Some threatened/ endangered species populations declining, some are increasing, most others are stable.	Fair		
Several threatened/ endangered species populations increasing, most others are stable.	Good		
All threatened/ endangered species populations either increasing or stable.	Very good✓		

***This needs to practically relate to the natural ecosystem potential rather than being driven merely by numbers and visibility. The assessment score may be elaborated under remarks.**

***Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

6.2 Is the population of tigers showing a declining, stable or increasing trend?

Condition	Category* ✓	Reference document(s)	Remarks
Population of tiger is showing a declining trend	Poor	1. Status of Tiger, Co-Predators and prey in India, 2010 by WII, NTCA 2. Discussion with Park Officials	The trends indicated in NTCA-WII all India Tiger Census suggest an increasing trend of Tigers from 95 (80-110) in 2006 to 112 (186-118) in 2010 along Dudhwa Kheri Pilibhit Tiger Landscape. However the Field Director in the discussion indicated some disagreement on methodology and reported a higher number of Tigers in DTR than reported in the NTCA WII estimation. Accordingly there were 109 Tigers in DTR in 2010 and 118 in 2011. The DTR reported photographic evidences of 130 Tigers. However, the country-wide estimation process that is accepted all over as the standard protocol suggests that the tiger population trend has not shown substantial increase. Given that Dudhwa has the potential of serving as a Source Site for tigers in the eastern part of Terai Arc Landscape, it needs to have a stable population of breeding females, which was not clearly elucidated during the MEE field surveys.
Population of tiger is stable	Fair		
Population of tiger is showing an increasing trend	Good✓		
Population of tiger has significantly increased	Very good		

**This assessment should be based in the context of available population estimate (2010-11) and the outcomes of the currently ongoing Phase-IV analyses.*

6.3 Have the threats* to the TR being reduced/ minimized? Or is there an increase?

Condition	Category* ✓	Reference document(s)	Remarks
Threats to the TR have not abated but have enhanced.	Poor	1. Status of Tiger, Co-Predators and prey in India, 2010 by WII, NTCA 2. Discussion with Park Officials	Due to strong protection measures, DTR management has been able to nab many known poachers and forest offenders which has significantly reduced the threats of poaching and illicit activities. However, threats from roads and railway a line cutting across DTR still remains as can be seen in the occasional road kills. Threats due to resource by local communities have reduced to a limited extent by constitution of EDCs, however much more inputs are needed to empower local communities for DTR protection.
Some threats to the TR have abated, others continue their presence	Fair		
Most threats to the TR have abated. The few remaining are vigorously being addressed	Good✓		
All threats to the TR have been effectively contained and an efficient system is in place to deal with any emerging situation	Very good		

**Does the TR have a Disaster Risk Management Plan to deal with existing as well as emerging threats?*

6.4 Are the expectations of visitors* generally met or exceeded?

Condition	Category* ✓	Reference document(s)	Remarks
Expectations of visitors generally not met.	Poor	<ol style="list-style-type: none"> 1. Discussion with Park Officials 2. Feedback forms 3. Draft TCP 2011-16 	<p>Tourism is a low key affair in DTR and Chapter 5 of Draft TCP discusses in details ecotourism and eco-development plan which focuses on development of Katarniaghat WLS and Dudhwa Tourism Zone. Presently Dudhwa Tourism complex is being developed and there is tourism complexes at Sathiyana, in addition to 19 Forest Guest Houses are also utilized for tourism activities.</p> <p>The visitors have to fill in forms for entry and stay at Dudhwa TR and also provided the feedback forms which are kept at the DD office. A visitor register records visitor's opinion which is normally satisfactory. With the introduction of guided tours the appreciation of Park values by visitors has improved.</p>
Expectations of many visitors are met.	Fair		
Expectations of most visitors are met.	Good✓		
Expectations of all most all visitors are met.	Very good		

*What is the compliance status on Supreme Court/ NTCA Guidelines on Ecotourism in TRs?

6.5 Are local communities supportive of TR management?

Condition	Category* ✓	Reference document(s)	Remarks
Local communities are hostile.	Poor	<ol style="list-style-type: none"> 1. Discussion with Park Officials 2. Meeting with EDC members on 10th April 2014 	<p>The DTR is managed with a strong protection centric approach. Of the 62 EDCs constituted during the India-Ecodevelopment Project, 34 are currently operational. In the meeting with EDC Parsia, Moura and Mudino Chari EDCs, it was noted that the EDCs have some money in their CDF and were willing to work with the Park officials in livelihood improvement programmes and park protection. However greater efforts are required from the management to elicit local community support.</p> <p>It is also reported that local communities have at times turned hostile against the management due to the protection centric approach. There is a need to include the local communities in the decision making process, especially when it comes to the collection of NTFPs from the buffer areas of the TR.</p> <p>DTR being one of the most important PAs in UP is supported well by local administration and by the Government as well.</p>
Some are supportive.	Fair✓		
Most locals are supportive of TR management.	Good		
All local communities supportive of TR management.	Very good		

*There could be many reasons for disenchantment. It could be real because of managerial neglect or the managerial efforts could be appropriate but there could be local elements/organizations who would like to keep the disaffection simmering for their own ulterior motives. Likewise success could be entirely because of the efforts of managers or they might be fortunate in striking partnerships with credible NGOs. Assessment may take the prevailing causes into account.

7. MEE Score Card⁺

Framework Element Number	Framework Element Name	Number of Criteria (a)	Maximum Mark per question (b)	Total (a x b)	Marks obtained for the Element	Overall MEE Score and % age
1.	Context	04	10	40	27.50	70.97 %
2.	Planning	07	10	70	52.50	
3.	Inputs	05	10	50	40.00	
4.	Process	06	10	60	37.50	
5.	Outputs	04	10	40	27.50	
6.	Outcomes	05	10	50	35.00	
Total		31		310	220.00	

⁺*Efforts will be made by the NTCA-WII-MEE Team to address the issue of assigning 'differential' weightages to the 31 Assessment Criteria including 'normalization'.*

Assessment Criteria for addressing issues relating to Climate Change & Carbon capture in the Tiger Reserves (TRs)

1. *Additional Criteria on Climate Change: Is the TR being consciously managed to adapt to climate change?*

Condition	Category* ✓	Comment/ Explanation	Next Steps
There have been no efforts to consider adaptation to climate change in management	Poor		
Some initial thought has taken place about likely impacts of climate change, but this has yet to be translated into management plans	Fair		
Detailed plans have been drawn up about how to adapt management to predicted climate change, but these have yet to be translated into active management.	Good		
Detailed plans have been drawn up about how to adapt management to predicted climate change, and these are already being implemented	Very good		

***Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

2. *Additional Criteria on Climate Change: Is the TR being consciously managed to prevent carbon loss and to encourage further carbon capture?*

Condition	Category* ✓	Comment/ Explanation	Next Steps
Carbon storage and carbon dioxide capture have not been considered in management of the TR	Poor		
Carbon storage and carbon dioxide capture have been considered in general terms, but has not yet been significantly reflected in management	Fair		
There are active measures in place to reduce carbon loss from the TR, but no conscious measures to increase carbon dioxide capture	Good		
There are active measures in place both to reduce carbon loss from the TR and to increase carbon dioxide capture	Very good		

***Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

Management Effectiveness Evaluation (MEE) of Corbett Tiger Reserve

1. Context

1.1 Are the values of the TR well documented, assessed and monitored?

Assessment criteria			
Condition	Category* (Tick ✓)	Reference document(s)	Remarks
Values not systematically documented, assessed and monitored.	Poor	1. Draft Tiger Conservation Plan (2009-10 to 2018-19)	1. One of the oldest conservation areas in the country, CTR is a significant core unit of the Terai Arc landscape. Rich in flora represented by moist Bhabar and Shivalik Sal forests, riverine forests and extensive grasslands (Chauris), CTR consequently also contains a rich animal diversity.
Values generally identified but not systematically assessed and monitored.	Fair	2. Researched information in various academic journals and reports, both in-house and by external agencies.	2. The floral and faunal inventories are available and species of high conservation values are systematically studied and monitored. The scientific organizations like WII, BNHS, ZSI, WWF, Delhi, Pantnagar and Kumaun Universities, CSD, IIRS, FRI etc. have been engaged in biodiversity studies and have produced reports that help CTR in listing and monitoring the values.
Most values systematically identified, assessed and monitored.	Good ✓	3. Monitoring protocols related to tiger monitoring	3. The historical records such as compartment history offer good benchmarks, besides the contemporary scientific information.
All values systematically identified, assessed and monitored.	Very good	4. Annual Reports of CTR 5. FSI data on CTR 6. Discussion with the TR officials 7. List of documents attached as Annexure I	4. Monitoring of predator-prey species in accordance with the NTCA protocol and WII methodology is being regularly undertaken. 5. The vegetation changes over the years have been attempted by IIRS and there is good information on watershed and associated values.

1.2 Are the threats to TR values well documented and assessed*?

Condition	Category* (Tick ✓)	Reference document(s)	Remarks
Threats not systematically documented or assessed.	Poor	1. Draft Tiger Conservation Plan (2009-10 to 2018-19)	1. The TCP has systematically identified threats with general classification of the vulnerable areas. Maps with accurate GPS location of such areas are available right up to frontline staff.
Threats generally identified but not systematically assessed.	Fair	2. Annual Reports 3. Long Range Patrolling Schedule	2. Major threats include human-wild animal conflict on the periphery of CTR, lantana infestation in forest fringes, danger of illegal movement of unscrupulous elements for high value species, grazing in the Buffer Zone by cattle, porosity of southern boundary, fires, unplanned development around CTR for catering to high volume of tourism and settlement of Gujar communities.
Most threats systematically identified and assessed.	Good ✓	4. Fire Plan (2013-14) 5. Security Plan (2011) 6. E-Eye Plan (2011-12) 7. Discussions with field officers and staff of CTR	3. CTR management is well aware of the threats and has necessary protection strategies in place to deal with them.
All threats systematically identified and assessed.	Very good		

*This assessment should be based on number, nature and extent of threats

1.3 Is the 'Core Area' of TR free from human and biotic interference?

Assessment criteria*			
Condition	Category* (Tick ✓)	Reference document(s)	Remarks
The 'Core Area' has extensive human and biotic interference.	Poor	1. Draft Tiger Conservation Plan (2009-10 to 2018-19)	1. The Corbett National Park and Sonanadi WLS constitute the core critical habitat of CTR. While there are no permanent villages in the core, 181 Gujar settlements (nomadic cattle herders) temporarily occupy parts of the core from April to June for grazing their cattle as traditional practice. A seasonal activity, it nevertheless, does cause significant impact during the period of their occupation, specially related to lopping of trees, grazing by their cattle and movements within the core area b/w settlement to settlement. 2. A proposal to rehabilitate the Gujars has been prepared and pending implementation due to issues related to FRA, 2006. The management reports that the rehabilitation could happen after settling the FRA issue related to Gujars. Other than this, there is no biotic interference in the core area of CTR
The 'Core Area' has some human and biotic interference.	Fair ✓	2. No.1783/12-1(10),Lansdowne, April 4, 2014 from ACF Kalagarh TR to FD CTR	
The 'Core Area' has little human and biotic interference.	Good	3. Annual Reports of CTR	
The 'Core Area' has no human and biotic interference.	Very good	4. Discussions with field officers and staff of CTR	

***This assessment should be based on existence of human settlements/ villages inside the core area; livestock grazing, cultivation, encroachments etc, resource extraction/ livelihood dependence of local communities and should reflect the overall interference due to all the above factors.**

1.4 Has the TR complied with the four statutory* requirements?

Assessment criteria			
Condition	Category* (Tick ✓)	Reference document(s)	Remarks
None of the four statutory requirements met	Poor	8. Notification Number WL – 05/X-2-2010-19(34)/2006 dated 26 February 2010 on core and buffer notification	1. Boundaries of core and buffer have been duly notified vide reference no. 1 and delineated on ground. CTR has a total core area of 821.99 sq km and buffer area 466.32 sq km. 2. The Tiger Conservation Foundation for CTR has been duly constituted vide reference no 2. 3. Vide reference 3, the State Level Steering Committee, under the chairman ship of Chief Minister has been constituted. 4. The TCP for CTR was finalized and submitted to NTCA during Oct 2013. NTCA has suggested certain revisions, which are being attended to by CTR management and the final draft is likely to be submitted to NTCA by June 2014. 5. Tripartite MoU has been signed as required. 6. The three SOPs have been received and are being translated into vernacular languages for wider use.
One of the four statutory requirements met	Fair	9. No 741. Order file no. 05788ha dated 14.09.2012 by the society registrar, Kumaun Region, Haldwani, Uttaranchal	
Two/three of the four statutory requirements met	Good✓	10. Constitution of State level Steering Committee?	
All four statutory requirements met	Very good	11. Tripartite MoU signed during 2009-10 12. Draft Tiger Conservation Plan (2009-10 to 2018-19) 13. SOPs by NTCA 14. Discussions with field officers and staff of CTR	

***Statutory requirements are (1) Legal delineation and notification of Core and Buffer Areas; (2) Establishment of Tiger Conservation Foundation; (3) Development of a Tiger Conservation Plan; and (4) Constitution of a State-level Steering Committee under the Chairmanship of the Chief Minister**

2. Planning

2.1 Status of Tiger Conservation Plan (TCP)?

Assessment criteria			
Condition	Category* (Tick)	Reference document(s)	Remarks
No TCP in place.	Poor	1. Draft TCP (2009-10 to 2018-19) 2. Discussions with field officers and staff of CTR	1. The TCP was prepared following process of consultation and incorporation of base line information and was submitted to the NTCA during OCT 2013. 2. NTCA has suggested improvements and the TCP is likely to be resubmitted by June 2014 after incorporating the revisions. 3. The reference letters could not be made available to the Committee.
TCP is under preparation	Fair		
TR has a relevant TCP	Good✓		
TR has a comprehensive and relevant TCP	Very good		

2.2 Does the TR safeguards the threatened biodiversity values?

Assessment criteria*			
Condition	Category* (Tick ✓)	Reference document(s)	Remarks
TR does not safeguard the threatened biodiversity values.	Poor	1. Draft Tiger Conservation Plan (2009-10 to 2018-19) 2. Fire Plan (2013-14) 3. Fire Scheme 2014 4. Long range patrolling reports like letter no. 256/(6-4) CLRG dated Kalagarh, Feb 19, 2014 from DD CTR 5. Discussions with field officers and staff of CTR	1. CTR management effectively safeguards the values. The protection strategy is based on the principle of rigorous foot patrolling with use of technology and conceives three layers where protection inputs are deployed. 2. The innermost core is protected by regular patrolling, deployment of adequate number of chowkis and use of technology like GPS and wireless networks. 3. One of the best practices includes long range patrolling of 5 to 6 days, cutting across ranges and involving staff from various ranges. There are systems of briefing and debriefing and once a month; such patrolling terminates at a point where often the FD and DDs attend to learn about the status of protection of the core. 4. The second layer consists of periphery of the core and buffer areas, where Tiger Protection Force staff, comprising of Ex-Army and local watchers, man the chowkis and outposts. 5. The Third Layer is at the periphery of the TR and beyond, including the corridors and is mainly protected through inter-departmental cooperation, use of informers' network and use of technology. The deployment of 9 towers of 'e-eye' is a case in point, which continuously watches over the southern boundary with UP. A number of alerts have been generated to prevent any untoward happening in the park. 6. Fire management is another effective practice, for which a standard procedure is available. With the help of IIRS, SMS alerts are generated and action taken. 7. The lantana control operation developed with the help of Dr C.R. Babu of Delhi University has become a standard procedure and is effectively used. 8. The buffer area has resource use from the villages and Gujar settlements, and the core area
TR safeguards a few threatened biodiversity values.	Fair		
TR safeguards a large number of threatened biodiversity values.	Good		
TR safeguards all threatened biodiversity values.	Very good✓		

			<p>does have resource use seasonally from Gujars. However, their movement and activities are constantly watched and no incident was reported during the past year related to local villagers' or Gujars' involvement in illicit activities.</p> <p>9. The likely threats, which may occur from the 21 villages located within the buffer and about 70 villages located within 5km of the buffer zone boundary are well recognized by CTR management.</p>
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***Remarks need to elaborate on the kind of safeguards and how they work or are intended to work**

2.3 Are stakeholders given an opportunity to participate in planning process?

Assessment criteria*			
Condition	Category* (Tick ✓)	Reference document(s)	Remarks
Little, if any opportunity for stakeholder participation in planning.	Poor	1. Draft Tiger Conservation Plan (2009-10 to 2018-19). 2. Discussion with EDC members at Morghahti on 6 th April, 2014. 3. Discussions with field officers and staff of CTR.	1. The preparation of management plan involved limited stakeholder consultation, mostly with the tourism entrepreneurs and local officials; however the village micro planning process involved the EDCs in one-time planning. 2. For fire planning, local stakeholders are consulted. There are local level NGOs like Corbett Tiger Foundation and institutions like WWF, WTI which have been involved in planning for protection and human wildlife conflict etc. 3. Tourism being the most sought after activity, includes Stakeholder participation from local level operators to inter-departmental consultations.
Stakeholders participate in some planning.	Fair		
Stakeholders participate in most planning processes.	Good✓		
Stakeholders routinely and systematically participate in all planning processes.	Very good		

***The result of participation must show in the field and not merely reported as a routine exercise.**

2.4 Are habitat management programmes systematically planned, relevant and monitored?

Assessment criteria*			
Condition	Category* (Tick ✓)	Reference document(s)	Remarks
Habitat management programmes are entirely ad-hoc.	Poor	1. Draft TCP for Core and buffer. 2. Discussions with the field officers and staff	1. The habitats have been assessed and analyzed. Water availability and habitat status is known. The general principle adopted includes habitat amelioration programmes in the core without much intervention. 2. In the buffer area, habitat management programmes are not given due recognition except where communities are involved. Lopping inside CTR has been prohibited 3. Under the programme conservation of water bodies, some water management works along the streams and nallas have been taken. 4. Similarly, important corridors leading to and from CTR have been identified. 5. A hog-deer recovery plan developed by Dr. CR. Babu Delhi of University of Delhi has been submitted to NTCA.
Limited planning and monitoring programmes are in place for habitat management.	Fair		
Habitat management programmes are generally planned and monitored.	Good✓		
Habitat management programmes are thoroughly planned and monitored.	Very good		

***Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

			6. Systematic habitat management programme exists for removal of Lantana in the critical tiger habitats under the guidance of Delhi University. 7. The relocated Gujar settlements are regularly monitored and grasslands status is maintained by management interventions. The 'Chauras' such as Dhikala have regular management programmes, which include patch burning in cool winters. 8. The southern boundary of CTR has Teak plantations, which are not managed any more. 9. Brief discussion on habitat management is found in the draft TCP.
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***This assessment should be primarily based on habitat management programmes in relation to habitats for species that are threatened (IUCN categories), are habitat specialists, subjected to seasonal movements, wide ranging with emphasis on the breeding and rearing habitat and may include factors such as food, water, shelter (all connotations). Habitat structure, composition, unique patches of vegetation and sensitive sites, sources of water and their distribution are integral. Corridors within buffer zone are critically important. For example, all riparian habitats. Have these been addressed? Is their a planning process in place?**

2.5 Does the TR has an effective protection strategy*?

Assessment criteria*			
Condition	Category* (Tick ✓)	Reference document(s)	Remarks
TR has little or no protection strategy.	Poor	1. Draft Tiger Conservation Plan (2009-10 to 2018-19) 2. 24x7 real time surveillance systems reports from control centre Kalagarh 3. Long ranged patrolling 4. Discussions with the field officers and staff 5. Protection/security plan 2011 updated	1) The TCP has systematically identified threats with general classification of the vulnerable areas. Maps with accurate GPS location of such areas are available right up to frontline staff. 2) The protection strategy is based on the principle of rigorous foot patrolling with use of technology' and conceives three layers where protection inputs are deployed. 3) The innermost core is protected by regular patrolling, deployment of adequate number of chowkis and use of technology like GPS and wireless networks. One of the best practices includes long range patrolling of 5 to 6 days cutting across ranges and involving staff from various ranges. There are systems of briefing and debriefing in once a month; such patrolling terminates at a point where even the FD and DDs attend to learn about the status of protection of the core. 4) The second layer consists of periphery of the core and buffer areas, where Tiger Protection Force staff, comprising of Ex-Army and local watchers, man the chowkis and outposts. 5) The Third Layer is at the periphery of the TR and beyond, including the corridors and is mainly protected through inter-departmental cooperation, use of informers' network and use of technology. 6. The deployment of 9 towers of 'e-eye' is a case in point, which continuously watches over the southern boundary with UP. A number of alerts have been generated to prevent any untoward happening in the park. CTR management finds E-Eye very useful deterrent and reports reduction of poaching cases from 23 (2011-12) to 14 (2012-13) to 03 (2013-14) and also illicit felling from 17 (2011-12) to 10 (2011-12) to 7
TR has an ad-hoc protection strategy.	Fair		
TR has a generally relevant protection strategy but is not very effective.	Good		
TR has a comprehensive and very effective protection strategy.	Very good ✓		

			<p>(2013-14).</p> <p>7. CTR is well equipped with 6 ranges and 37 beats, which includes 39 forest Chowkis, 35 fire cue stations, 128 watch towers, 11 anti poaching camps, and good communications networks using vehicles and wireless sets.</p> <p>8. A total of 221 permanent staff, 47 casual workers and 133 operation lord watchers are engaged in protection duties. Annually security plans are prepared at division levels and followed. However a formal security audit has not started and STPF has not been constituted.</p> <p>9. The unified control with the FD of both buffer and core has improved protection of the park. No significant offence has been reported in the park for the last one year.</p>
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***This assessment takes inter-alia into account the nature of threats, the number and location of patrolling camps and foot and mobile patrolling, needs that relate to available manpower, terrain difficulties, practicability of area coverage, readiness to contain specific threats with necessary support and facilities.**

2.6 Has the TR been effective in the mitigation of human-wildlife conflicts?

Assessment criteria*			
Condition	Category* (Tick ✓)	Reference document(s)	Remarks
Human-wildlife conflicts are significant but poorly addressed.	Poor	1. Draft Tiger Conservation Plan (2009-10 to 2018-19) 2. GO no. 2228/X-2-2012:19(37/2003) 10 Dec 2012 3. Human Wildlife Conflict compensation payment rules 2012	1. From 2011-12 to 2013-14, there have been 10 cases of human deaths, 30 cases of human injury for which Rs. 26.75 lakh were paid as compensation. There have also been 1646 cases of cattle loss over the last 3 years, for which an amount of Rs. 90.61 lakh have been paid as compensation. There have also been 4488 cases of crop damage, for which an amount of Rs. 24.42 lakh have been disbursed over the last three years. 2. While the conflict cases keep on recurring in an around CTR periodically, the compensation payment mechanism has been streamlined vide Government rules and G.O. quoted in the reference, which provides speedy response. 3. At the level of DFOs, an amount of Rs. 20 lakh is made available as corpus fund for immediate payment of compensation/Ex-gratia. The rate for Human death is now Rs. 3 lakh and for permanent disability Rs. 2 lakh. Further, the Government prescribes for Rs. 50,000 for seriously injured person and Rs. 15,000 for ordinary injuries. 4. The conflict sites are often movement passages of animals like tigers and elephants, where people have settled.
TR has been able to mitigate few human-wildlife conflicts.	Fair		
TR has been able to mitigate many human-wildlife conflicts.	Good✓		
TR has been effective in mitigating all human-wildlife conflicts.	Very good		

***Judgment needs to consider staff training, capabilities, equipment, logistics, local attitude and politics (negatively aided and/or abetted), assistance of relevant agencies (e.g. police. Local administration, local people themselves) PR, follow-up actions and monitoring**

2.7 Is the TR integrated into a wider ecological network/ landscape following the principles of the ecosystem approach?

Assessment criteria*			
Condition	Category* (Tick ✓)	Reference document(s)	Remarks
TR not integrated into a wider network/ landscape.	Poor	1. Draft Tiger Conservation Plan (2009-10 to 2018-19) 2. Discussions with the field officers and staff	1. CTR connects with Pilibhit and Bijnor forest divisions in U.P, connecting DTR in the east and Kotdwar and Lansdown forest divisions in the west and north to further link with the Rajaji NP.
Some limited attempts to integrate the TR into a network/ landscape.	Fair		2. All important corridors have been identified and the existing buffer area has been integrated from the neighboring territorial divisions. The Corridors in the Ramnagar forest division, Terai west forest division, Social Forestry and plantation divisions Bijnor, and Lansdowne and Garhwal forest divisions have all been mapped.
TR is generally quite well integrated into a network/ landscape.	Good✓		3. Through inter-state and inter-divisional patrolling, the corridors are provided reasonable protection.
TR is fully integrated into a wider network/ landscape.	Very good		4. Additionally, on the initiative of the CTR management, Amangarh Forest Reserve in UP (Southern side) extending to 80 sq km has been declared by UP Government as buffer of CTR. 5. Further, Kotri and Dugadda ranges of Lansdowne Forest Division have been proposed as additional buffer to CTR for establishing the linkage to the Rajaji NP in the west. 6. The matter of regulation on land use around CTR has been discussed within the department and also at the Government level. 7. Administrative mechanisms to integrate the TR into large landscape require further strengthening

***Assessment needs to consider the scope of opportunities on the landscape scale that exist. Consider whether any attempts have been made and what are these? Have all the important corridors been identified? What actions are planned/implemented for their security? Have the Forest Working Plans and Forest Development Corporation Plans within the identified landscapes taken cognizance of such new requirement?**

3. Inputs

3.1 Are personnel adequate, well organized and deployed with access to adequate resources in the Tiger Reserve (TR)*?

Assessment criteria*			
Condition	Category* (Tick ✓)	Reference document(s)	Remarks
Few, personnel explicitly allocated but poorly supported for TR management.	Poor	1. Draft Tiger Conservation Plan (2009-10 to 2018-19) 2. Discussions with the field officers and staff	1. For managing 2 divisions, through 6 ranges and 37 beats, the CTR has total permanent staff strength of 221.
Some personnel explicitly allocated for TR management but not adequately supported and systematically linked to management objectives.	Fair	3. Security Plan 2011 updated	2. Vacancies exist at the level of Forest Guard and Forester. The beats forest Chowkis (39), Fire Crue Stations (35), Watch Towers (128), are managed with the help of 47 casual workers and 133 anti poaching watchers under the project operations lords, which was started in the year 2001 and involved local villagers in protection activities. 3. For Tiger Protection Force, 28 Ex-service men have been deployed in the CTR. 4. There are presently 37 beats in the CTR which have been proposed to be increased to 76 for

Some personnel with fair support explicitly allocated towards achievement of specific TR management objectives.	Good✓		effective management. All the staff available is deployed for meeting the objective of protecting CTR.
Adequate personnel appropriately supported and explicitly allocated towards achievement of specific TR management objectives.	Very good		5. Looking at the age profile of the staff, it is seen that 28% of the Forest Guards are below 40 years, 41% b/w 40 to 50 years and 31% are above 50; Similarly at the Foresters level 6% are below 40 years, 11% between 40 to 50 and 83% above 50. Most of the Protection watchers are more than 40 years of age.

***This assessment should inter-alia be based on number of personnel allocated for attainment of TR objectives at the Range , Round, Beat and Patrolling camps levels or as relevant to the needs (sanctioned posts vis- a- vis existing personnel and needs beyond the sanctioned strengths. It is possible that posts have last been sanctioned several years back that do not now account for the current needs)**

3.2 Are resources (vehicle, equipment, building etc.) adequate, well organized and managed with desired access?

Assessment criteria*			
Condition	Category* (Tick ✓)	Reference document(s)	Remarks
Few, if any, resources explicitly allocated for TR management.	Poor	1. Draft Tiger Conservation Plan (2009-10 to 2018-19)	There are about 480 buildings used for various offices, residential accommodation, field check posts, beat station, fire cru stations etc. distributed to protect CTR from all around. CTR has adequate number of weapons which includes 73 12 bore shotguns, and 75 .315 bore rifles, 11 revolvers, and 10 pump action guns. 12 jeeps, 30 motor cycles, are available for the mobility of the staff and officers. In addition, there are 6 tractors and 4 tankers which are employed for specific requirements related to water management etc. and transport of staff to enter camps. CTR has also 2 buses attached to the training centre Kalagarh. There are 2 repeater wireless stations, 98 base stations, 211 walky talkies are available for communication. In addition 59 GPS available to frontline staff improves the management of CTR.
Some resources explicitly allocated for TR management but not systematically linked to management objectives.	Fair	2. Discussions with the field officers and staff	
Some resources explicitly allocated towards achievement of specific TR management objectives.	Good✓		
Adequate resources explicitly allocated towards achievement of specific TR management objectives.	Very Good		

***Assessment: These form a variety of resources. These may be segregated into immovable (structures) and movable categories and each further may be considered under the essential and desirable categories. It is best to start with what are the minimum needs to attain each objective, what is available and manner of use/deployment. The proportions of the 'essentials' and 'desirables' along the importance gradient of objectives would serve as pointers for score categories. Specific remarks would be vitally important.**

3.3 Are financial resources other than those of the State linked to priority actions and are funds adequate, released timely and utilized?

Assessment criteria*			
Condition	Category* (Tick ✓)	Reference document(s)	Remarks
Resource allocation is ad-hoc, funds are inadequate and seldom released in time and not utilized.	Poor	1. Annual Progress reports for 1010-11, 2012-13, 2013-14	Under the central Scheme, the CTR has received Rs. 591.31 lakh (2011-12), Rs. 801.88 (2012-13) and Rs. 729.53 lakh (2013-14). The expenditure for all the three years has been 100 %. In the central schemes NTCA has been providing bulk of the money which has varied from 501.46 (2011-12) to 534.54 (2012-13 and 552.26 lack (2013-14). NTCA also provided an additional amount of Rs. 21 lakh during 2013-14 which was completely utilized. 13 th Finance commission also supports CTR for forest protection and conservation and provided Rs. 65.2 lakh (2011-12), 194.49 (2012-13), 132.28 lakh (2013-14). In addition the CTR also gets small amount under Project Elephant and Integrated Forest Protection Scheme of the Govt. of India. While the CTR reports adequacy of funds, it finds inadequacy of funds for maintenance of Chowkis and roads, vehicles, fuel, technical supports and staff welfare n the central share. During 2013-14 NTCA did not released the second installment due to issues related to Utilization Certificate.
Some specific allocation for management of priority action. Funds are inadequate and there is some delay in release, partially utilized.	Fair		
Comprehensive planning and allocation that meets the most important objectives. Generally funds released with not much delay and mostly utilized.	Good		
Comprehensive planning and allocation of resources for attainment of most objectives. Funds generally released on-time and are fully utilized.	Very good✓		

***Obtain details of funds released by NTCA and their utilization by TR in the last 3 years and indicate them under 'Remarks'. Also comment on the problems associated with funds and their mitigation.**

3.4 Are financial resources from the State linked to priority action and funds adequate, timely released and utilized for the management of Tiger Reserve?

Assessment criteria*			
Condition	Category* (Tick ✓)	Reference document(s)	Remarks
Resource allocation is ad-hoc, funds are inadequate and seldom released in time and not utilized.	Poor	1. Annual Financial Progress reports for 1011-12, 2012-13, 2013-14	Normally the funds are released on the basis of APO which is submitted in time to state govt. The state has been supporting CTR by providing plan and non-plan fund from the state sector. CTR received Rs. 673.13 lakh (2011-12) 113.69 lakh (2012-13) and 119.41 lakh (2013-14) under the non plan schemes. In the plan component of the budget, CTR receive Rs. 133.89 lakh (2011-12), 140.17 (2012-13), and 123.03 (2013-14). The state plan funds are released for fire protection, human wildlife conflict, habitat improvement, forest road improvement, ecotourism etc. The park has been fully utilizing these funds. In addition CTR also received funds under CAMPA and they amounted to Rs. 32.30 lakh (2011-12), 63.48 (2012-13) and 271.33 (2013-14). The fund utilization was more than 95%. During 2013-14 the State Govt also provided funds for Gujar rehabilitation to the tune of 95.10 lakh. The statement show full utilization of these funds. As part of convergence, CTR also draws funds from the district level schemes, which amounted to Rs 9.5 lakh (2011-12), 5.96 (2012-13) and 3.19 (2013-14). Most of the maintenance works are taken up with the help of State funds; however a quarterly ceiling on cash-credit limit occasionally causes difficulty in timely availability of funds.
Some specific allocation for management of priority action. Funds are inadequate and there is some delay in release, partially utilized.	Fair		
Comprehensive planning and allocation that meets the most important objectives. Generally funds released with not much delay and mostly utilized.	Good		
Comprehensive planning and allocation of resources for attainment of most objectives. Funds generally released on-time and are fully utilized.	Very good✓		

***Obtain details of funds released by State and their utilization by TR in the last 3 years and indicate them under 'Remarks'. Also comment on the problems associated with funds and their mitigation.**

3.5 What level of resources are provided by NGOs?

Assessment criteria			
Condition	Category* (Tick ✓)	Reference document(s)	Remarks
NGOs contribute nothing for the management of the TR.	Poor	1. Discussion with field officers and staff	NGOs, National and local work closely with CTR management. WWF has provided camping equipments, metal detectors etc. and was also involved in providing interim relief in conflict cases. WWF has also been working on Tiger monitoring in the Ramnagar Forest Divisions and Terai West division since 2010 and providing imp support for landscape level issues. A local NGO names Corbett Tiger Foundation has covered 357 villages in 12 administrative blocks of 4 districts and assisted CTR, and its adjoining forest in providing interim relief in cases of human wildlife conflict. TRAFFIC India has provided a sniffer dog which is kept at Kalagarh and used for trekking. CTR has also received 2 jeeps from WCT which has also promised generator sets and Rs. 50 lakh for strengthening 20 forest guard chowkis. A settlement known as Sunderkhal is always in the news for human wildlife conflict because it is situated in the corridor of Tiger between Corbett and Ramnagar. Talks are ongoing between CTR and TI for relocation of Sunderkhal village.
NGOs make some contribution to management of the TR but opportunities for collaboration are not systematically explored.	Fair		
NGOs contributions are systematically sought and negotiated for the management of some TR level activities.	Good✓		
NGOs contributions are systematically sought and negotiated for the management of many TR level activities.	Very good		

4. Process

4.1 Does the TR have manpower resources trained in wildlife conservation for effective TR management?

Assessment criteria*			
Condition	Category* (Tick ✓)	Reference document(s)	Remarks
No trained officers and frontline staff in the TR.	Poor	1. Draft Tiger Conservation Plan (2009-10 to 2018-19) 2. Discussions with the field officers and staff	The Field Director, Deputy Director and one ACF have undergone Diploma course in WII. One of its kind in the country Corbett Wildlife Training center in Kalagarh provides exclusive trainings to all staff in the state as well as from UP on Wildlife management. The centre is providing training on Wildlife management since 1998-99 and has trained 5598 officers and staff. Over the last 3 years starting from 2011-12, a total of 31 wildlife management training programmes were organized which were attended by 8 CCF/CF, 15 DFO, 35 ACF, 116 RO/DRO, 265 Foresters, and 419 Forest Guards. It has also trained NGOs and EDC member's no. 46 over the last 3 years. More than 80% of frontline staff and a large no. of protection watchers have been given elementary training on wildlife issues. In the draft TCP a staff development plan is included.
Some trained officers and few trained frontline staff, posted in the TR.	Fair		
All trained officers and fair number of trained frontline staff posted in the TR.	Good		
All trained officers and most of the trained frontline staff is posted in the TR.	Very good✓		

*Indicate % of trained staff in various categories.

4.2 Is TR staff management performance linked to achievement of management objectives?

Assessment criteria			
Condition	Category* (Tick ✓)	Reference document(s)	Remarks
No linkage between staff management performance and management objectives.	Poor	1. Discussions with the field officers and staff 2. Outlook magazine April 2014	CTR is one of the most important Conservation area in the country and has been duly recognized over the years by receiving various kind of awards, the latest been OUTLOOK travelers for the best national park during April 2014. The meritorious services of staff are recognized and entered in the service book. However the staff promotions are governed by the State policy on promotion and is not linked to meritorious service.
Some linkage between staff management performance and management objectives, but not consistently or systematically assessed.	Fair		
Management performance for most staff is directly linked to achievement of relevant management objectives.	Good✓		
Management performance of all staff is directly linked to achievement of relevant management objectives.	Very good		

4.3 Is there effective public participation in TR management and does it show in making a difference?

Assessment criteria			
Condition	Category* (Tick ✓)	Reference document(s)	Remarks
Little or no public participation in TR management.	Poor	1. Discussions with CTR officers and field staff 2. Discussion with EDC members at Morghati on dated 6 April, 2014	Tourism being a significant activity consultations take place b/w park officials, other dept. and local stakeholders. Structured meetings occasionally take place with EDC members. However unstructured meetings with local stakeholders take place on wild animal human conflict and fire management. CTR has developed web based feedback system which allows stakeholders to communicate issues of concern to Park.
Opportunistic public participation in some of the relevant aspects of TR management.	Fair		
Systematic public participation in most of the relevant aspects of TR management.	Good✓		
Comprehensive and systematic public participation in all important and relevant aspects of TR management.	Very good		

***Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

4.4 Is there a responsive system for handling complaints and comments about TR management?

Assessment criteria			
Condition	Category* (Tick ✓)	Reference document(s)	Remarks
Ad-hoc approach to handling complaints.	Poor	1. Discussions with CTR officers and field staff 2. Complaint Register 3. Toll Free Number 18001804033	Suggestions boxes have been placed at the point of entry for visitors in CTR. Visitors feedback are regularly obtained. In respect of complaints, the UT Govt. has opened a web portal "Samadhan" and all complaints lodged on this portal are immediately attended to. With Respect to complaints related to staff welfare, the respective Range Officers have to attend to such complaints and take corrective actions. A toll free number is available for public.
Complaints handling system operational but not responsive to individual issues and with limited follow up.	Fair		
Coordinated system logs and responds effectively to most complaints.	Good✓		
All complaints systematically logged in coordinated system and timely response provided with minimal repeat complaints.	Very good		

***Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

4.5 Does TR management address the livelihood issues of resource dependent communities, especially of women?

Assessment criteria			
Condition	Category* (Tick ✓)	Reference document(s)	Remarks
No livelihood issues are addressed by TR management.	Poor	1. Discussions with CTR officers and field staff 2. Meeting with EDC members at Morghati on 6 April 2014	Tourism is the main state of employment to the local peoples of CTR and all the vehicles which take visitor inside CTR are the source of the employment to the local people. CTR also provides employment to local communities in park management. Activities. Employment for local communities in park management like road maintenance, fire removal other activities. On the UP Border in the southern part of CTR local villagers are permitted to use the Kalagarh Senai Road which helps them in their livelihood matters. Structured livelihood programme are being planned and expected to be implemented during current plan period. CTR has established a center of Eco-tourism and sustainable livelihood which provides livelihood support to Graama Vikas Samiti at Choti Haldwani through Corbett Heritage Trail. The number of mandays generated in the last 3 years by the funds received from Govt. of India is Rs. 87,360.00 for 2011-12, Rs. 72,045.00 for 2012-13 and Rs. 66,803.00 for 2013-14.
Few livelihood issues are addressed by TR management.	Fair✓		
Substantial livelihood issues are addressed by TR management.	Good		
Livelihood issues of resource dependent communities especially of women are addressed effectively by TR managers.	Very good		

4.6 Has the TR planned and implemented the voluntary 'Village Relocation' from the core areas?

Assessment criteria*			
Condition	Category* (Tick ✓)	Reference document(s)	Remarks
No planning and no implementation	Poor	1. Discussions with CTR officers and field staff 2. Letter No. 1873/12-1 (10) dated Landsdown April 4, 2014 from Deputy Director, Kalagarh TR Division.	The Corbett National Park and Sonanadi WLS constitute the core critical habitat of CTR. While there are no permanent villages in the core, 181 Gujar settlements (nomadic cattle herders) temporarily occupy parts of the core from April to June for grazing their cattle as traditional practice. A proposal to settle the Gujars has been prepared and pending implementation due to issues related to FRA, 2006. The management reports that the rehabilitation could happen after settling the FRA issue related to Gujars. The Village Sunderkhal which lies in the corridor b/w CTR and Ramnagar Forest division is also being considered for relocation for which initial negotiations have started.
Plans have been made but no implementation	Fair		
Plans have been made and some implementation is in progress	Good✓		
Plans have been made and are being actively implemented	Very good		

***Assessment will look into the village relocation planning process including availability of manpower, financial resources and NGO support, if any.**

5. Output

5.1 Is adequate information on TR management publicly available?

Assessment criteria			
Condition	Category* (Tick ✓)	Reference document(s)	Remarks
Little or no information on TR management publicly available.	Poor	1. www.corbettnationalpark.in online link to Corbett TR – provides basic tourist related information on the TR and contact details. 2. www.corbettonline.gov.uk in 3. Brochures and posters available. 4. Discussions with CTR officers and field staff	The website indicated in the reference provides basic information on CTR, largely related to tourism to public. Brochures and posters are available and the information center at Dhangarhi provides introductory orientation to visitors. For management related specific information the Office of FD and DD can be approached.
Publicly available information is general and has limited relevance to management accountability and the condition of public assets.	Fair✓		
Publicly available information provides detailed insight into major management issues and condition of public assets.	Good		
Comprehensive reports are routinely available in public domain on management and condition of public assets.	Very good		

5.2 Are visitor services and facilities appropriate and adequate?

Assessment criteria*			
Condition	Category* (Tick ✓)	Reference document(s)	Remarks
Visitor services and facilities do not exist.	Poor	1. Draft Tiger Conservation Plan (2009-10 to 2018-19) 2. www.corbettnationalpark.in and www.corbettonline.gov.uk.in	There are 202528 tourists from India and 7734 tourist from abroad in 2011-12 and 200656 tourists from India and 6654 tourist from abroad in 2012-13 and 206413 tourists from India and 5262 tourist from abroad in 2013-14 visited the CTR. The Draft TCP has details of the locations of 20 Forest Rest houses, 8 tourism complexes, 3 NICs and 2 museums and one library. All the tourism related bookings are online and the gypsies take visitors to CTR with a local guide. The boarding and lodging facilities are appropriate, however Interpretation facilities need improvement. An amphitheatre at Dhikala has been designed with Gurjar Architecture and the paint used in the building is now marketed by Asian paints as Corbett Brown.
Visitor services and facilities are very basic.	Fair		
Visitor services and facilities are monitored from time to time and are fairly effective.	Good		
Visitor services and facilities are conscientiously maintained, regularly upgraded and monitored for visitor satisfaction	Very good ✓		

**Include the existence and quality of visitor and interpretation centers, including skills and capabilities of personnel manning these, TR related publications, films, videos; arrangements of stay (including places serving refreshments and food owned and managed by TR), watch towers and hides including safety factors, vehicles assigned for visitors including riding elephants, if any and their deployment, drinking water, rest rooms, garbage disposal, attended and self guided services in the field, visitor feedback on the quality of wilderness experience.*

5.3 Are research/ monitoring related trends systematically evaluated and routinely reported and used to improve management?

Assessment criteria*			
Condition	Category* (Tick ✓)	Reference document(s)	Remarks
Little or no systematic evaluation or routine reporting of trends.	Poor	1. List of research projects as Annexure I. 2. Draft Tiger Conservation Plan (2009-10 to 2018-19) 3. Discussions with CTR officers and field staff	One of the oldest conservation areas in the country, CTR is a significant core unit of the Terai Arc landscape. Rich in floral and faunal diversity. The floral and faunal inventories are available and species of high conservation values are systematically studied and monitored. The scientific organizations like WII, BNHS, ZSI, WWF-India, Pantnagar and Kumaun Universities, CSD, IIRS, FRI etc. have been engaged in biodiversity studies and have produced reports that help CTR in listing and monitoring the values. Monitoring of predator-prey species in accordance with the NTCA protocol and WII methodology is being regularly undertaken. The vegetation changes over the years have been attempted by IIRS and there is good information on watershed and associated values. A list of important research projects is attached as annexure I.
Some evaluation and reporting undertaken but neither systematic nor routine.	Fair		
Systematic evaluation and routine reporting of trends undertaken.	Good ✓		
Systematic evaluation and comprehensive reporting of trends undertaken and attempts made at course corrections as relevant.	Very good		

**Not all TRs attract projects and researchers and with exceptions, little research takes place on the TRs own steam because of systemic limitations. However, monitoring of some critical issues is expected e.g. population of tiger, co-predators and prey with insights into their demography and distribution (some opportunistic sampling by sightings, signs and spatial distribution during assessment would be extremely useful in terms of expert impression and as a pulse), monitoring incidence of livestock grazing, fires, weeds, sources of water, a variety of illegal activities typically associated with the reserve, wildlife health (e.g. epidemics, immunization of livestock) regeneration and change in vegetation, visitors and their activities, offence cases, ex-gratia payments e*

5.4 Is there a systematic maintenance schedule and funds in place for management of infrastructure/assets?

Assessment criteria			
Condition	Category* (Tick ✓)	Reference document(s)	Remarks
No systematic inventory or maintenance schedule.	Poor	1. Building maintenance register, Stock register, log books, miscellaneous maintenance records etc. 2. Draft Tiger Conservation Plan (2009-10 to 2018-19)	Maintenance register for buildings, roads etc. and log books for boats, vehicles are maintained properly. Similarly stock register are in place. However maintenance funds are in short supply.
Inventory maintenance is ad-hoc and so is the maintenance schedule.	Fair		
Systematic inventory provides the basis for maintenance schedule but funds are inadequate.	Good✓		
Systematic inventory provides the basis for maintenance schedule and adequate funds are made available.	Very good		

6. Outcomes

6.1 Are populations of threatened species declining, stable or increasing?

Condition	Category* (Tick ✓)	Reference document(s)	Remarks
Populations of key threatened/ endangered species are declining.	Poor	1. Draft Tiger Conservation Plan (2009-10 to 2018-19) 2. WII Data base 3. Discussions with CTR officers and field staff	Some of the important threatened species include Leopard, Hog Deer, Gharial, etc. While populations of predators are reported to be stable, more studies need to be done for estimating population trends of ungulates, specially hog deer.
Some threatened/ endangered species populations declining, some are increasing, most others are stable.	Fair✓		
Several threatened/ endangered species populations increasing, most others are stable.	Good		
All threatened/ endangered species populations either increasing or stable.	Very good		

**This needs to practically relate to the natural ecosystem potential rather than being driven merely by numbers and visibility. The assessment score may be elaborated under remarks.*

6.2 Is the population of tigers showing a declining, stable or increasing trend?

Condition	Category* (Tick ✓)	Reference document(s)	Remarks
Population of tiger is showing a declining trend	Poor	1. Draft Tiger Conservation Plan (2009-10 to 2018-19) 2. WII Data base 3. Discussions with CTR officers and field staff	As per All India Tiger census Corbett had 164 Tigers (151-178) during 2006, and the Tiger abundance increase to 214 (190-239). Correspondingly the areas occupied by the Tiger increased to 2287sqkm in 2010 from 1428sqkm in 2006.
Population of tiger is stable	Fair		
Population of tiger is showing an increasing trend	Good✓		
Population of tiger has significantly increased	Very good		

**This assessment should be based in the context of available population estimate (2010-11) and the outcomes of the currently ongoing Phase-IV analyses.*

6.3 Have the threats* to the TR being reduced/ minimized? Or is there an increase?

Condition	Category*(Tick ✓)	Reference document(s)	Remarks
Threats to the TR have not abated but have enhanced.	Poor	1. Discussions with CTR officers and field staff	Due to effective protection, the threats to the Park have significantly reduced for the last three years; there have not been any case of hunting of wild animals. However man-animal conflict in buffer area continuous to be a significant problem. Lantana has been removed from some parts of the core using scientific methods and such areas are recovering. Although the fire incidences keep on occurring, the satellite based SMS alert system has improved fire fighting capabilities of CTR. Tourism however is increasing and land use changes around CTR for housing greater number of tourism remains a concern.
Some threats to the TR have abated, others continue their presence	Fair		
Most threats to the TR have abated. The few remaining are vigorously being addressed	Good✓		
All threats to the TR have been effectively contained and an efficient system is in place to deal with any emerging situation	Very good		

***Does the TR have a Disaster Risk Management Plan to deal with existing as well as emerging threats?**

6.4 Are the expectations of visitors* generally met or exceeded?

Condition	Category*(Tick ✓)	Reference document(s)	Remarks
Expectations of visitors generally not met.	Poor	1. Discussions with CTR officers and field staff 2. Visitor books 3. Unstructured feedback from students at Choti Haldwani on 8 April 2014	Mostly the visitors come to CTR for sighting Tigers. The visitors who stay at various facilities of CTR are generally satisfied with facilities and sightings. However the day visitors who take short gypsy rides in CTR express satisfaction only if they sight Tigers, Leopards and Elephants. A group of School Children from Mumbai which met at Choti Haldwani express their satisfaction about CTR.
Expectations of many visitors are met.	Fair		
Expectations of most visitors are met.	Good✓		
Expectations of all most all visitors are met.	Very good		

***What is the compliance status on Supreme Court/ NTCA Guidelines on Ecotourism in TRs?**

6.5 Are local communities supportive of TR management?

Condition	Category*(Tick ✓)	Reference document(s)	Remarks
Local communities are hostile.	Poor	1. Discussions with CTR officers and field staff 2. Meeting with EDC members at Morghati on 6 April 2014	CTR is very well supported by local stakeholders as it provides livelihood support on account of tourism and park management works. The NGOs and other Govt. Dept. are also very supportive of CTR. The park management is proactive in eliciting public support through activities like nature camps, school programmes and trainings for EDC members.
Some are supportive.	Fair		
Most locals are supportive of TR management.	Good✓		
All local communities supportive of TR management.	Very good		

***There could be many reasons for disenchantment. It could be real because of managerial neglect or the managerial efforts could be appropriate but there could be local elements/organizations who would like to keep the disaffection simmering for their own ulterior motives. Likewise success could be entirely because of the efforts of managers or they might be fortunate in striking partnerships with credible NGOs. Assessment may take the prevailing causes into account.**

7. MEE Score Card⁺

Framework Element Number	Framework Element Name	Number of Criteria (a)	Maximum Mark per question (b)	Total (a x b)	Marks obtained for the Element	Overall MEE Score and % age
1.	Context	04	10	40	27.50	76.61 %
2.	Planning	07	10	70	57.50	
3.	Inputs	05	10	50	42.50	
4.	Process	06	10	60	45.00	
5.	Outputs	04	10	40	30.00	
6.	Outcomes	05	10	50	35.00	
Total		31		310	237.50	

⁺*Efforts will be made by the NTCA-WII-MEE Team to address the issue of assigning 'differential' weightages to the 31 Assessment Criteria including 'normalization'.*

Assessment Criteria for addressing issues relating to Climate Change & Carbon capture in the Tiger Reserves (TRs)

1. Additional Criteria on Climate Change: Is the TR being consciously managed to adapt to climate change?

Condition	Category*	(Tick ✓)	Comment/ Explanation	Next Steps
There have been no efforts to consider adaptation to climate change in management	Poor			
Some initial thought has taken place about likely impacts of climate change, but this has yet to be translated into management plans	Fair			
Detailed plans have been drawn up about how to adapt management to predicted climate change, but these have yet to be translated into active management.	Good			
Detailed plans have been drawn up about how to adapt management to predicted climate change, and these are already being implemented	Very good			

2. Additional Criteria on Climate Change: Is the TR being consciously managed to prevent carbon loss and to encourage further carbon capture?

Condition	Category*	(Tick ✓)	Comment/ Explanation	Next Steps
Carbon storage and carbon dioxide capture have not been considered in management of the TR	Poor			
Carbon storage and carbon dioxide capture have been considered in general terms, but has not yet been significantly reflected in management	Fair			
There are active measures in place to reduce carbon loss from the TR, but no conscious measures to increase carbon dioxide capture	Good			
There are active measures in place both to reduce carbon loss from the TR and to increase carbon dioxide capture	Very good			

Management Effectiveness Evaluation (MEE) of Ranthambore Tiger Reserves

1. Context

1.1 Are the values of the TR well documented, assessed and monitored?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Values not systematically documented, assessed and monitored.	Poor		1) Draft TCP (2013-14 to 2022-23) 2) Discussion with RTR officials 3) Letter from CWLW to WWF-India no.3(03)-Tech-11/CWLW/2010/9755 dated 10 th April 2013	<ul style="list-style-type: none"> Values are discussed in part I, 1.3 and in chapter 2. The values include biodiversity, tourism, hydrological, historical, religious and cultural types. There used to be annual water-hole counts until 2013 which has now been discontinued due to WII-NTCA monitoring of tigers, co-predators and prey. In addition, tourist flow, pilgrims vehicle flow and human wildlife conflict are monitored as part of regular monitoring activities. WWF-India in partnership with the Rajasthan and Madhya Pradesh Forest Department has been conducting a study of connectivity from RTR to other tiger habitats in the Western India Tiger Landscape.
Values generally identified but not systematically assessed and monitored.	Fair			
Most values systematically identified, assessed and monitored.	Good ✓			
All values systematically identified, assessed and monitored.	Very good			

1.2 Are the threats to TR values well documented and assessed*?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Threats not systematically documented or assessed.	Poor		1) Draft TCP (2013-14 to 2022-23) 2) Discussion with RTR officials	<ul style="list-style-type: none"> All major threats for core and buffer have been recorded in TCP Part I. For the core, the threats include spread of invasive species, hunting, poaching, illegal cutting of trees, illegal removal of NTFPs, encroachment and tourism pressures. In Chapter 6.5 of Part I major threats have been identified under SWOT framework. For buffer area, the threats have been included in Chapter 6.5 of Part II which were identified under SWOT framework. The draft TCP also discusses threats to the corridors in Part III.
Threats generally identified but not systematically assessed.	Fair			
Most threats systematically identified and assessed.	Good ✓			
All threats systematically identified and assessed.	Very good			

*This assessment should be based on number, nature and extent of threats

1.3 Is the 'Core Area' of TR free from human and biotic interference?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
The 'Core Area' has extensive human and biotic interference.	Poor		1) Draft TCP (2013-14 to 2022-23) 2) Discussion with RTR officials 3) Office Order, PCCF No. F15(-)2013/Estd-strength/PCCF/459 dated 9 th January 2014.	<ul style="list-style-type: none"> The core area (CTH) includes is of 1113.36 sq.km included in Ranthambhore National Park, Keladevi, Sawai Madhopur and Sawai Mansingh Wildlife Sanctuaries out of which approximately 44sq.km is devoid of any biotic pressures. There are 64 villages in the core area in which 43 villages are in Keladevi Sanctuary, 5 villages are in Sawai Mansingh WLS, 14 villages in Sawai Madhopur and 2 villages are in the corridor between Keladevi WLS and the Ranthambhore NP. The villages have a total of 8151 families and cattle count as per the previous MEE report (2010) was about 50,000. During rainy season, the RTR experiences additional grazing pressures with cattle coming from adjoining areas. Tourism is operational in approximately 16% of the core area. The Ganesha temple near Yogimahal Gate gets approximately 1.5million pilgrims every year. Other important religious sites include Kachida, Khatola, etc. Both core and buffer are under the charge of the Field Director and CF, Ranthambhore Tiger Reserve vide reference 3.
The 'Core Area' has some human and biotic interference.	Fair ✓			
The 'Core Area' has little human and biotic interference.	Good			
The 'Core Area' has no human and biotic interference.	Very good			

***This assessment should be based on existence and the efforts made by TR management to address issues related to human settlements/ villages inside the core area; livestock grazing, cultivation, encroachments etc, resource extraction/ livelihood dependence of local communities and should reflect the overall interference due to all the above factors. The issue of 'Unified Control' of the 'Core' and 'Buffer' zones-by under the Field Director would also be taken into account.**

1.4 Has the TR complied with the four Statutory* Requirements (SR) along with Tripartite MoU and three Standard Operation Procedures (SOP)?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
None of the four SR, no compliance of Tripartite MoU and three SOPs met	Poor		1) For core No. F.3(34)Forest/2007/J aipur dated 28 th Dec 2007 2) No. F.3(34)Forest/2007/J aipur dated 6 th July 2012. 3) F3(21)Forest/2005 dated 18 th Dec 2009 4) F.1-10/2013-NTCA	<ul style="list-style-type: none"> Core area notified vide Ref. 1 Buffer area notified vide Ref. 2 Ranthambhore Tiger Conservation Foundation established vide Ref.3. Presently Rs. 71.93 lakh is available in the SB Account of Foundation and Rs. 347.00 lakh is locked in the treasury account. Draft TCP was prepared and submitted to NTCA during April
Two of the four SR, 50% conditions of the Tripartite MoU and SOPs complied	Fair			
Three of the four SR, 75% conditions of the Tri-partite MoU and SOPs complied	Good ✓			
All four SR, 100% conditions of the Tripartite MoU and SOPs	Very good			

complied			5) dated 6 th July 2013 State-level Steering Committee has not been constituted yet for Ranthambhore TR.	2013 which was examined by NTCA and comments communicated to the Park vide Ref. 4. The park authorities are now in the process of the revising the TCP and will submit the same to NTCA by 30 th June 2014. <ul style="list-style-type: none"> SOPs have been distributed among the Range Officers, Hindi translation is being done for distributing among the frontline staff of Forest Dept.
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***Statutory requirements are (1) Legal delineation and notification of Core and Buffer Areas; (2) Establishment of Tiger Conservation Foundation; (3) Development of a Tiger Conservation Plan; and (4) Constitution of a State-level Steering Committee under the Chairmanship of the Chief Minister. TA refers agreement between Field Director, State Government and NTCA. The 3 SOPs are on (i) Straying of Tiger in human dominated landscape, (ii) Tiger Mortality and (iii) Disposal of Carcasses**

2. Planning

2.1 Status of Tiger Conservation Plan (TCP) *?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No TCP in place.	Poor		1) Draft TCP (2013-14 to 2022-23) 2) Discussion with RTR officials 3) F.1-10/2013-NTCA dated 6 th July 2013	<ul style="list-style-type: none"> Draft TCP was prepared and submitted to NTCA during April 2013 which was examined by NTCA and comments communicated to the Park vide Ref. 4. The park authorities are now in the process of the revising the TCP and will submit the same to NTCA by 30th June 2014. Consultations with WII, WWF and local stakeholders were carried out on 15th April 2014 for the draft TCP.
TCP is under preparation	Fair			
TR has a relevant TCP	Good ✓			
TR has a comprehensive and relevant TCP, duly approved by the NTCA	Very good			

***The scientific content and the participatory processes used in preparation of the TCP will be taken into account in assessing the quality of TCP.**

2.2 Does the TR safeguards the threatened biodiversity values?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR does not safeguard the threatened biodiversity values.	Poor		1) Draft TCP (2013-14 to 2022-23) 2) Discussion with RTR officials 3) Order of the District Collector no. No.F.6 (27) AR/Gr/III/94 dated 8 th Aug 1994 of Govt. of Rajasthan 4) No.P17(14)/Sanc/Law/10 /7904 dated 17 th June 2013 from District Magistrate, Sawai Madhopur, appointing a Magistrate for control of illegal grazing in RTR.	1) Under chapter 10 of Part I of TCP, the theme plan addresses the concern of safeguarding RTR from various threats. 2) The plan proposes constitution of a Tiger Cell, deployment of a Tiger Protection Force, patrolling of beats, night patrolling, etc. The protection network includes 10 Ranges, 38 Naka, 117 check posts, 12 Anti-poaching squads, 7 gates and 2 barriers. 3) Staff – Sanctioned strength FD 1, DCF 2, ACF 13, RO 18, Forester 17, Asst. Forester 43, Forest Guard 144, Work-charge Employee 117. Vacancies include ACF 6, RO 13, Forester 7, Asst. Forester 18, Forest Guard 12. For prevention of grazing during
TR safeguards a few threatened biodiversity values.	Fair			
TR safeguards a large number of threatened biodiversity values.	Good ✓			
TR safeguards all threatened biodiversity values.	Very good			

				<p>monsoon, 150 Home Guards are engaged every year to assist the Forest Guards.</p> <p>4) Two flying squad divisions for wildlife protection in and around RTR are placed under the charge of DCF I and DCF II, each having one ACF and one RO. Field staff depend on availability. Each team uses a canter and a jeep.</p> <p>5) Arms – 0.32 Revolver 5, 0.315 calibre rifle 2, 12 bore shotgun 15. These are distributed among different range offices.</p> <p>6) Vehicles – Gypsy 12, Bolero 6, Jeep 4, Canter 6, Bolero Camper 6, Rapid Response Unit 2, Wildlife Ambulance 1, Motorbikes 43. All the vehicles are reportedly used for protection purposes and all vehicles are equipped with wireless.</p> <p>7) Field equipment – 90 camera traps, 30 Range Finders, 50 GPS, 1 infra red night vision device, 20 cameras and 15 binoculars.</p> <p>8) Wireless network – 52 fixed base station and 100 mobile handsets.</p> <p>9) Total 120km of protection wall has been constructed around the boundary of RTR.</p> <p>10) A total of 26,000 LPG connections have been distributed in the peripheral villages of RTR.</p> <p>11) A Standing Committee for RTR under the chairmanship of Divisional Commissioner of Kota and including the Police, District Administration, Zila Parishad with Field Director as Member Secretary is in place. The committee shall meet once every quarter and decide on measures for wildlife crime control. In addition, by order of the DC, annually section 144 is promulgated in the Ranthambhore National Park.</p> <p>12) Annual vaccination of livestock from the peripheral villages is carried out.</p> <p>13) The CTH is free from all mining leases. There is only one mining lease, belonging to ACC at Lakheri, Bundi District.</p> <p>14) Chapter 10.4 of TCP I discusses fire protection strategy with establishment of firelines and their maintenance.</p>
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**Remarks need to elaborate on the kind of safeguards and how they work or are intended to work*

2.3 Are stakeholders given an opportunity to participate in planning process?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little, if any opportunity for stakeholder participation in planning.	Poor		1) Order of the District Collector no. No.F.6 (27) AR/Gr/III/94 dated 8 th Aug 1994 of Govt. of Rajasthan 2) Govt. of Rajasthan Order no., F6-1AR/Gr3/2003 dated 8 th Feb 2012. 3) Draft TCP (2013-14 to 2022-23) 4) Discussion with RTR officials 5) District level implementation committee for relocation. 6) Tourism & Pilgrims Management committee CWLW order F.3(10) Tourism/Technical-1/CWLW/17307 dated 24 th June 2011.	1. A Standing Committee for RTR under the chairmanship of Divisional Commissioner of Kota and including the Police, District Administration, Zila Parishad with Field Director as Member Secretary is in place. The committee shall meet once every quarter and decide on measures for wildlife crime control. 2. For interdepartmental coordination and participation of various govt. agencies, various committees have been prepared. 3. Regular meetings with tourism stakeholders are being carried out. 4. There are 26 EDCs which include the earlier established Village Forest Protection Management Committees are reported to be place for RTR. Micro-plan preparations for them are reportedly being done. 5. WII and NGOs like WWF, Tiger Watch, Prakrit Society and Ranthambhore Foundation, etc. are involved in different conservation activities in collaboration with the RTR authorities.
Stakeholders participate in some planning.	Fair			
Stakeholders participate in most planning processes.	Good ✓			
Stakeholders routinely and systematically participate in all planning processes.	Very good			

*The result of participation must show in the field and not merely reported as a routine exercise.

2.4 Are habitat management programmes systematically planned, relevant and monitored, and contribute effectively to Tiger and other endangered species conservation?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Habitat management programmes are entirely adhoc.	Poor		1) Draft TCP (2013-14 to 2022-23) 2) Discussion with RTR officials	1) Draft TCP discusses Theme Plans for habitat including eradication of invasive species (7.2.2.4), soil and water conservation (7.2.2.5), water management during dry season (7.2.2.6), and also management of <i>Prosopis juliflora</i> in 4.3. Removal of <i>P. juliflora</i> is being carried out in Khandar and Faludi ranges in a total of 287.64 ha. since 2011. 2) GIS based maps at 1:50,000 scale have been prepared for habitat management purposes.
Limited planning and monitoring programmes are in place for habitat management.	Fair			
Habitat management programmes are generally planned and monitored.	Good ✓			
Habitat management programmes are thoroughly planned and monitored.	Very good			

*Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

				<p>3) Habitat management primarily focuses on improving the condition of water resources. There are 385 small and medium sized water holes and water bodies.</p> <p>4) Riparian areas have been identified in CTH.</p> <p>5) Nesting sites of vultures have been identified and they are regularly monitored.</p>
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***This assessment should be primarily based on habitat management programmes in relation to habitats for species that are threatened (IUCN categories), are habitat specialists, subjected to seasonal movements, wide ranging with emphasis on the breeding and rearing habitat and may include factors such as food, water, shelter (all connotations).Habitat structure, composition, unique patches of vegetation and sensitive sites, sources of water and their distribution are integral. Corridors within buffer zone are critically important. For example, all riparian habitats. Have these been addressed? Is their a planning process in place? The management practices dealing with invasive species such as Lantana, Michania etc. would be examined.**

2.5 Does the TR has an effective Protection Strategy (PS)* and Security Plan and Security Audit (SA) in place?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR has little or no PS and SA.	Poor		<p>1) Draft TCP (2013-14 to 2022-23). Under chapter 7.2.2.2. a Theme Plan for anti-poaching has been prepared.</p> <p>2) Order No. F(-)/Protection/DCF/2012/5872 dated 15th May 2012 constituting Cobra Teams for night patrolling.</p> <p>3) Discussion with RTR officials</p> <p>4) No.V-15(-) Law&Order/2013/667 dated 5th July 2013 of DGP, Rajasthan deploying one company of RAC in RTR.</p> <p>5) DGP's order for STPF P-4(8)/Police/Deputation/2011/1210 dated 10th March 2014</p>	<ul style="list-style-type: none"> The Theme Plan from Ref. 1 that includes procedures for prevention and detection of offences, joint patrolling by forest and police, intelligence gathering and procedures for checking entries and exits. The DCFs constitute special Cobra Teams for night patrolling. Under chapter 10 of Part I of TCP, the theme plan addresses the concern of safeguarding RTR from various threats. <p>1. The plan proposes constitution of a Tiger Cell, deployment of a Tiger Protection Force, patrolling of beats, night patrolling, etc. The protection network includes 10 Ranges, 38 Naka, 117 check posts, 12 Anti-poaching squads, 7 gates and 2 barriers.</p> <p>2. Staff – Sanctioned strength FD 1, DCF 2, ACF 13, RO 18, Forester 17, Asst. Forester 43, Forest Guard 144, Work-charge Employee 117. Vacancies include ACF 6, RO 13, Forester 7, Asst. Forester 18, and Forest Guard 12. For prevention of grazing during monsoon, 150 Home Guards are engaged every year to assist the Forest Guards.</p> <p>3. Two flying squad divisions for wildlife protection in and around RTR are placed under the charge of DCF I and DCF II,</p>
TR has an adhoc PS and SA.	Fair			
TR has a generally relevant PS and SA but is not very effective.	Good✓			
TR has a comprehensive and very effective PS and SA.	Very good			

			<p>each having one ACF and one RO. Field staff depend on availability. Each team uses a canter and a jeep.</p> <ol style="list-style-type: none"> 4. Arms – 0.32 Revolver 5, 0.315 caliber rifle 2, 12 bore shotgun 15. These are distributed among different range offices. 5. Vehicles – Gypsy 12, Bolero 6, Jeep 4, Canter 6, Bolero Camper 6, Rapid Response Unit 2, Wildlife Ambulance 1, Motorbikes 43. All the vehicles are reportedly used for protection purposes and all vehicles are equipped with wireless. 6. Field equipment – 90 camera traps, 30 Range Finders, 50 GPS, 1 infra red night vision device, 20 cameras and 15 binoculars. 7. Wireless network – 52 fixed base station and 100 mobile handsets. 8. Total 120km of protection wall has been constructed around the boundary of RTR. 9. A Standing Committee for RTR under the chairmanship of Divisional Commissioner of Kota and including the Police, District Administration, Zila Parishad with Field Director as Member Secretary is in place. The committee shall meet once every quarter and decide on measures for wildlife crime control. In addition, by order of the DC, annually section 144 is promulgated in the Ranthambhore National Park. 10. Chapter 10.4 of TCP I discusses fire protection strategy with establishment of fire-line and their maintenance. 11. Anti-grazing camps with staff and Home Guards are established in vulnerable places (Lakardah, Anantpura, Indala) during monsoon. 12. Movement register of staff is maintained at field camps, these needs to be GIS based and needs to be linked with M-StrIPES. 13. One battalion of Reserved Armed Constabulary is deployed during monsoon by order of the DG-Police. 14. In 2013-14, total of number of
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				<p>cases pending are 186 of which 93 are pending in courts and 93 are being investigated at the department level. Of the 93 cases being investigated 30 are pending for less than 1 year, 25 from 1-3 years and 38 for more than 3 years.</p> <p>15. STPF constitutions for RTR with 1 Dy. Superintendent of Police, 3 Sub-inspector, 18 Head-Constable and 90 Constable have been constituted and posting of staff is under process.</p> <p>16. There is a network of fair-weather road measuring 976km and 5km of all weather road. The all weather road connects the <i>Ganesh</i> temple to the <i>Ganesh Dham</i> entry gate and 75km of the fair weather roads are used for tourist movement in the 5 tourism zones.</p>
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***This assessment takes inter-alia into account the nature of threats, the number and location of patrolling camps and foot and mobile patrolling, needs that relate to available manpower, terrain difficulties, practicability of area coverage, readiness to contain specific threats with necessary support and facilities. The constitution and functioning of Special Tiger Protection Force (STPF), Number of offences reported, arrests made, prosecution initiated and conviction achieved will be taken into account.**

2.6 Has the TR been effective in the mitigation of human-wildlife conflicts?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Human-wildlife conflicts are significant but poorly addressed.	Poor		1) Draft TCP (2013-14 to 2022-23),	1) From 2011 – 2014, there has been a total number of 6 human death and 46 cases of human injury for which an amount of Rs.1.2million has been paid as compensation. Similarly there have been cases of 977 cattle depredation for which approximately Rs.3million have been paid as compensation.
TR has been able to mitigate few human-wildlife conflicts.	Fair		2) Discussion with RTR officials	
TR has been able to mitigate many human-wildlife conflicts.	Good✓		3) F.No.13-2/2011 WL-I(pt) GOI dated 21 st Dec 2012	2) No case of crop damage has been reported. 3) The compensation norms as described vide ref.3 are followed.
TR has been effective in mitigating all human-wildlife conflicts.	Very good		4) HWC around RTR, a report by Soujanya Srivastava and Dharmendra Khandal, Tiger Watch.	4) As per information given by NGO, Tiger Watch in their report the number of HWC cases have been on increase over the last 10 years with correspondingly higher <i>ex-gratia</i> . Average time taken for disbursement period of <i>ex-gratia</i> has come down from 137 days in 2004 to 29 days in 2012 vide Ref. 4. 5) Equipment includes two tranquilizing guns, sanctioned posts of veterinary doctor and veterinary assistant are vacant.

***The assessment will take into account the number of incidences reported and payment of compensation made and its timeliness.**

2.7 Is the TR integrated into a wider ecological network/ landscape following the principles of the ecosystem approach?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR not integrated into a wider network/ landscape.	Poor		1) WWF-India's study and Tiger Watch's study on corridors.	1. RTR is the main source sites for the Western India Tiger Landscape, supporting tiger population at Ramgarh-Bisdhari WLS, Mukandara TR, Kuno Palpur WLS, Sultanpur forests at Kota. Existing corridors are being monitored jointly by the Forest Dept. and NGOs. This needs to be
Some limited attempts to integrate the TR into a network/ landscape.	Fair			
TR is generally quite well integrated into a network/ landscape.	Good ✓			
TR is fully integrated into a wider network/ landscape.	Very good			

***Assessment needs to consider the scope of opportunities on the landscape scale that exist. Consider whether any attempts have been made and what are these? Have all the important corridors been identified? What actions are planned/implemented for their security? Have the Forest Working Plans and Forest Development Corporation Plans within the identified landscapes taken cognizance of such new requirement? These should have been reflected in TCPs. Is there is any effort to rationalize landuse around TR? Is any effort being made to plan and use 'Smart Green Infrastructure'?**

3. Inputs

3.1 Are personnel adequate, well organized and deployed with access to adequate resources in the Tiger Reserve (TR)*?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Few, personnel explicitly allocated but poorly supported for TR management.	Poor		1. Draft TCP (2013-14 to 2022-23) 2. Discussion with RTR officials	1. Staff – Sanctioned strength FD 1, DCF 2, ACF 13, RO 18, Forester 17, Asst. Forester 43, Forest Guard 144, Work-charge Employee 117. Vacancy is high, that includes ACF 6, RO 13, Forester 7, Asst. Forester 18, Forest Guard 12. For prevention of grazing during monsoon, 150 Home Guards are engaged every year to assist the Forest Guards. 2. The deployment of staff includes – 1 Forester as Naka in-charge and number of forest guards, watchers and home-guards depending on the number of beats. 3. Due to vacancies at many Naka, Asst. Foresters and Senior Forest Guards are holding the charge of Foresters 4. In addition, RAC and STPF personnel are also deployed. 5. Women staffs when recruited are allotted for beats, however, they generally prefer office jobs, and hence block recruitments in the beats.
Some personnel explicitly allocated for TR management but not adequately supported and systematically linked to management objectives.	Fair			
Some personnel with fair support explicitly allocated towards achievement of specific TR management objectives.	Good ✓			
Adequate personnel appropriately supported and explicitly allocated towards achievement of specific TR management objectives.	Very good			

***This assessment should inter-alia be based on number of personnel allocated for attainment of TR objectives at the Range , Round, Beat and Patrolling camps levels or as relevant to the needs (sanctioned posts vis- a- vis existing personnel and needs beyond the sanctioned strengths. It is possible that posts have last been sanctioned several years back that do not now account for the current needs)**

3.2 Are resources (vehicle, equipment, building etc.) adequate, well organized and managed with desired access?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Few, if any, resources explicitly allocated for TR management.	Poor		1) Draft TCP (2013-14 to 2022-23), 2) Discussion with RTR officials	1. Buildings – 96 with DCF I and 50 with DCF II that include offices, forest rest houses, check posts, barriers and <i>naka</i> .
Some resources explicitly allocated for TR management but not systematically linked to management objectives.	Fair			2. Arms – 0.32 Revolver 5, 0.315 calibre rifle 2, 12 bore shotgun 15. These are distributed among different range offices.
Some resources explicitly allocated towards achievement of specific TR management objectives.	Good			3. Vehicles – Gypsy 12, Bolero 6, Jeep 4, Canter 6, Bolero Camper 6, Rapid Response Unit 2, Wildlife Ambulance 1, Motorbikes 43. All the vehicles are reportedly used for protection purposes and all vehicles are equipped with wireless.
Adequate resources explicitly allocated towards achievement of specific TR management objectives.	Very good ✓			4. Field equipment – 90 camera traps (25 additional camera traps have been procured through WII), 30 Range Finders, 50 GPS, 1 infra red night vision device, 20 cameras and 15 binoculars. 5. Wireless network – 52 fixed base station and 100 mobile handsets. 6. Available man-power is utilized judiciously for protection of Park. Annexure 10 of the TCP gives details of vehicles being used, Annexure 16 talks of buildings.

* These form a variety of resources. These may be segregated into immovable (structures) and movable categories and each further may be considered under the essential and desirable categories. It is best to start with what are the minimum needs to attain each objective, what is available and manner of use/deployment. The proportions of the 'essentials' and 'desirables' along the importance gradient of objectives would serve as pointers for score categories. Specific remarks would be vitally important.

3.3 Are financial resources other than those of the State linked to priority actions and are funds adequate, released timely and utilized?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Resource allocation is ad-hoc, funds are inadequate and seldom released in time and not utilized.	Poor		1) Annual Progress Reports for last three years.	1. NTCA contributed Rs.270.30lakh in 2011-12 out of which Rs.216.33 was spent; Rs.226.00lakh in 2012-13 out of which Rs.225.86 was spent and Rs.361.80 in 2013-14 out of which Rs.304.52 was spent.
Some specific allocation for management of priority action. Funds are inadequate and there is some delay in release, partially utilized.	Fair			2. For relocation, in 2011-12, Rs.2492.405lakh was released and 1754.568lakh was spent; in 2012-13 Rs.2600.00lakh was released and Rs.1140.71lakh was spent; in 2013-14 Rs.1459.29lakh was released out of which Rs.344.04lakh was spent. A total of 300 people were relocated in 2011-12, 167 people in 2012-13 and 43 people in 2013-14.
Comprehensive planning and allocation that meets the most important objectives. Generally funds released with not much delay and mostly utilized.	Good ✓			3. NTCA normally sanctions funds by June/July, but the RTR received funds not before September that delays implementation of certain priority activities.
Comprehensive planning and allocation of resources for attainment of most objectives. Funds generally released on-time and are fully utilized.	Very good			

				<p>4. A major issue relates to relocation related tasks as the summer months (April – June) which is a critical period for relocation of villagers remains inactive due to non-availability of funds.</p> <p>5. Most of the funds shortages are experienced for building and vehicle maintenance.</p>
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***Obtain details of funds released by NTCA and their utilization by TR in the last 3 years and indicate them under 'Remarks'. Also comment on the problems associated with fund allocations and their utilization.**

3.4 Are financial resources from the State linked to priority action and funds adequate, timely released and utilized for the management of Tiger Reserve?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Resource allocation is ad-hoc, funds are inadequate and seldom released in time and not utilized.	Poor		1) Annual Progress Reports for past three years.	<p>1. The State Govt. contributed to the RTR for the following schemes – NABARD Rs.13.04crore (2011-12), Rs.9.61crore (2012-13), and no funds were received in 2013-14, amounts spent against this receipt are Rs.3.42crore (2011-12), Rs.3.75crore (2012-13); Integrated Forest Program Rs.2lakh (2011-2012); 13th Finance Commission Rs.85.9lakh (2013-14) and out of that Rs.84.26lakh was spent; NREGA Rs.93lakh (2013-14) and full amount was spent; CM's budget allotment Rs.180lakh(2013-14) and out of that full amount was spent for LPG distribution among critical villages; CAMPA Rs.2.4crore(2011-12), amount spent was Rs93.16lakh, received Rs.3.79crore (2012-13) and Rs.176.14 was spent and Rs.2.58crore (2013-14) was received out of which Rs.257.62 was spent.</p> <p>2. The state share was around Rs.20crore during 2011-12 and 2012-13 which has come down to Rs.5.74crore in 2013-14.</p>
Some specific allocation for management of priority action. Funds are inadequate and there is some delay in release, partially utilized.	Fair			
Comprehensive planning and allocation that meets the most important objectives. Generally funds released with not much delay and mostly utilized.	Good ✓			
Comprehensive planning and allocation of resources for attainment of most objectives. Funds generally released on-time and are fully utilized.	Very good			

***Obtain details of funds released by State and their utilization by TR in the last 3 years and indicate them under 'Remarks'. Also comment on the problems associated with fund allocation and their utilization.**

3.5 What level of resources are provided by NGOs?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
NGOs contribute nothing for the management of the TR.	Poor		1) Discussion with RTR officers and NGO representatives from WWF, Tiger Watch and Prakritik Society	<p>1. WWF – Monitoring status of tigers, co-predators and prey in corridors and RVWLS, assess the functionality of corridors; assist FD to study HTC, and capacity building of frontline staff.</p> <p>2. Tiger Watch identified 25% of the villages and helped FD prepare a project of 260crore for relocating those villages. TW is running a program with Mongias for bringing them to mainstream by providing basic education. About 75% of 125 Mogiya families are being involved in some kind of work by TW.</p>
NGOs make some contribution to management of the TR but opportunities for collaboration are not systematically explored.	Fair			
NGOs contributions are systematically sought and negotiated for the management of some TR level activities.	Good ✓			
NGOs contributions are systematically sought and	Very good			

negotiated for the management of many TR level activities.				<p>Different awards given Rs.21K to one ACF/ROs; Rs.10K each given to 4 frontline staff and Rs.2K each given to 20 villagers. Village Wildlife Watchers are supported in Khandar Range, 5 being supported by TW. In addition TW also helps the Park in curbing wildlife crime by engaging with Mogiya people and bringing them to mainstream.</p> <p>3. Prakritik Society (Rupinder Kaur) – Working with Govardhan Singh Rathore. Started in 1997, and established the Ranthambhore Sevika Hospital. Provides discounted treatment, like Mogiyas get subsidized treatment using Mogia Health Card. Have set up 587 biogas plants in 68 villages around the park. Cattle breed program in partnership with Ranthambhore Foundation that will support till June 2014.</p>
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4. Process

4.1 Does the TR have manpower resources trained in wildlife conservation for effective TR management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No trained officers and frontline staff in the TR.	Poor		1) Discussion with officials of RTR	1. DCF-I is trained in Diploma Course, and ACF has undergone Certificate Course in WII.
Some trained officers and few trained frontline staff, posted in the TR.	Fair ✓			2. Phase IV monitoring, M-StrIPES and tranquilization training programs were organized by WII in the recent past.
All trained officers and fair number of trained frontline staff posted in the TR.	Good			3. Law Enforcement Monitoring training was done by WWF-India.
All trained officers and most of the trained frontline staff is posted in the TR.	Very good			4. Tiger Trust conducted a training of lady officers on law enforcement. 5. FTI, Jaipur provides training in legal and IT matters. 6. No refreshers course has been organized for senior level staff 7. Staff development plan does not exist 8. Training on GPS handling was received well by new recruits, whereas older staff members could not receive that.

***Indicate % of trained staff in various categories. The number and thematic areas of the 'Internal Training' programmes organized in the TR in the last 3 years may be taken into account. Has the TR prepared a 'Staff Development Plan'? Is it being implemented?**

4.2 Is TR staff management performance linked to achievement of management objectives?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No linkage between staff management performance and management objectives.	Poor		1) Discussion with the officials of RTR.	1) Managerial promotions non-existent. 2) Annual Confidential Reports are prepared for all staff from Forest Guards and above.
Some linkage between staff management performance and management objectives, but not consistently or systematically assessed.	Fair			
Management performance for most staff is directly linked to achievement of relevant management objectives.	Good ✓			
Management performance of all staff is directly linked to achievement of relevant management objectives.	Very good			

4.3 Is there effective public participation in TR management* and does it show in making a difference?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no public participation in TR management.	Poor		1) Discussion with the officials of the RTR.	1. Participation of general public in TR management needs to be improved. EDC functioning needs to be strengthened. 2. Tourism guides are selected from the local communities. They support tourism as well as help in fire management and garbage collection. 3. Registered Gypsies and Canters are also utilized for protection, on payment of only fuel charges. There are 26 EDCs which include the earlier established Village Forest Protection Management Committees are reported to be place for RTR. Micro-plan preparation for them are reportedly being done.
Opportunistic public participation in some of the relevant aspects of TR management.	Fair ✓			
Systematic public participation in most of the relevant aspects of TR management.	Good			
Comprehensive and systematic public participation in all important and relevant aspects of TR management.	Very good			

*The involvement of NGOs/ NGLs in population estimation may be taken into account

4.4 Is there a responsive system for handling complaints and comments* about TR management?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Ad-hoc approach to handling complaints.	Poor		1. www.sugam.nic.in 2. Rajasthan Sunwai Ka Adhiniyam	1. Govt. website as mentioned in Ref. 1 can be used for registering complaints and providing comments. TR also uses that for addressing complaints from civil society. 2. Complaints registers are maintained at DCF offices. 3. RTI applications are handled at DCF level. Public grievances hearing are conducted daily. 4. Feedback forms are circulated and accepted at all offices.
Complaints handling system operational but not responsive to individual issues and with limited follow up.	Fair			
Coordinated system logs and responds effectively to most complaints.	Good ✓			
All complaints systematically logged in coordinated system and timely response provided with minimal repeat complaints.	Very good			

*Does the TR maintains 'Suggestions Register'? What actions are taken to deal with suggestions?

4.5 Does TR management address the livelihood issues* of resource dependent communities, especially of women?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No livelihood issues are addressed by TR management.	Poor		1) Discussion with officials of RTR	1. A total of 26,000 LPG connections have been distributed in the peripheral villages 2. Out of priority electric connection has been provided to households in peripheral villagers 3. A total of 102 EDCs have been constituted, they are at a nascent state and their participation needs to be improved by strengthening their capacity. 4. Tourism in Sawai Madhopur is mostly dependent on the well being of RTR. 5. With the help of NGOs <i>Mogiya</i> community members are being brought to mainstream and their livelihood augmented. 6. Breed improvement programme of buffaloes in 6 peripheral villages. 7. SHGs for women developed, e.g. <i>Dastkar</i> . 8. Approximately 1.5lakh mandays of employment is generated annually by RTR.
Few livelihood issues are addressed by TR management.	Fair			
Substantial livelihood issues are addressed by TR management.	Good ✓			
Livelihood issues of resource dependent communities especially of women are addressed effectively by TR managers.	Very good			

***The number of mandays generated in the last 3 years may be taken into account. Are funds received from District Agencies and other sources? Provide details of funds received in last 3 years.**

4.6 Has the TR planned and implemented the voluntary 'Village Relocation' from the Core/ Critical Tiger Habitat (CTH)?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No planning and no implementation	Poor		1) TCP Chapter 7.2.1.2.5 of Part I.	6. There are 65 villages in the TR, and 4 villages have been relocated and 8 are in the process of being relocated. 7. Detailed relocation program is discussed in the draft TCP chapter. 8. The committee visited relocated village of Girirajpur and found that post relocation issues require adequate and sympathetic supervision and the villagers need more hand-holding.
Plans have been made but no implementation	Fair			
Plans have been made and some implementation is in progress	Good ✓			
Plans have been made and are being actively implemented/ no human habitation in the CTH	Very good			

***Assessment will look into the village relocation planning process including availability of manpower, financial resources and NGO support, if any. Is there a mechanism to address the complaints received in respect of relocation process? Effort must be made to assess post-relocation success or otherwise.**

5. Output

5.1 *Is adequate information on TR management publicly available?*

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no information on TR management publicly available.	Poor		1. Discussion with the officials of RTR	1. www.rajasthanwildlife.rajasthan.gov.in website has a component on RTR
Publicly available information is general and has limited relevance to management accountability and the condition of public assets.	Fair			2. www.rajforest.nic.in for Rajasthan Forest Dept. has a section on RTR
Publicly available information provides detailed insight into major management issues and condition of public assets.	Good✓			3. Brochures on RTR are tourism related.
Comprehensive reports are routinely available in public domain on management and condition of public assets.	Very good			4. Management related information, people approach offices of CF&FD and DCF 5. Kids for Tigers programme has information on RTR

5.2 *Are visitor services and facilities appropriate and adequate?*

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Visitor services and facilities do not exist.	Poor		1) Discussions with the officials of RTR	1) Visitors mostly come to RTR for sighting tigers, for which there are adequate services in the form of road network, vehicles, guides, guards, etc.
Visitor services and facilities are very basic.	Fair			2) There is no Nature Interpretation Centre for RTR.
Visitor services and facilities are monitored from time to time and are fairly effective.	Good ✓			3) Information on RTR is displayed in the RG Museum of Natural History, Sawai Madhopur.
Visitor services and facilities are conscientiously maintained, regularly upgraded and monitored for visitor satisfaction	Very good			4) Films are being made on RTR, copies of which are reportedly submitted to the park management. 5) A tourist center in Sawai Madhopur is in place under the charge of an ACF, from where Gypsy bookings and guide services are provided to the visitors. Based on the Carrying Capacity of RTR, a total of 80 vehicles, 40 in the morning and 40 in the afternoon are permitted to enter the park for tourism purposes. 6) Online reservation is available for 30 vehicles in the morning and 30 in the evening. 7) A system of structured feedback form is in place with the RTR. 8) Rajasthan Tourism Development Corporation runs in collaboration with Railways running a train known as Palace on Wheel, visitors of which visit Ranthambore on weekly basis. RTR makes necessary arrangements for their transport to the park.

**Include the existence and quality of visitor and interpretation centers, including skills and capabilities of personnel manning these, TR related publications, films, videos; arrangements of stay (including places serving refreshments and food owned and managed by TR), watch towers and hides including safety factors, vehicles assigned for visitors including riding elephants, if any and their deployment, drinking water, rest rooms, garbage disposal, attended and self guided services in the field, visitor feedback on the quality of wilderness experience.*

5.3 Are research/ monitoring related trends systematically evaluated and routinely reported and used to improve management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no systematic evaluation or routine reporting of trends.	Poor		1) Discussion with park officials	<ul style="list-style-type: none"> WII-NTCA monitoring and estimation of tiger and its prey base is continuing. WWF is engaged in monitoring of tigers and prey base in the corridors connecting RTR with neighboring tiger habitats. Tiger watch is working on HWC, and has produced one report highlighting cases until 2012.
Some evaluation and reporting undertaken but neither systematic nor routine.	Fair			
Systematic evaluation and routine reporting of trends undertaken.	Good ✓			
Systematic evaluation and comprehensive reporting of trends undertaken and attempts made at course corrections as relevant.	Very good			

***Not all TRs attract projects and researchers and with exceptions, little research takes place on the TRs own steam because of systemic limitations. However, monitoring of some critical issues is expected e.g. population of tiger, co-predators and prey with insights into their demography and distribution (some opportunistic sampling by sightings, signs and spatial distribution during assessment would be extremely useful in terms of expert impression and as a pulse), monitoring incidence of livestock grazing, fires, weeds, sources of water, a variety of illegal activities typically associated with the reserve, wildlife health (e.g. epidemics, immunization of livestock) regeneration and change in vegetation, visitors and their activities, offence cases, ex-gratia payments etc. Efforts must be made to assess the planning and implementation of Phase-IV monitoring protocols and the success of implementation of M-Stripes (wherever applicable). Are the 'Sykes and Horill' monitoring plots maintained and data analyzed?**

5.4 Is there a systematic maintenance schedule and funds in place for management of infrastructure/assets?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No systematic inventory or maintenance schedule.	Poor		Draft TCP Annual Plan of Operation	1) In the current year's budget, RTR has proposed Rs. 70 lakh for vehicle maintenance and Rs. 25 lakh for building maintenance. On an average RTR spends about Rs. 50 lakh on vehicle maintenance, and around rs. 10 lakh on building maintenance. 2) The management reports shortage of funds for maintenance, as there are liabilities of around Rs. 20 lakhs on account of fuel costs. 3) Stock register for stores, building register and vehicle log books and history cards are maintained routinely.
Inventory maintenance is adhoc and so is the maintenance schedule.	Fair			
Systematic inventory provides the basis for maintenance schedule but funds are inadequate.	Good ✓			
Systematic inventory provides the basis for maintenance schedule and adequate funds are made available.	Very good			

6. Outcomes

6.1 Are populations of threatened species declining, stable or increasing?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Populations of key threatened/ endangered species are declining.	Poor		Discussion with RTR officials	<ul style="list-style-type: none"> The RTR has been undertaking waterhole counts for a long period, which was discontinued from 2014 due to questions on methodology and operational issues. However, based on waterhole count data available, it is seen that average numbers sighted over the last 5 years of species like leopard (110), sloth bear (180), caracal (20), chinkara (1500), vulture (450) are showing more or else stable trends. In places from where the villages have been relocated like Padra, Hindala, Mor Dungri etc. , the habitat recovery is taking place and places like Hindala are reported to have more sightings of Chinkara than the past. Due to introduction of a scientific and rigorous method of estimation (distance sampling), RTR is now moving into new protocols for monitoring of wild animals.
Some threatened/ endangered species populations declining, some are increasing, most others are stable.	Fair			
Several threatened/ endangered species populations increasing, most others are stable.	Good✓			
All threatened/ endangered species populations either increasing or stable.	Very good			

**This needs to practically relate to the natural ecosystem potential rather than being driven merely by numbers and visibility. The assessment score may be elaborated under remarks.*

6.2 Is the population of tigers showing a declining, stable or increasing trend?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Population of tiger is showing a declining trend	Poor		1 Census reports based on Camera trap exercise. 2 Tiger estimation, distribution and dynamics of tiger population, May 2009.	<ul style="list-style-type: none"> The population estimation, based on camera trap method carried out by RTR in collaboration with WII show 27 adults in 2011, 26 adults in 2012 and 24 adults in 2013. The report also indicates annual recruitment of cubs. RTR is monitoring individual tigers from 2007, and has improved the monitoring from 2009 after introduction of camera trap technology. Since then 75 individuals have been identified, records of family lineage maintained and deaths recorded. Since 2007, nine deaths, eight missing have been reported. Four animals have been dispersed and further eight tigers have been translocated to Sariska TR. Accordingly, there are 46 tigers, including cubs up to 2013 in RTR. A fortnightly report on daily movement of tigers based on pug mark and camera trap is prepared and compiled at DCF level. A popular publication Face to Face: The tigers of Ranthambore, 2013-14 have been prepared by RTR giving photo details of tigers of Ranthambore.
Population of tiger is stable	Fair			
Population of tiger is showing an increasing trend	Good			
Population of tiger has significantly increased	Very good✓			

**This assessment should be based in the context of available population estimate (2010-11) and the outcomes of the currently ongoing Phase-IV analyses.*

6.3 Have the threats* to the TR being reduced/ minimized? Or is there an increase?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Threats to the TR have not abated but have enhanced.	Poor		Discussion with park staff and field visits	1. Some biotic pressure inside the CTH has reduced due to relocation of 4 villages and about 400 sq km area of CTH is now completely free from biotic interference. 2. Cattle grazing has reduced due to deployment of home guards, Rajasthan Armed Constabulary, strengthening of Naka and Chaukis in vulnerable areas for grazing, support from district administration and police, appointment of a Magistrates to oversee law enforcementment for grazing control during the rainy seasons. 3. Fuel wood removal has reportedly reduced due to supply of 26,000 LPG connections and stronger protection against illegal fuel wood harvest. 4.No poaching cases of large cats reported over the last 3 years. 5. Mogya hunting tribe is being tackled through social mobilization processes with the help of NGOs for weaning them away from illicit activities. 6. Peripheral villages are provided with priority electricity connections for agriculture support, resulting in better relations between villagers and forest staff. 7. However, the threats emanating from religious tourism, especially at Ganesh temple in Ranthambore fort, have not reduced as the number of pilgrims continue to increase and its movement within RTR is mostly uncontrolled.
Some threats to the TR have abated, others continue their presence	Fair			
Most threats to the TR have abated. The few remaining are vigorously being addressed	Good ✓			
All threats to the TR have been effectively contained and an efficient system is in place to deal with any emerging situation	Very good			

***Does the TR have a Disaster Risk Management Plan to deal with existing as well as emerging threats?**

6.4 Are the expectations of visitors* generally met or exceeded?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Expectations of visitors generally not met.	Poor		Discussion with park officials and field officers	1) The park utilizes about 15 percent of the TR for tourism complying with court directions. 2) As most of the tourists visit RTR for sighting tigers and the sightings are normally good, most of the visitors go back satisfied. 3) However, the RTR does not have interpretation facilities.
Expectations of many visitors are met.	Fair			
Expectations of most visitors are met.	Good ✓			
Expectations of all most all visitors are met.	Very good			

***What is the compliance status on Supreme Court/ NTCA Guidelines on Ecotourism in TRs?**

6.5 Are local communities supportive of TR management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Local communities are hostile.	Poor		Discussions, field visits and meeting with villagers on 6 th June at Giriraj Pura	1) The hospitality industry and business communities at Sawai Madhopur are supportive as their business is directly dependent on the health of RTR. 2) Local NGOs are also supportive. 3) However, limited conflict due largely to grazing issues exists between villages in and around RTR, although there is reported to be substantial
Some are supportive.	Fair			
Most locals are supportive of TR management.	Good ✓			
All local communities supportive of TR	Very good			

***Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

management.				<p>reduction in such conflict.</p> <p>4) The relocation programme is assisting RTR in increasing local community support, however, it will need a better compassionate approach and post rehabilitation hand holding for better results.</p> <p>5) The presences of EDCs have not made substantial difference, but with more efforts on community mobilization and empowerment, support will increase.</p>
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**There could be many reasons for disenchantment. It could be real because of managerial neglect or the managerial efforts could be appropriate but there could be local elements/organizations who would like to keep the disaffection simmering for their own ulterior motives. Likewise success could be entirely because of the efforts of managers or they might be fortunate in striking partnerships with credible NGOs. Assessment may take the prevailing causes into account.*

7. MEE Score Card*

Framework Element Number	Framework Element Name	Number of Criteria (a)	Maximum Mark per question (b)	Total (a x b)	Marks obtained for the Element	Overall MEE Score and % age
1.	Context	04	10	40	27.50	71.77 %
2.	Planning	07	10	70	52.50	
3.	Inputs	05	10	50	40.00	
4.	Process	06	10	60	40.00	
5.	Outputs	04	10	40	27.50	
6.	Outcomes	05	10	50	35.00	
Total		31		310	222.50	

**Efforts will be made by the NTCA-WII-MEE Team to address the issue of assigning 'differential' weightages to the 31 Assessment Criteria including 'normalization'.*

Assessment Criteria for addressing issues relating to Climate Change & Carbon capture in the Tiger Reserves (TRs)

1. *Additional Criteria on Climate Change: Is the TR being consciously managed to adapt to climate change?*

Condition	Category*	(Tick ✓)	Comment/ Explanation	Next Steps
There have been no efforts to consider adaptation to climate change in management	Poor			
Some initial thought has taken place about likely impacts of climate change, but this has yet to be translated into management plans	Fair			
Detailed plans have been drawn up about how to adapt management to predicted climate change, but these have yet to be translated into active management.	Good			
Detailed plans have been drawn up about how to adapt management to predicted climate change, and these are already being implemented	Very good			

***Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

2. *Additional Criteria on Climate Change: Is the TR being consciously managed to prevent carbon loss and to encourage further carbon capture?*

Condition	Category*	(Tick ✓)	Comment/ Explanation	Next Steps
Carbon storage and carbon dioxide capture have not been considered in management of the TR	Poor			
Carbon storage and carbon dioxide capture have been considered in general terms, but has not yet been significantly reflected in management	Fair			
There are active measures in place to reduce carbon loss from the TR, but no conscious measures to increase carbon dioxide capture	Good			
There are active measures in place both to reduce carbon loss from the TR and to increase carbon dioxide capture	Very good			

***Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

Management Effectiveness Evaluation (MEE) of Sariska Tiger Reserve

1. Context

1.1 Are the values of the TR well documented, assessed and monitored?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Values not systematically documented, assessed and monitored.	Poor		1) Draft TCP 2014-15	<ul style="list-style-type: none"> TCP chapters 1.3 and 2 have described broad values of STR that includes conservation recreational, research and education perceived values, resources for local people, and watershed values. Values have also been classified from local to global. Biodiversity values have been well documented in papers published in peer reviewed journals as well as in popular journals. Tarun Bharat Sangh has extensively worked on documenting and assessing water values, especially in relation to community use. They have also carried out extensive awareness programs. Two booklets on Sariska have been published by them. WII has monitored large mammal status and distribution and regular monitoring programs are going on. Renowned filmmaker Rajesh Bedi has authored a book on Sariska. Phase IV monitoring of tigers, co-predators and prey is going on in collaboration with WII. Brochures on Sariska prepared by Rajasthan Tourism Department. Records of spiny tailed lizard at STR. Manoj Parashar <i>et al.</i> JBNHS (in press).
Values generally identified but not systematically assessed and monitored.	Fair		2) Discussion with Sariska Tiger Reserve (henceforth STR) officials	
Most values systematically identified, assessed and monitored.	Good ✓		3) Food habits of golden jackal and striped hyena. P. Chaurisha <i>et al.</i> 2012. <i>World Journal of Zool</i> 7(2).	
All values systematically identified, assessed and monitored.	Very good		4) Prey selection, food habit and dietary overlap between leopard and re-introduced tiger in a semi-arid forest of Sariska Tiger Reserve, Western India. 2012. K. Mondal <i>et al. Intl. Journ. Zool.</i> 2012.	
			5) Home range and resource selection of problems leopards translocated to forested habitat. K. Mondal <i>et al.</i> 2013. <i>Curr. Science</i> 105(3).	
			6) Prey selection by tigers in Sariska Tiger Reserve, Rajasthan. 2008. D. Avinandan <i>et al.</i> JBNHS.	
			7) Abundance and habitat suitability model for Ratel in STR, Western India. 2012. S. Gupta <i>et al.</i> <i>Wildl. Biol. Pract.</i> 8(1).	
			8) Diversity and abundance of rodents in STR. 2013. S. Gupta <i>et al.</i> JBNHS.	
			9) Annotated checklist of the birds of STR. 2006. G. Sahabuddin. <i>Indian Birds</i> 2(3).	
			10) Sariska: The Reign of Tigers. 2012. K. Shankar S. Bhattacharjee. <i>STRIPES Sep-Oct</i> 2012.	
			11) Tale of a travelling tiger. 2012. S. Bhattacharjee. <i>Sanctuary Asia</i> .	
			12) 'Sariska ka Vaibhav' by Aman Singh, Tarun Bharat Sangh.	
			13) Forest Rejuvenation by Dr Khalak Dina, Tarun Bharat Sangh.	

1.2 Are the threats to TR values well documented and assessed*?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Threats not systematically documented or assessed.	Poor		1) Draft TCP chapter 4.3 discusses threats to STR. 2) Draft TCP chapter 6.5 discusses threats in SWOT framework. 3) Discussion with STR officials	<ul style="list-style-type: none"> Due to large number of entry points, especially at Tehla and Baletha, illegal entry is a continuous threat to STR. Due to 29 villages inside the CTH, continuous pressure of high biomass extraction and habitat degradation is reported to have been a threat. Inadequate strength of frontline staff is a weakness. Movement of State Highway No. 13 between Alwar to Jaipur is passing through STR, which is a threat to wildlife movement across the road. Heavy movement of pilgrims through the STR to Pandupol temple.
Threats generally identified but not systematically assessed.	Fair			
Most threats systematically identified and assessed.	Good ✓			
All threats systematically identified and assessed.	Very good			

*This assessment should be based on number, nature and extent of threats

1.3 Is the 'Core Area' of TR free from human and biotic interference?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
The 'Core Area' has extensive human and biotic interference.	Poor		1) Draft TCP 2) Discussion with STR officials 3) No. F19(-) 2012/Establishment/ Rajasthan/CWLW dated 10 th Dec 2012	<ul style="list-style-type: none"> Size of the core area of STR is 881.11sq.km. and it is not free from human and biotic interference. 29 villages were in the core, out of which 3 have been relocated and 6 are in the process of being relocated. Existing human population is 2500 families (2008) and livestock number is 28,360. Agriculture area within the core amounts to 6,760 ha. In addition, approximately 4,000 ha comprises of govt. land and pasture land. Relocation of villages is being pursued. The Field Director has the unified control of core and buffer vide Ref. 3.
The 'Core Area' has some human and biotic interference.	Fair ✓			
The 'Core Area' has little human and biotic interference.	Good			
The 'Core Area' has no human and biotic interference.	Very good			

*This assessment should be based on existence and the efforts made by TR management to address issues related to human settlements/ villages inside the core area; livestock grazing, cultivation, encroachments etc, resource extraction/ livelihood dependence of local communities and should reflect the overall interference due to all the above factors. The issue of 'Unified Control' of the 'Core' and 'Buffer' zones-by under the Field Director would also be taken into account.

1.4 Has the TR complied with the four Statutory* Requirements (SR) along with Tripartite MoU and three Standard Operation Procedures (SOP)?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
None of the four SR, no compliance of Tripartite MoU and three SOPs met	Poor		1) Core notification by No. F3(34)Forest/2007 Dated 28.12.07	<ul style="list-style-type: none"> Core and Buffer notification exists TCF exists, STR Conservation Foundation is in place since 2011. Boundary has been delineated on ground and on maps both in toposheets and in digital format. TCP submitted by F.D. Sariska vide letter No. 844 dated 14.03.2014 to CWLW Rajasthan for approval. CWLW Rajasthan vide letter No. 2552 dated 02.04.13 forwarded TCP to NTCA for approval. NTCA vide letter No. 1-9/2013-NTCA Dated 10.07.13 after examination of TCP, asked recast the TCP vis-à-vis the said comments TCP after recasting sent to NTCA by CWLW vide letter No 6545 dated 25.02.14. A meeting by NTCA was held on 11-12 March 2014 for all FD's. Supplementary guidelines issued by NTCA vide letter dated 13.05.14. TCP for STR submitted to CWLW Rajasthan vide letter No. 1614 dated 30.05.14 for approval. Three SOPs have been received and distributed at Division and Range level.
Two of the four SR, 50% conditions of the Tripartite MoU and SOPs complied	Fair		2) Buffer notification by F.3(34)Van/2007 dated July 9, 2012	
Three of the four SR, 75% conditions of the Tri-partite MoU and SOPs complied	Good ✓		3) TCF dated Registration No 310/2010 Alwar (4.02.2010)	
All four SR, 100% conditions of the Tripartite MoU and SOPs complied	Very good		4) Draft TCP 2014-15. 5) State Level Steering Committee has not been constituted yet.	

*Statutory requirements are (1) Legal delineation and notification of Core and Buffer Areas; (2) Establishment of Tiger Conservation Foundation; (3) Development of a Tiger Conservation Plan; and (4) Constitution of a State-level Steering Committee under the Chairmanship of the Chief Minister. TA refers agreement between Field Director, State Government and NTCA. The 3 SOPs are on (i) Straying of Tiger in human dominated landscape, (ii) Tiger Mortality and (iii) Disposal of Carcasses

2. Planning

2.1 Status of Tiger Conservation Plan (TCP)*?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No TCP in place.	Poor		1) Discussion with STR officials	<ul style="list-style-type: none"> TCP submitted by F.D. Sariska vide letter No. 844 dated 14.03.2013 to CWLW Rajasthan for approval. CWLW Rajasthan vide letter No. 2552 dated 02.04.13 forwarded TCP to NTCA for approval. NTCA vide letter No. 1-9/2013-NTCA Dated 10.07.13 after examination of TCP, asked to recast the TCP vis-à-vis the said comments. TCP after
TCP is under preparation	Fair		2) Draft TCP (2014-15 to 2023-24)	
TR has a relevant TCP	Good ✓		3) No P3(21)/Forest/2005, 18.12.2009 of Forest Department, Govt. of Rajasthan	
TR has a comprehensive and relevant TCP, duly approved by the NTCA	Very good			

				<p>recasting sent to NTCA by CWLW vide letter No 6545 dated 25.02.14. A meeting by NTCA was held on 11-12 March 2014 for all FD's. Supplementary guidelines issued by NTCA vide letter dated 13.05.14. TCP for STR submitted to CWLW Rajasthan vide letter No. 1614 dated 30.05.14 for approval, and the soft copy of the draft sent to NTCA also.</p> <ul style="list-style-type: none"> • Approval awaited. • A state level Governing for STR Conservation Foundation was formed vide ref.3 under the Chairmanship of Minister of Forests and Environment, Rajasthan. However, the state level Steering Committee is not formed so far.
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***The scientific content and the participatory processes used in preparation of the TCP will be taken into account in assessing the quality of TCP.**

2.2 Does the TR safeguards the threatened biodiversity values?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR does not safeguard the threatened biodiversity values.	Poor		1) Discussion with STR officials 2) Draft TCP (2014-15 to 2023-24)T	<ul style="list-style-type: none"> • Yes, the draft TCP details various strategies which are implemented on ground. • Theme plan for stepping up protection by addressing human wildlife interface, theme plan for active management, theme plan for movement of pilgrims have been discussed in Chapter 7.2.2 of the draft TCP. Various strategies for protecting STR have been discussed in detail. • Chapter 7.2.2.1 discusses discusses strategies for protecting park values against cattle grazing, fuel wood and firewood removal, fire, encroachments and protection against traditional hunting communities. • The values are safeguarded by staff which includes 2 Deputy Field Directors, 3 ACFs, 8 ROs, 26 Foresters, 106 Forest Guards, and 95 Work Charge employees. In addition, STR also employs Home Guards depending on the necessity in field. During the visit of the Committee 85
TR safeguards a few threatened biodiversity values.	Fair			
TR safeguards a large number of threatened biodiversity values.	Good✓			
TR safeguards all threatened biodiversity values.	Very good			

				<p>Home Guards were on duty.</p> <ul style="list-style-type: none"> The staff is deployed in 19 Naka and 83 Chauki. In compliance with the Hon'ble SC order on control of traffic in State Highway 13, four manned barriers have been established. In addition, five manned barriers have been in operation in the STR. There are 132 building of various kinds, 3 Gypsies, 3 Bolero, 2 Thar jeeps, 5 pick ups, 3 Canthers, one tractor, 22 motorcycles. There is a road network of 286 km in STR of which 146 km is also used for tourism purpose. The protection is strengthened with the help of 52 wireless base stations, 17 vehicle mounted mobile sets and 107 handsets. STR has 2 Revolvers, three 12 bore DBBL, 3 muzzle loaders and two 315 rifles. There are 129 GPS, 90 Prismatic Compass, 101 Range Finders, 185 Camera traps, 2 Metal detectors and 2 binoculars. All officers and front line staff are given Common User Group SIMS. A net work of 320 km of fire lines 5 meter wide are maintained annually, which includes 119 km in Sariska Range, 125 km in Tehla Range, 74 km in Akabar Pur Range and 32 km in Talvriksha Range.
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**Remarks need to elaborate on the kind of safeguards and how they work or are intended to work*

2.3 Are stakeholders given an opportunity to participate in planning process?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little, if any opportunity for stakeholder participation in planning.	Poor		1) Discussion with STR officials	<ul style="list-style-type: none"> The Committee was informed that the TCP was prepared on the basis of the guidelines issued by NTCA and in consultation with stakeholders like forest staff, nature guides, vehicle owners for tourism purpose; and with EDC members on protection strategies. NGOs like Tarun Bharat Sangh, Upkaar Sansthan, Sariska Tiger Foundation, STCG and WCT etc. on various strategies for park management. For declaration of Buffer Zone, Ecosensitive Zone and utilization of MNREGA funds, consultations are made with the District administration and
Stakeholders participate in some planning.	Fair		2) F No P 6 (14)/ Adm Ref/Sec 3-2008 (2), 14.3.2008 of Government of Rajasthan	
Stakeholders participate in most planning processes.	Good ✓		3) F No F 6 (1)/ Adm Ref/GR 3/2003, dated 8.2.2012 of Government of Rajasthan	
Stakeholders routinely and systematically participate in all planning processes.	Very good		4) P 12 (16)/Energy/04/Part, dated 7.3.2008 of Energy Department	
			5) F 11 (1)/ Forest/78, dated 1.3.2011 of Forest Department, Government of Rajasthan	
			6) Microplans for EDC	
			7) Hon'ble CM's announcement in the Budget speech of 2012-13.	

***Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

				<p>Gram Panchayat.</p> <ul style="list-style-type: none"> • The EDC microplans are prepared for development of village communities, ecorestoration and water conservation in consultation with the concerned local villagers. • Committee under the Chairmanship of District Collector for planning and implementation of rights under FRA 2006, vide ref 2 • District level implementation committee for relocation and rehabilitation process vide ref 3. • Out of turn electricity connections to villagers in the periphery of CTH and for relocated families vide ref 4. • Compensation for human and cattle loss to villagers outside all NP and WLS through out the state of Rajasthan. • Rs. 90 lakh was announced by Hon'ble CM in his Budget Speech 2012-13 for distribution of 5000 LPG connections to peripheral villages of STR. Similarly, the announcement for 2013-14 was made for a sum of Rs. 180 lakh for 10,000 additional LPG connections for STR.
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**The result of participation must show in the field and not merely reported as a routine exercise.*

2.4 Are habitat management programmes systematically planned, relevant and monitored, and contribute effectively to Tiger and other endangered species conservation?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Habitat management programmes are entirely adhoc.	Poor		1) Discussion with STR officials 2) Draft TCP (2014-15 to 2023-24)	<ul style="list-style-type: none"> • TCP chapter 7.2.1 provides for plan of habitat management. The denning sites of large cats, Caracal; roosting sites of vultures and other important birds, colonies of rare species such as Spiny tailed lizard have been identified and provisions made to ensure their well being. • For improving the carrying capacity of herbivores, weed eradication and habitat improvement programmes are planned and implemented. • Removal of around 200 ha of Adhatoda vasica, Prosopis juliflora and Cassia tora at Baghani, Umri, Rautkela and Nayapani areas have been attempted.
Limited planning and monitoring programmes are in place for habitat management.	Fair			
Habitat management programmes are generally planned and monitored.	Good✓			
Habitat management programmes are thoroughly planned and monitored.	Very good			

***Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

				<ul style="list-style-type: none"> • The TCP also discusses management of water in the park under Chapter 7.2.1. • Special protection provisions for 72 sq km of densest forests in Rajasthan (FSI 2011) comprising of Boswellia Serrata and Anogeissus pendula has been discussed in TCP 7.2.1 under unique habitats. • In addition, forest patches containing Butea monosperma, Zizyphus jujube, Acacia catechu and Pandanus tictoria have been identified as unique habitats. • GPS location based water map of STR is in the TCP. 252 water points during the pinch period have been identified and listed. • Under NABARD support, 20 water harvesting structures have been constructed at a cost of Rs. 789.72 lakh From 2011 to 2013. • Extensive water conservation works (fracture treatment for rejuvenating water regime) have been taken up during 2012-13 in plateau area of Bana, Phatiyakhora, Malajodka, Udayanath and Kalighati areas, including 71 structures 'Talai, Jodi and Johad', based on the size of micro catchment at a cost of Rs. 250 lakh under CAMPA. Tarun Bharat Sangh was involved in planning and implementation of this scheme. • In other schemes 85 ponds and 62 anicuts have been constructed in STR.
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***This assessment should be primarily based on habitat management programmes in relation to habitats for species that are threatened (IUCN categories), are habitat specialists, subjected to seasonal movements, wide ranging with emphasis on the breeding and rearing habitat and may include factors such as food, water, shelter (all connotations).Habitat structure, composition, unique patches of vegetation and sensitive sites, sources of water and their distribution are integral. Corridors within buffer zone are critically important. For example, all riparian habitats. Have these been addressed? Is their a planning process in place? The management practices dealing with invasive species such as Lantana, Michania etc. would be examined.**

2.5 Does the TR has an effective Protection Strategy (PS)* and Security Plan and Security Audit (SA) in place?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR has little or no PS and SA.	Poor		1) Discussion with STR officials	<ul style="list-style-type: none"> • Yes, the draft TCP details various strategies, which are implemented on ground. • Theme plan for stepping up protection by addressing human wildlife interface, theme plan for active management, theme plan for movement of pilgrims have been discussed in Chapter 7.2.2 of the draft TCP. Various strategies for protecting
TR has an adhoc PS and SA.	Fair		2) Draft TCP (2014-15 to 2023-24)	
TR has a generally relevant PS and SA but is not very effective.	Good		3) CWLW letter No 612, dated 11.6.2012	
TR has a comprehensive and very effective PS and SA.	Very good ✓		4) NTCA letter No. 15-5/2008 (NTCA)/(Part 1),	

			dated 21.6.2012	<p>STR have been discussed in detail.</p> <ul style="list-style-type: none"> Chapter 7.2.2.1 discusses discusses strategies for protecting park values against cattle grazing, fuelwood and firewood removal, fire, encroachments and protection against traditional hunting communities. The STR is protected by staff which includes 2 Deputy Field Directors, 3 ACFs, 8 ROs, 26 Foresters, 106 Forest Guards, and 95 Work Charge employees. In addition, STR also employs Home Guards depending on the necessity in field. During the visit of the Committee 85 Home Guards were on duty. The staff is deployed in 19 Naka and 83 Chauki. In compliance with the Hon'ble SC order on control of traffic in State Highway 13, four manned barriers have been established. In addition, five manned barriers have been in operation in the STR. There are 132 building of various kinds, 3 Gypsys, 3 Bolero, 2 Thar jeeps, 5 pick ups, 3 Canfers, one tractor, 22 motorcycles. There is a road network of 286 km in STR of which 146 km is also used for tourism purpose. The protection is strengthened with the help of 52 wireless base stations, 17 vehicle mounted mobile sets and 107 handsets. STR has 2 Revolvers, three 12 bore DBBL, 3 muzzle loaders and two 315 rifles. There are 129 GPS, 90 Prismatic Compass, 101 Range Finders, 185 Camera traps, 2 Metal detectors and 2 binoculars. All officers and front line staff are given Common User Group SIMS. <p>17. A proposal for constitution of STPF was submitted to NTCA vide ref 3, which gave in principle approval for the constitution of STPF for STR vide ref 4. Budgetary provision was made in the APO 2013-14, but no funds were sanctioned. Again the provision has been made in the current year's APO and approval is awaited. The STR management reports that once funds are received from NTCA, the STR will constitute STPF.</p> <p>18. A network for secret information has been developed in peripheral villages in order to identify the gangs of poachers operating around STR. More than 400 people have been interrogated, which led to cracking of</p>
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				<p>14 tiger and 27 leopard poaching cases. 45 offenders have been arrested and cases are charged in the court.</p> <p>19. In tiger and leopard poaching cases, relating to year 2005 to 2008, 35 offenders have been prosecuted and convicted in tiger cases (14) and 21 offenders in leopard cases (27) with imprisonment of 3 to 5 years.</p> <p>20. Two cases of tiger and 2 of leopard poaching have been handed over to CBI for investigation in 2005. The cases are being tried in the CBI court in Jaipur.</p> <p>21. The STR has built a protocol for intensive monitoring of reintroduced tigers by telemetry and 24-7 surveillance. It has been discussed in detail in Chapter 7.2.2.2 (ii). The Committee witnessed the process of monitoring in the field.</p> <p>22. As on March 2014 there are 796 registered cases and 515 cases balance from the previous years. Of the total 1311 cases, 811 cases have been disposed off, 135 cases are pending in courts and 365 cases are under investigation in the department. The cases include illicit logging, wood removal, mining, defacing boundary pillar etc.</p> <p>23. At the end of 2013-14, a total of 170 cases of wildlife offences have been registered, out of which 31 have been disposed, 56 are pending in courts and 83 are under investigation.</p>
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**This assessment takes inter-alia into account the nature of threats, the number and location of patrolling camps and foot and mobile patrolling, needs that relate to available manpower, terrain difficulties, practicability of area coverage, readiness to contain specific threats with necessary support and facilities. The constitution and functioning of Special Tiger Protection Force (STPF), Number of offences reported, arrests made, prosecution initiated and conviction achieved will be taken into account.*

2.6 Has the TR been effective in the mitigation of human-wildlife conflicts?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Human-wildlife conflicts are significant but poorly addressed.	Poor		1) Discussion with STR officials 2) GO No. F 11 (1)/Forest/78, dated 1.3.2011 on compensation rate	1) Government of Rajasthan have issued order vide ref 2 for paying compensation for human and cattle losses.
TR has been able to mitigate few human-wildlife conflicts.	Fair			2) Over last three years, compensation of Rs 2 lakh has been paid for one human death, and Rs 70,000 was paid for 6 human injuries. An amount of Rs. 17,20,900 was paid towards 286 livestock kills.
TR has been able to mitigate many human-wildlife conflicts.	Good ✓			3) No compensation is paid towards crop loss.
TR has been effective in mitigating all human-wildlife conflicts.	Very good			

				<p>4) The compensation for loss of life to both humans and cattle is paid from the Conservation Foundation, through decision in the foundation meeting of 2012.</p> <p>5) Because the compensation is paid by the Foundation, the payments are made within 24 hours, and in any case within 3 days, subject to fulfilling the required formality.</p>
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***The assessment will take into account the number of incidences reported and payment of compensation made and its timeliness.**

2.7 Is the TR integrated into a wider ecological network/ landscape following the principles of the ecosystem approach?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR not integrated into a wider network/ landscape.	Poor		2) xx	<p>The linking of Sariska Tiger Reserve with existing source tiger population of Ranthambhore tiger reserve is reported to be not feasible due presence of agriculture landscape for more than 100 kilometer with almost no corridor connectivity. The corridors like rivers, culverts ravines ,plantations, orchards, private forests, pastures, revenue hillocks have also been taken into consideration to make functional corridor between Sariska and Ranthambhore, but due to lack of contiguity it is not possible.</p> <p>The linking of Jamwa Ramgarh Sanctuary in South with STR has already been done by including it in the STR buffer area. The jamuwa ramgarh sanctuary has good corridor connectivity.</p> <p>As there is no possibility of linking CTH of sariska tiger reserve further south with CTH of Ranthambhore tiger reserve, no corridor plan has been prepared by the STR.</p>
Some limited attempts to integrate the TR into a network/ landscape.	Fair			
TR is generally quite well integrated into a network/ landscape.	Good ✓			
TR is fully integrated into a wider network/ landscape.	Very good			

***Assessment needs to consider the scope of opportunities on the landscape scale that exist. Consider whether any attempts have been made and what are these? Have all the important corridors been identified? What actions are planned/implemented for their security? Have the Forest Working Plans and Forest Development Corporation Plans within the identified landscapes taken cognizance of such new requirement? These should have been reflected in TCPs. Is there is any effort to rationalize landuse around TR? Is any effort being made to plan and use 'Smart Green Infrastructure'?**

3. Inputs

3.1 Are personnel adequate, well organized and deployed with access to adequate resources in the Tiger Reserve (TR)*?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Few, personnel explicitly allocated but poorly supported for TR management.	Poor		1. Discussion with STR officials 2. Draft TCP (2014-15 to 2023-24)	1. A Field Director, under whom 2 Deputy Field Directors, 3 ACFs, 8 ROs, 26 Foresters, 106 Forest Guards, and 95 Work Charge employees work as regular establishment employees, heads the STR. In addition, STR also employs Home Guards depending on the necessity in field. During the visit of the Committee 85 Home Guards were on duty. 2. The staff is deployed in 19 Naka and 83 Chauki. In compliance with the Hon'ble SC order on control of traffic in State Highway 13, four manned barriers have been established. In addition, five manned barriers have been in operation in the STR. 3. A proposal for constitution of STPF was submitted to NTCA vide ref 3, which gave in principle approval for the constitution of STPF for STR vide ref 4. Budgetary provision was made in the APO 2013-14, but no funds were sanctioned. Again the provision has been made in the current year's APO and approval is awaited. The STR management reports that once funds are received from NTCA, the STR will constitute STPF. The proposal includes deployment of one Company of 112 people in the STR. 4. There are 4 vacancies of ACF, 4 vacancies of ROs and 7 vacancies of Forest Guards in STR at the time of Committee's visit. 5. In TCP Chapter 11 a proposal for staff deployment has been discussed which includes additional posts of 1 DCF and Dy FD with headquarters at Alwar. 6. The additional DCF is proposed in order to divide the STR into two independent divisions, whereas presently there is only one division with one DCF manning the entire STR. 7. In addition, additional requirement of field staff includes 254 FG, 19 Foresters and 17 Asst Foresters. 24 additional posts of drivers have also been proposed. 8. The Rajasthan Armed Constabulary consisting of one company was deployed from 2005 to 2008 for law enforcement. It was withdrawn and considering the requirement of protection the STR proposes to continue deployment of RAC until the STPF is constituted.
Some personnel explicitly allocated for TR management but not adequately supported and systematically linked to management objectives.	Fair			
Some personnel with fair support explicitly allocated towards achievement of specific TR management objectives.	Good ✓			
Adequate personnel appropriately supported and explicitly allocated towards achievement of specific TR management objectives.	Very good			

***This assessment should inter-alia be based on number of personnel allocated for attainment of TR objectives at the Range , Round, Beat and Patrolling camps levels or as relevant to the needs (sanctioned posts vis- a- vis existing personnel and needs beyond the sanctioned strengths. It is possible that posts have last been sanctioned several years back that do not now account for the current needs)**

3.2 Are resources (vehicle, equipment, building etc.) adequate, well organized and managed with desired access?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Few, if any, resources explicitly allocated for TR management.	Poor		1) Discussion with STR officials	1. There are 132 building of various kinds, 3 Gypsies, 3 Bolero, 2 Thar jeeps, 5 pick ups, 3 Canthers, one tractor, 22 motorcycles. 2. There is a road network of 286 km in STR of which 146 km is also used for tourism purpose. 3. The protection is strengthened with the help of 52 wireless base stations, 17 vehicle mounted mobile sets and 107 handsets. STR has 2 Revolvers, three 12 bore DBBL, 3 muzzle loaders and two 315 rifles. 4. There are 129 GPS, 90 Prismatic Compass, 101 Range Finders, 185 Camera traps, 2 Metal detectors and 2 binoculars. 5. All officers and front line staff are given Common User Group SIMS. 6. The STR management reports adequacy of infrastructure in Core area.
Some resources explicitly allocated for TR management but not systematically linked to management objectives.	Fair			
Some resources explicitly allocated towards achievement of specific TR management objectives.	Good ✓			
Adequate resources explicitly allocated towards achievement of specific TR management objectives.	Very good			

* These form a variety of resources. These may be segregated into immovable (structures) and movable categories and each further may be considered under the essential and desirable categories. It is best to start with what are the minimum needs to attain each objective, what is available and manner of use/deployment. The proportions of the 'essentials' and 'desirables' along the importance gradient of objectives would serve as pointers for score categories. Specific remarks would be vitally important.

3.3 Are financial resources other than those of the State linked to priority actions and are funds adequate, released timely and utilized?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Resource allocation is ad-hoc, funds are inadequate and seldom released in time and not utilized.	Poor		2) Annual Progress Reports 3) Discussion with park officials	3. Only NTCA provides central government support to STR. 4. In 2011-12, NTCA provided Rs. 2294.04 lakh, including the unspent amount of Rs 1895.99 lakh to STR. An amount of Rs. 1609.54 lakh was spent. 5. In 2012-13, allotment was Rs. 2018.71 including unspent amount from last year. The expenditure was Rs. 1521.61 lakh 6. In 2013-14 allotment was Rs 789.69, including unspent balance from the last year and the expenditure was Rs 690.40 lakh. 7. The APO for 2014-15 has been approved for an amount of Rs 218 lakh . 8. Normally the allotment from NTCA is received by June-July and it takes about a month for the state Govt to release the funds to STR.
Some specific allocation for management of priority action. Funds are inadequate and there is some delay in release, partially utilized.	Fair			
Comprehensive planning and allocation that meets the most important objectives. Generally funds released with not much delay and mostly utilized.	Good ✓			
Comprehensive planning and allocation of resources for attainment of most objectives. Funds generally released on-time and are fully utilized.	Very good			

*Obtain details of funds released by NTCA and their utilization by TR in the last 3 years and indicate them under 'Remarks'. Also comment on the problems associated with fund allocations and their utilization.

3.4 Are financial resources from the State linked to priority action and funds adequate, timely released and utilized for the management of Tiger Reserve?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Resource allocation is ad-hoc, funds are inadequate and seldom released in time and not utilized.	Poor		<ul style="list-style-type: none"> Annual Progress Reports 	<ol style="list-style-type: none"> The state Govt. provides support under various schemes Under NABARD, for eco restoration and water conservation in 2012-13, Rs 103.63 lakh was sanctioned and Rs 103.40 lakh was spent. In 2013-14, Rs 172.83 lakh was sanctioned and Rs. 172.09 lakh was spent. Under 13th Finance commission for boundary demarcation & construction of stony masonry wall in year 2012-13, Rs. 22 lakh were sanctioned & spent, in Year 2013-14, Rs. 41.40 lakh was sanctioned and Rs. 40.10 lakh was spent. In 2013-14 under RDF plan for eco restoration Rs. 61.61 lakh sanctioned and Rs. 61.44 lakh is expenditure. In 2011-12, Rs 192.70 lakh was sanctioned under CAMPA for water conservation, and Rs 184.68 lakh was spent. During 2012-13, Rs 375.10 lakh was sanctioned for water harvesting, wall construction and other establishments. Rs. 374.07 was spent. In 2013-14, Rs. 140.43 was sanctioned and Rs. 139.68 lakh was spent. No problem was reported in terms of release and utilization of funds
Some specific allocation for management of priority action. Funds are inadequate and there is some delay in release, partially utilized.	Fair			
Comprehensive planning and allocation that meets the most important objectives. Generally funds released with not much delay and mostly utilized.	Good			
Comprehensive planning and allocation of resources for attainment of most objectives. Funds generally released on-time and are fully utilized.	Very good ✓			

**Obtain details of funds released by State and their utilization by TR in the last 3 years and indicate them under 'Remarks'. Also comment on the problems associated with fund allocation and their utilization.*

3.5 What level of resources are provided by NGOs?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
NGOs contribute nothing for the management of the TR.	Poor		<ol style="list-style-type: none"> Discussion with park officials 	<ol style="list-style-type: none"> NGOs participate in STR management. WCT, Mumbai has provided one Rapid Response Unit vehicle, patrolling kits and equipment, 9 motor bikes. They also organized 140 health camps with local NGO Upkaar Sansthan for peripheral villages and for field staff. WWF, New Delhi provided one Bolero, 7 motor cycles and 3 canters. Grey Films, New Delhi provided one Gypsy. WTI New Delhi provided Rs. 25,000 for 21 relocated families of Baghani village and also provided utensils to them. Mata Gombi Devi Alwar provided skill upgradation for agriculture, animal husbandry and SHGs for relocated families. Tarun Bharti Sangh helped in environmental
NGOs make some contribution to management of the TR but opportunities for collaboration are not systematically explored.	Fair			
NGOs contributions are systematically sought and negotiated for the management of some TR level activities.	Good ✓			
NGOs contributions are systematically sought and negotiated for the management of many TR level activities.	Very good			

				<p>education programmes for 1200 school children of 25 schools with STR Conservation Foundation funds. They also provided community awareness programmes in 44 villages through Padyatras and Kalajatha through their own funds.</p> <p>8. Upkaar Sansthan provided environmental education to 800 school children in 20 schools with Conservation Foundation funds</p>
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4. Process

4.1 Does the TR have manpower resources trained in wildlife conservation for effective TR management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No trained officers and frontline staff in the TR.	Poor		1) Discussion with park officials	1. The FD and Dy FD are trained in WII PG Diploma
Some trained officers and few trained frontline staff, posted in the TR.	Fair			2. All ACFs and ROs have undergone refresher courses including wildlife management at FTI Jaipur
All trained officers and and fair number of trained frontline staff posted in the TR.	Good ✓			3. The foresters and forest guards get wildlife training at FTI Jaipur as part of their regular training.
All trained officers and most of the trained frontline staff is posted in the TR.	Very good			4. Tiger Trust of India organized special training programmes for lady forest guards in wildlife law enforcement during 2012, 2013 and 2014. 5. FD, ACFs and all ROs were trained in NTCA phase IV training programme at Kalagarh, Corbett in 2012. 6. The field staff was trained in MSTrIPES by FD and trained officers during 2012. 7. About 40 field staff have been trained in radio telemetry to monitor re introduced tigers by forming dedicated parties with WII assistance.

**Indicate % of trained staff in various categories. The number and thematic areas of the 'Internal Training' programmes organized in the TR in the last 3 years may be taken into account. Has the TR prepared a 'Staff Development Plan'? Is it being implemented?*

4.2 Is TR staff management performance linked to achievement of management objectives?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No linkage between staff management performance and management objectives.	Poor		1) Discussion with park officials	1) The promotions of staff are based on state rules which takes into account seniority and ACR of staff for promotion.
Some linkage between staff management performance and management objectives, but not consistently or systematically assessed.	Fair			
Management performance for most staff is directly linked to achievement of relevant management objectives.	Good ✓			
Management performance of all staff is directly linked to achievement of relevant management objectives.	Very good			

4.3 Is there effective public participation in TR management* and does it show in making a difference?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no public participation in TR management.	Poor		1) Discussions with park officials and meeting with EDCs on 8.6.2014	1. The local communities are being involved in park protection, especially in the eastern part of the park. 2. NGOs are actively participating in various programmes of awareness, infrastructure support, skill development and community mobilization. 3. The private tour operators and Gypsy drivers participate in cleaning the park, especially after religious festivals. 4. In past, the NGOs participated in water hole counts, which has been discontinued now in view of NTCA direction.
Opportunistic public participation in some of the relevant aspects of TR management.	Fair			
Systematic public participation in most of the relevant aspects of TR management.	Good ✓			
Comprehensive and systematic public participation in all important and relevant aspects of TR management.	Very good			

*The involvement of NGOs/ NGLs in population estimation may be taken into account

4.4 Is there a responsive system for handling complaints and comments* about TR management?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Ad-hoc approach to handling complaints.	Poor		1. www.sugam.nic.in 2. Rajasthan Sunwai Ka Adhiniyam, 2013	1. Govt. website as mentioned in Ref. 1 can be used for registering complaints and providing comments. TR also uses that for addressing complaints from civil society. 2. Complaints registers are maintained at DCF offices. 3. RTI applications are handled at DCF level. Public grievances hearing is required to be conducted daily as required by state directives
Complaints handling system operational but not responsive to individual issues and with limited follow up.	Fair			
Coordinated system logs and responds effectively to most complaints.	Good ✓			
All complaints systematically logged in coordinated system and timely response provided with minimal repeat complaints.	Very good			

*Does the TR maintains 'Suggestions Register'? What actions are taken to deal with suggestions?

4.5 Does TR management address the livelihood issues* of resource dependent communities, especially of women?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No livelihood issues are addressed by TR management.	Poor		1) Discussion with park officials and EDC meeting on 8 th June.	1. 50 Subsidized LPG connections were given to the peripheral villages in 2011-12. During 2012-13, 5,000 such connections were given and in 2013-14, 9,640 connections were given. 2. In peripheral villages, 918 out of turn agriculture electric connection for growing fodder and ensuring crops were given. 3. 90,698 man days of employment for local people was generated during 2011-12. During 2012-13, 26,892 and 2013-14, 17,281 man days were generated .
Few livelihood issues are addressed by TR management.	Fair			
Substantial livelihood issues are addressed by TR management.	Good ✓			
Livelihood issues of resource dependent communities especially of women are addressed effectively by TR	Very good			

*Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

managers.				4. There are 51 EDCs, which receive employment support. 5. No funds are received from District development agencies, except MNREGA.
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***The number of mandays generated in the last 3 years may be taken into account. Are funds received from District Agencies and other sources? Provide details of funds received in last 3 years.**

4.6 Has the TR planned and implemented the voluntary 'Village Relocation' from the Core/ Critical Tiger Habitat (CTH)?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No planning and no implementation	Poor		1) Draft TCP (2014-15 to 2023-24) 2) Discussion with park officials	1. Chapter 7.2.1 (B) discusses in detail village relocation plan.
Plans have been made but no implementation	Fair			2. Of the 29 villages that existed in STR, 3 villages have been relocated and the process is on in 6 more villages.
Plans have been made and some implementation is in progress	Good ✓			3. Of the surveyed 9 villages for priority relocation, out of 953 families, 592 families have been relocated and 47 families are under process. Negotiation for relocating the remaining families and their consent is processed.
Plans have been made and are being actively implemented/ no human habitation in the CTH	Very good			4. There is one DCF relocation and one RO relocation exclusively appointed for this purpose. 5. Funds for relocation are made available only through NTCA and no funds are made available from the state. 6. The state government has asked for proposal vide ref 3 to incentivize relocation programme. 7. As per the park officials, the land package of rehabilitation is facing difficulty because average land prices have sky rocketed due to Alwar district being brought under NCR, 8. For redressal of complaints regarding rehabilitation, established procedures are in place. 9. STR is involved in post rehabilitation hand holding.

***Assessment will look into the village relocation planning process including availability of manpower, financial resources and NGO support, if any. Is there a mechanism to address the complaints received in respect of relocation process? Effort must be made to assess post-relocation success or otherwise.**

5. Output

5.1 *Is adequate information on TR management publicly available?*

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no information on TR management publicly available.	Poor		1. Discussion with park officials	1. www.rajasthanwildlife.rajasthan.gov.in website has a component on STR 2. www.rajforest.nic.in for Rajasthan Forest Dept. has a section on STR 3. Brochures on STR are tourism related. 4. Management related information, people approach offices of CF&FD and DCF.
Publicly available information is general and has limited relevance to management accountability and the condition of public assets.	Fair			
Publicly available information provides detailed insight into major management issues and condition of public assets.	Good ✓			
Comprehensive reports are routinely available in public domain on management and condition of public assets.	Very good			

5.2 *Are visitor services and facilities appropriate and adequate?*

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Visitor services and facilities do not exist.	Poor		1) Discussions with the officials of STR	1) The tourism zone is demarcated and is about 18% in CTH. 2) There are 3 tourism zone is Sariska and 2 tourism zone in Tehla and 156.47 km length. 3) As per the carrying capacity calculated in Chapter Zone Plan for Eco tourism 7.2.1. 35 Gypsies are in morning and 35 gypsy in evening are permitted 4) 75% Gypsy is booked in online booking and 25% is current booking for which procedure in place. 5) The park remains closed from 1 st July to 30 September. 6) There in a Interpretation Center, booking window, parking space, and film show, brochures, sticker & 7) The tourism zone is managed in 18% of CTH, complying with SC directives.
Visitor services and facilities are very basic.	Fair			
Visitor services and facilities are monitored from time to time and are fairly effective.	Good ✓			
Visitor services and facilities are conscientiously maintained, regularly upgraded and monitored for visitor satisfaction	Very good			

**Include the existence and quality of visitor and interpretation centers, including skills and capabilities of personnel manning these, TR related publications, films, videos; arrangements of stay (including places serving refreshments and food owned and managed by TR), watch towers and hides including safety factors, vehicles assigned for visitors including riding elephants, if any and their deployment, drinking water, rest rooms, garbage disposal, attended and self guided services in the field, visitor feedback on the quality of wilderness experience.*

5.3 Are research/ monitoring related trends systematically evaluated and routinely reported and used to improve management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no systematic evaluation or routine reporting of trends.	Poor		1) Draft TCP 2014-15 2) Discussion with Sariska Tiger Reserve (henceforth STR) officials	<ul style="list-style-type: none"> A number of research programmes have been conducted by WII and local researchers. Chapter 8 of draft TCP lists out research priorities and identifies management related projects to be undertaken in future. 17 projects have been identified. A research monitoring committee is proposed under the chairmanship of CWLW. Phase IV monitoring of tiger and prey base is being done. 274 sq km area is covered under camera traps. 2014, carnivore sign survey and transect sampling for presence of carnivores and ungulate densities is being done. Tiger research is being used to improve management. There is a position of a Research Officer, which is vacant.
Some evaluation and reporting undertaken but neither systematic nor routine.	Fair		3) Food habits of golden jackal and striped hyaena. P. Chaurisha <i>et al.</i> 2012. <i>World Journal of Zool</i> 7(2).	
Systematic evaluation and routine reporting of trends undertaken.	Good ✓		4) Prey selection, food habit and dietary overlap between leopard and re-introduced tiger in a semi-arid forest of Sariska Tiger Reserve, Western India. 2012. K. Mondal <i>et al.</i> <i>Intl. Journ. Zool.</i> 2012.	
Systematic evaluation and comprehensive reporting of trends undertaken and attempts made at course corrections as relevant.	Very good		5) Home range and resource selection of problems leopards translocated to forested habitat. K. Mondal <i>et al.</i> 2013. <i>Curr. Science</i> 105(3). 6) Prey selection by tigers in Sariska Tiger Reserve, Rajasthan. 2008. D. Avinandan <i>et al.</i> <i>JBNHS</i> . 7) Abundance and habitat suitability model for Ratel in STR, Western India. 2012. S. Gupta <i>et al.</i> <i>Wildl. Biol. Pract.</i> 8(1). 8) Diversity and abundance of rodents in STR. 2013. S. Gupta <i>et al.</i> <i>JBNHS</i> . 9) Annotated checklist of the birds of STR. 2006. G. Sahabuddin. <i>Indian Birds</i> 2(3). 10) Sariska: The Reign of Tigers. 2012. K. Shankar S. Bhattacharjee. <i>STRIPES Sep-Oct 2012</i> . 11) Tale of a travelling tiger. 2012. S. Bhattacharjee. <i>Sanctuary Asia</i> . 12) 'Sariska ka Vaibhav' by Aman Singh, Tarun Bharat Sangh. 13) Forest Rejuvenation by Dr Khalak Dina, Tarun Bharat Sangh. 2)	

***Not all TRs attract projects and researchers and with exceptions, little research takes place on the TRs own steam because of systemic limitations. However, monitoring of some critical issues is expected e.g. population of tiger, co-predators and prey with insights into their demography and distribution (some opportunistic sampling by sightings, signs and spatial distribution during assessment would be extremely useful in terms of expert**

impression and as a pulse), monitoring incidence of livestock grazing, fires, weeds, sources of water, a variety of illegal activities typically associated with the reserve, wildlife health (e.g. epidemics, immunization of livestock) regeneration and change in vegetation, visitors and their activities, offence cases, ex-gratia payments etc. Efforts must be made to assess the planning and implementation of Phase-IV monitoring protocols and the success of implementation of M-Stripes (wherever applicable). Are the 'Sykes and Horill' monitoring plots maintained and data analyzed?

5.4 Is there a systematic maintenance schedule and funds in place for management of infrastructure/assets?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No systematic inventory or maintenance schedule.	Poor		Discussion with park officials	1) In the current year's budget, STR has proposed Rs. 25 lakh for vehicle maintenance and Rs. 10 lakh for building maintenance. On an average STR spends about Rs.15 lakh on vehicle maintenance, and around Rs. 10 lakh on building maintenance. 2) The management reports shortage of funds for maintenance. 3) Stock register for stores, building register and vehicle log books and history cards are maintained routinely.
Inventory maintenance is adhoc and so is the maintenance schedule.	Fair			
Systematic inventory provides the basis for maintenance schedule but funds are inadequate.	Good ✓			
Systematic inventory provides the basis for maintenance schedule and adequate funds are made available.	Very good			

6. Outcomes

6.1 Are populations of threatened species declining, stable or increasing?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Populations of key threatened/ endangered species are declining.	Poor		Draft TCP and discussion with park officials	Leopard - The co-predator sharing the habitat with Tiger, is the leopard, distributed throughout the Reserve in CTH.WII in 2007 estimated the density and distribution of leopards and status of other lesser carnivores through camera trapping under mark-recapture framework. The density of leopard in Sariska Tiger Reserve was found 7 individuals per 100 km ² , which is comparable with Satpura NP (7-10/100 km ²), Rajaji NP (9.8/100 km ²), Mera Poh (6/100 km ²), Ngorongoro NP (7.5/100 km ²), Kruger NP (5.1/100 km ²) and Nairobi NP (10/100 km ²). The latest density estimation figures are not available. Caracal- Caracal is one of the most elusive carnivores in Sariska Tiger Reserve. Sariska holds a good habitat and prey base for caracal (Mukherjee 1998). Sankar et al. (2007) prepared its distribution map based on secondary data. Recent information is lacking. In respect of prey base K Mondal et.al. (2012) reported the densities of various species per square kilometer of STR, of which Chital was 44.30, Sambar 25.23, Neelgai 18.91, wild pig 14.95, peafowl 121.43 and hare was 3.45. Information on species like Chausinga, Sloth bear are lacking and require investigation.
Some threatened/ endangered species populations declining, some are increasing, most others are stable.	Fair			
Several threatened/ endangered species populations increasing, most others are stable.	Good ✓			
All threatened/ endangered species populations either increasing or stable.	Very good			

**This needs to practically relate to the natural ecosystem potential rather than being driven merely by numbers and visibility. The assessment score may be elaborated under remarks.*

6.2 Is the population of tigers showing a declining, stable or increasing trend?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Population of tiger is showing a declining trend	Poor		NTCA-WII report on reintroduced tigers Discussion with park officials	Since year 2008 tigers have been reintroduced in Sariska Tiger Reserve on dates 28 th June 2008 (ST-1), 4 th July 2008 (ST-2), 25 th February 2009(ST-3), 20 th July 2010(ST-4), 28 th July 2010 (ST-5) and 23 rd February 2011 (ST-6). ST-1 male tiger died on 14 th November 2010 due to poisoning. After a long and anxious wait, the ST2 littered two cubs in year 2012. Both the female cubs have grown up and separated from the mother and now occupy Slopka, Bhainsota, Devri and Zahaj areas. There has not been any other pregnancy since then. Of the 881 sq km of CTH, 542 sq km area is occupied by 9 tigers. Interestingly, the present tiger occupancy is greater than the area occupied by tigers in 2003-04.
Population of tiger is stable	Fair			
Population of tiger is showing an increasing trend	Good ✓			
Population of tiger has significantly increased	Very good			

**This assessment should be based in the context of available population estimate (2010-11) and the outcomes of the currently ongoing Phase-IV analyses.*

6.3 Have the threats* to the TR being reduced/ minimized? Or is there an increase?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Threats to the TR have not abated but have enhanced.	Poor		Discussion with park officials	<ol style="list-style-type: none"> 1) The relocated village sites at Baghani, Umri and Rautkela are now free of human disturbance and habitats are reported to be recovering. 2) Distribution of about 15,000 subsidized LPG connection has reportedly reduced the extraction of fuel wood from the CTH. 3) 918 out of turn electricity connections to peripheral villages for agriculture and fodder cultivation has reportedly reduced extractive pressure on CTH. 4) 30 km long protection wall in the peripheral patches have reportedly protected the respective areas from grazing and encroachments. 5) Involvement of locals as tourist guides and vehicle drivers has reportedly reduced illicit engagement of locals in the STR. 6) However, a systematic study on impact assessment has not been done.
Some threats to the TR have abated, others continue their presence	Fair			
Most threats to the TR have abated. The few remaining are vigorously being addressed	Good ✓			
All threats to the TR have been effectively contained and an efficient system is in place to deal with any emerging situation	Very good			

**Does the TR have a Disaster Risk Management Plan to deal with existing as well as emerging threats?*

6.4 Are the expectations of visitors* generally met or exceeded?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Expectations of visitors generally not met.	Poor		Discussion with park officials	1) There were 34,403 visitors to STR during 2011-12, 23,063 in 2012-13 and 32,361 in 2013-14. The revenues correspondingly were Rs 82.30 lakh, 67.31 lakh and 72.37 respectively. 2) The STR Conservation Foundation receives the revenue generated. 3) The figures given above include vehicles registered outside Alwar district entering on Tuesday and Saturday for pilgrimage to Pandupole Hanuman temple. 4) The pilgrimage vehicles of Alwar registration are allowed free entry. 5) An analysis of feed back from wildlife tourists indicate that visitors express dissatisfaction for not being able to sight tigers, toilet facilities and for sitting space. 6) 75% bookings for Gypsies are on line, which is being managed by Rajasthan NIC. 7) The tourism zone is managed in 18% of CTH, complying with SC directives.
Expectations of many visitors are met.	Fair			
Expectations of most visitors are met.	Good✓			
Expectations of all most all visitors are met.	Very good			

***What is the compliance status on Supreme Court/ NTCA Guidelines on Ecotourism in TRs?**

6.5 Are local communities supportive of TR management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Local communities are hostile.	Poor		Discussion of park officers & EDC meeting on 8 th June 2014	1) The local communities very hostile to STR which is manifested in the wiping of tiger population in Sariska. 2) As the local communities occupy prime habitats in STR are primarily cattle herders there has always been the situation of conflict between local people and STR management. The hostilities continued to exist as is seen is the poisoning of ST-1 dated 14 November 2011. 3) However the STR management has released the issues of livelihood of park people interface by addressing basic resource dependency issues. 4) Providing alternate option for fuel wood, fodder and avoiding crop damage by wild animals has been part of strategies to win local people confidence. This has improve park management – people relationship as was witnessed during EDC meeting at Siliberi.
Some are supportive.	Fair			
Most locals are supportive of TR management.	Good✓			
All local communities supportive of TR management.	Very good			

***There could be many reasons for disenchantment. It could be real because of managerial neglect or the managerial efforts could be appropriate but there could be local elements/organizations who would like to keep the disaffection simmering for their own ulterior motives. Likewise success could be entirely because of the efforts of managers or they might be fortunate in striking partnerships with credible NGOs. Assessment may take the prevailing causes into account.**

7. MEE Score Card⁺

Framework Element Number	Framework Element Name	Number of Criteria (a)	Maximum Mark per question (b)	Total (a x b)	Marks obtained for the Element	Overall MEE Score and % age
1.	Context	04	10	40	27.50	73.39 %
2.	Planning	07	10	70	52.50	
3.	Inputs	05	10	50	40.00	
4.	Process	06	10	60	45.00	
5.	Outputs	04	10	40	27.50	
6.	Outcomes	05	10	50	35.50	
Total		31		310	227.50	

⁺*Efforts will be made by the NTCA-WII-MEE Team to address the issue of assigning 'differential' weightages to the 31 Assessment Criteria including 'normalization'.*

Assessment Criteria for addressing issues relating to Climate Change & Carbon capture in the Tiger Reserves (TRs)

1. *Additional Criteria on Climate Change: Is the TR being consciously managed to adapt to climate change?*

Condition	Category*	(Tick ✓)	Comment/ Explanation	Next Steps
There have been no efforts to consider adaptation to climate change in management	Poor			
Some initial thought has taken place about likely impacts of climate change, but this has yet to be translated into management plans	Fair			
Detailed plans have been drawn up about how to adapt management to predicted climate change, but these have yet to be translated into active management.	Good			
Detailed plans have been drawn up about how to adapt management to predicted climate change, and these are already being implemented	Very good			

***Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

2. *Additional Criteria on Climate Change: Is the TR being consciously managed to prevent carbon loss and to encourage further carbon capture?*

Condition	Category*	(Tick ✓)	Comment/ Explanation	Next Steps
Carbon storage and carbon dioxide capture have not been considered in management of the TR	Poor			
Carbon storage and carbon dioxide capture have been considered in general terms, but has not yet been significantly reflected in management	Fair			
There are active measures in place to reduce carbon loss from the TR, but no conscious measures to increase carbon dioxide capture	Good			
There are active measures in place both to reduce carbon loss from the TR and to increase carbon dioxide capture	Very good			

***Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

Management Effectiveness Evaluation (MEE) of Mukundra Hills Tiger Reserve

1. Context

1.1 Are the values of the TR well documented, assessed and monitored?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Values not systematically documented, assessed and monitored.	Poor		1) Indicative Tiger Conservation Plan of MHTR (2013-2014)	<ul style="list-style-type: none"> Part of Malwa Plateau with dry-deciduous type II, semi-arid and tropical forest formations Unique geological features MHTR was notified on 10/09/2013 M.Sc. Wildlife Science students of Kota University have undertaken studies on 'Food habit & prey selection of leopard', 'Ecological assessment of gharial and crocodile', 'Population density of ungulates', 'Population density of vultures' and Ph.D. thesis as mentioned Being a newly declared Tiger Reserve, systematic monitoring protocol is not there, needs to be developed and implemented
Values generally identified but not systematically assessed and monitored.	Fair✓		2) Indicative TCP discusses values of the park in part A, Chapter 2, focusing on floral, faunal, hydrological, archaeological and cultural values	
Most values systematically identified, assessed and monitored.	Good		3) Masters dissertation thesis of Kota University, Wildlife Science Dept.	
All values systematically identified, assessed and monitored.	Very good		4) Ph.D. thesis titled 'Carbon Sequestration in Mukundara National Park', & 'Ecosystem Services in Mukundara National Park'	

1.2 Are the threats to TR values well documented and assessed*?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Threats not systematically documented or assessed.	Poor		1. Indicative Tiger Conservation Plan of MHTR (2013-2014) discusses threats in SWOT framework in Chapter 6	1. Major threats include illegal entry and vulnerability to poaching, high biomass extraction, habitat fragmentation, grazing, presence of human settlements in prime wildlife habitats, NH 12 & Delhi-Mumbai railway track passing through the Tiger Reserve
Threats generally identified but not systematically assessed.	Fair✓			
Most threats systematically identified and assessed.	Good			
All threats systematically identified and assessed.	Very good			

*This assessment should be based on number, nature and extent of threats

1.3 Is the 'Core Area' of TR free from human and biotic interference?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
The 'Core Area' has extensive human and biotic interference.	Poor		1. Indicative Tiger Conservation Plan of MHTR (2013-2014) discusses values of the park in 2. Discussion with officers of the Forest Dept., Shri M. L. Meena IFS, Shri Sunil Chidri IFS, Shri Rajeev Kapoor and	1. The core area is NOT free from biotic interference as the core area has 16 villages with approximately 1285 families with more than 10,000 nos. cattle 2. More than 50% of populations in the 16 villages are comprised of Gujjars who are cattle herders. Other
The 'Core Area' has some human and biotic interference.	Fair✓			
The 'Core Area' has little human and biotic interference.	Good			
The 'Core Area' has no human and biotic interference.	Very good			

			3. NGOs of Kota town F-19 (-) 2012/Establishment – Gazette/ PCCF/1119-1129 dated 17 th Feb 2014	communities include <i>Bheel & Meena</i> 3. The buffer areas of Kota, Jhalawar and Chittorgarh forest divisions have been placed under unified control of the DCF of Mukandara National Park, hand-over of staff and area is under process.
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***This assessment should be based on existence and the efforts made by TR management to address issues related to human settlements/ villages inside the core area; livestock grazing, cultivation, encroachments etc, resource extraction/ livelihood dependence of local communities and should reflect the overall interference due to all the above factors. The issue of 'Unified Control' of the 'Core' and 'Buffer' zones ~~by~~ under the Field Director would also be taken into account.**

1.4 Has the TR complied with the four Statutory* Requirements (SR) along with Tripartite MoU and three Standard Operation Procedures (SOP)?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
None of the four SR, no compliance of Tripartite MoU and three SOPs met	Poor		<ul style="list-style-type: none"> Order no. Letter.3(8)Forest/2012 dated 9th April 2013 published in Gazette dated 18th April 2013, Govt. of Rajasthan Indicative TCP submitted to NTCA vide letter no.– F3(210)/Technical-1/CWLW/2009/6202 dated 22nd January 2014 	1. Notification of core & buffer through Govt. order 2. Core and buffer have been delineated on ground and mapped 3. Proposal of TCF is being prepared by the DCF 4. Indicative TCP has been prepared and submitted to NTCA 5. As a follow up on the TCP, NTCA convened a meeting of MHTR officials from 3 rd to 5 th April 2014 at Sariska TR and suggested certain modifications. The MHTR is attending to those modifications and is likely to submit the revised TCP by 30 th June 2014 6. State level Steering Committee has not been constituted yet. 7. SOPs from NTCA have been received by the MHTR authority and distributed up to Range level and veterinary doctors, and has been followed in some of the recent cases
Two of the four SR, 50% conditions of the Tripartite MoU and SOPs complied	Fair ✓			
Three of the four SR, 75% conditions of the Tri-partite MoU and SOPs complied	Good			
All four SR, 100% conditions of the Tripartite MoU and SOPs complied	Very good			

***Statutory requirements are (1) Legal delineation and notification of Core and Buffer Areas; (2) Establishment of Tiger Conservation Foundation; (3) Development of a Tiger Conservation Plan; and (4) Constitution of a State-level Steering Committee under the Chairmanship of the Chief Minister. TA refers agreement between Field Director, State Government and NTCA. The 3 SOPs are on (i) Straying of Tiger in human dominated landscape, (ii) Tiger Mortality and (iii) Disposal of Carcasses**

2. Planning

2.1 Status of Tiger Conservation Plan (TCP) *?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No TCP in place.	Poor		1) Indicative TCP submitted to NTCA vide letter no.– F3(210)/Technical-1/CWLW/2009/6202 dated 22 nd January 2014 2) Discussion with officers of the Forest Dept., CCF Shri M. L. Meena IFS, DCF Shri Sunil Chidri IFS, ACF Shri Rajeev Kapoor and ACF Shri Yodhraj Singh Hada	1) Indicative TCP has been prepared and submitted to NTCA 2) As a follow up on the TCP, NTCA convened a meeting of MHTR officials from 3 rd to 5 th April 2014 at Sariska TR and suggested certain modifications. The MHTR is attending to those modifications and is likely to submit the revised TCP by 30 th June 2014
TCP is under preparation	Fair ✓			
TR has a relevant TCP	Good			
TR has a comprehensive and relevant TCP, duly approved by the NTCA	Very good			

**The scientific content and the participatory processes used in preparation of the TCP will be taken into account in assessing the quality of TCP.*

2.2 Does the TR safeguards the threatened biodiversity values?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR does not safeguard the threatened biodiversity values.	Poor		<ul style="list-style-type: none"> Indicative TCP chapter 7 Discussion with officers of the Forest Dept., CCF Shri M. L. Meena IFS, DCF Shri Sunil Chidri IFS, ACF Shri Rajeev Kapoor and ACF Shri Yodhraj Singh Hada 	<ul style="list-style-type: none"> Chapter 7 of the Indicative TCP prescribes strategies for management of invasive species, grazing control, control of mining and encroachment, fuelwood collection, lopping and cutting of trees, fire incidents, poaching, etc. The TR has a network of 24 sections (<i>naka</i>) and guard-posts (<i>chowki</i>), five checkposts, seven jeeps fitted with wireless base stations, eight motorbikes, two motorboats. Elementary wireless network is present – 10 base stations and 24 handsets Two revolvers, one 12 bore double barrel breach-loading shotgun, seven 12 bore pump-action shotguns MHTR has a grid of fire-lines distributed in 10 areas across the TR, six fire-watchtowers
TR safeguards a few threatened biodiversity values.	Fair ✓			
TR safeguards a large number of threatened biodiversity values.	Good			
TR safeguards all threatened biodiversity values.	Very good			

**Remarks need to elaborate on the kind of safeguards and how they work or are intended to work*

2.3 Are stakeholders given an opportunity to participate in planning process?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little, if any opportunity for stakeholder participation in planning.	Poor		1) Indicative TCP chapter 7 2) Discussion with officers of the Forest Dept., CCF Shri M. L. Meena IFS, DCF Shri Sunil Chidri IFS, ACF Shri Rajeev Kapoor and ACF Shri Yodhraj Singh Hada	1) Microplans on socioeconomic and hydrological matters have been prepared through participatory process for each of seven villages (6 in core, 1 in buffer) 2) Unstructured discussions with local CBOs, academicians and departmental officers 3) Recommendations from the Wildlife Science Dept. of Kota University have been included in the indicative TCP 4) Socio-economic profile of the TR developed by a sociologist who had meetings with <i>Gram-sabhas</i> were included in the indicative TCP
Stakeholders participate in some planning.	Fair			
Stakeholders participate in most planning processes.	Good ✓			
Stakeholders routinely and systematically participate in all planning processes.	Very good			

*The result of participation must show in the field and not merely reported as a routine exercise.

2.4 Are habitat management programmes systematically planned, relevant and monitored, and contribute effectively to Tiger and other endangered species conservation?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Habitat management programmes are entirely adhoc.	Poor		1) Indicative TCP chapter 7 2) Discussion with officers of the Forest Dept., CCF Shri M. L. Meena IFS, DCF Shri Sunil Chidri IFS, ACF Shri Rajeev Kapoor and ACF Shri Yodhraj Singh Hada	1) Chapter 7 of Indicative TCP describes habitat management programs for the MHTR 2) An assessment of invasive species has been made for select spaces within MHTR, plan for removal of those species has been prescribed 3) The focus of habitat management is on improving food for wild animals, grassland management, removal of invasive species, development of waterholes, water channels to connect streams to drier parts, maintenance of perennial water channels and development of models for soil and water conservation. 4) Species specific habitat management programs require detailed understanding and implementation. 5) Focus on gharial, mugger crocodile and long-billed vulture population and habitat monitoring is being developed
Limited planning and monitoring programmes are in place for habitat management.	Fair ✓			
Habitat management programmes are generally planned and monitored.	Good			
Habitat management programmes are thoroughly planned and monitored.	Very good			

*This assessment should be primarily based on habitat management programmes in relation to habitats for species that are threatened (IUCN categories), are habitat specialists, subjected to seasonal movements, wide ranging with emphasis on the breeding and rearing habitat and may include factors such as food, water, shelter (all connotations). Habitat structure, composition, unique patches of vegetation and sensitive sites, sources of water and their distribution are integral. Corridors within buffer zone are critically important. For example, all riparian habitats. Have these been addressed? Is there a planning process in place? The management practices dealing with invasive species such as *Lantana*, *Michania* etc. would be examined.

2.5 Does the TR has an effective Protection Strategy (PS)* and Security Plan and Security Audit (SA) in place?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR has little or no PS and SA.	Poor		<ul style="list-style-type: none"> Indicative TCP chapter 10 Discussion with officers of the Forest Dept., CCF Shri M. L. Meena IFS, DCF Shri Sunil Chidri IFS, ACF Shri Rajeev Kapoor and ACF Shri Yodhraj Singh Hada 	<ol style="list-style-type: none"> Chapter 10 in the indicative TCP discusses protection strategies in MHTR. It talks about constitution of a Tiger Cell, District level Wildlife Protection Task Force and deployment of STPF in MHTR. The plan also prescribes foot patrolling in different beats, establishment of anti-poaching camps, night patrolling provisions, intelligence gathering, informer networks and constitution of a wildlife crime cell at Division unit. The plan takes note of necessity of collaborating with the Police Department. Detailed prescriptions are available for improving staffing pattern, mobility and field level improvement for protection. The TR has a network of 24 sections (<i>naka</i>) and guard-posts (<i>chowki</i>), five checkpoints, seven jeeps fitted with wireless base stations, eight motorbikes, two motorboats. Elementary wireless network is present – 10 base stations and 24 handsets. Two revolvers, one 12 bore double barrel breach-loading shotgun, seven 12 bore pump-action shotguns There are 47 Forest Guards, 6 Asst. Foresters, 3 Foresters and 2 Range Officers along with 2 ACFs in the TR. In addition to that, 45 work-charged employees and 30 Home Guards have been deputed for protection activities. While the average age of the staff is over 45, new recruitment of 18 young forest guards have lowered the average age. Offence list – 753 offences have been registered in MTR, of which 125 are charged in the courts and 628 are at the stage of investigation. The cases included 109 illicit felling, 155 cases of tree pollarding, 113 illicit grazing, 159 illicit mining of sandstone and rubble and 28 cases related to wildlife offences. However being a new TR the protection strategy and its implementation requires further strengthening.
TR has an adhoc PS and SA.	Fair✓			
TR has a generally relevant PS and SA but is not very effective.	Good			
TR has a comprehensive and very effective PS and SA.	Very good			

**This assessment takes inter-alia into account the nature of threats, the number and location of patrolling camps and foot and mobile patrolling, needs that relate to available manpower, terrain difficulties, practicability of area coverage, readiness to contain specific threats with necessary support and facilities. The constitution and functioning of Special Tiger Protection Force (STPF), Number of offences reported, arrests made, prosecution initiated and conviction achieved will be taken into account.*

2.6 Has the TR been effective in the mitigation of human-wildlife conflicts?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Human-wildlife conflicts are significant but poorly addressed.	Poor		Discussion with MTR officials and villagers	There are no recorded cases of conflicts. However, in a meeting with MTR and village people on 2 nd June at Damodorpura village. Villagers informed of crop damage by wild herbivores. Ex-gratia has not been paid as the villages are located within the core of the TR.
TR has been able to mitigate few human-wildlife conflicts.	Fair			
TR has been able to mitigate many human-wildlife conflicts.	Good✓			
TR has been effective in mitigating all human-wildlife conflicts.	Very good			

***The assessment will take into account the number of incidences reported and payment of compensation made and its timeliness.**

2.7 Is the TR integrated into a wider ecological network/ landscape following the principles of the ecosystem approach?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR not integrated into a wider network/ landscape.	Poor		Indicative TCP	<ol style="list-style-type: none"> 1) The constitution of MHTR recognizes the Western India Tiger Landscape, connecting this with Ranthambore TR through Ramgarh – Bisdhari WLS of Bundi district and territorial forest areas of Bundi district. 2) Another linkage is from Chambal River to Kalisindh River towards Dara WLS. 3) A tigress from Ranthambore TR is in the Kalisindh ravines of Kota district since past four years, another tiger is in Ramgarh Bisdhari WLS. 4) Buffer areas notified from Kota, Chitorgarh and Bundi districts are also connected to surrounding wildlife habitats. 5) The Indicative TCP briefly discusses existing corridors and strategies for developing those corridors. This also stresses the tenuous status of linkage between Gandhisagar WLS and MHTR due to sheep migration, more than 200,000 sheep migrates from western Rajasthan to southwards. 6) Potential of connectivity from Dara to Shergadh WLS (Baran district), to Chipabarodh to Nahargadh to Sahabadh and finally to Shivpuri and Kuno Palpur WLS. 7) The mechanism for integrating the TR into larger landscape however is required.
Some limited attempts to integrate the TR into a network/ landscape.	Fair✓			
TR is generally quite well integrated into a network/ landscape.	Good			
TR is fully integrated into a wider network/ landscape.	Very good			

***Assessment needs to consider the scope of opportunities on the landscape scale that exist. Consider whether any attempts have been made and what are these? Have all the important corridors been identified? What actions are planned/implemented for their security? Have the Forest Working Plans and Forest Development Corporation Plans within the identified landscapes taken cognizance of such new requirement? These should have been reflected in TCPs. Is there is any effort to rationalize landuse around TR? Is any effort being made to plan and use 'Smart Green Infrastructure'?**

3. Inputs

3.1 Are personnel adequate, well organized and deployed with access to adequate resources in the Tiger Reserve (TR)*?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Few, personnel explicitly allocated but poorly supported for TR management.	Poor		1) Indicative TCP Chapter 10 discusses about staff deployment & chapter 13 discusses staff requirement.	1) There are 47 Forest Guards, 6 Asst. Foresters, 3 Foresters and 2 Range Officers along with 2 ACFs in the TR. In addition to that, 45 work-charged employees and 30 Home Guards have been deputed for protection activities. 2) While the average age of the staff is over 45, new recruitment of 18 young forest guards have lowered the average age. 3) Vacancy of two ACF, two RO, three Forester, nine Asst. Forester, eight Forest Guards.
Some personnel explicitly allocated for TR management but not adequately supported and systematically linked to management objectives.	Fair ✓			
Some personnel with fair support explicitly allocated towards achievement of specific TR management objectives.	Good			
Adequate personnel appropriately supported and explicitly allocated towards achievement of specific TR management objectives.	Very good			

***This assessment should inter-alia be based on number of personnel allocated for attainment of TR objectives at the Range , Round, Beat and Patrolling camps levels or as relevant to the needs (sanctioned posts vis- a- vis existing personnel and needs beyond the sanctioned strengths. It is possible that posts have last been sanctioned several years back that do not now account for the current needs)**

3.2 Are resources (vehicle, equipment, building etc.) adequate, well organized and managed with desired access?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Few, if any, resources explicitly allocated for TR management.	Poor		1) Indicative TCP chapter 10.	1) The TR has a network of 24 sections (<i>naka</i>) and guard-posts (<i>chowki</i>), five checkpoints, seven jeeps fitted with wireless base stations, eight motorbikes, two motorboats. Elementary wireless network is present – 10 base stations and 24 handsets. Two revolvers, one 12 bore double barrel breach-loading shotgun, seven 12 bore pump-action shotguns, eight GPS sets, one DSLR camera, 5 binoculars. 2) Equipment is inadequate given the status that it is a Tiger Reserve. Therefore, additional resources are required for procurement of more firearms and field patrolling as well as monitoring equipment.
Some resources explicitly allocated for TR management but not systematically linked to management objectives.	Fair ✓			
Some resources explicitly allocated towards achievement of specific TR management objectives.	Good			
Adequate resources explicitly allocated towards achievement of specific TR management objectives.	Very good			

*** These form a variety of resources. These may be segregated into immovable (structures) and movable categories and each further may be considered under the essential and desirable categories. It is best to start with what are the minimum needs to attain each objective, what is available and manner of use/deployment. The proportions of the 'essentials' and 'desirables' along the importance gradient of objectives would serve as pointers for score categories. Specific remarks would be vitally important.**

3.3 Are financial resources other than those of the State linked to priority actions and are funds adequate, released timely and utilized?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Resource allocation is adhoc, funds are inadequate and seldom released in time and not utilized.	Poor		<ul style="list-style-type: none"> Annual progress reports Discussion with officials of the Forest Dept. 	1) The first APO for MHTR has been submitted to the NTCA and approval is awaited. 2) During the previous years the MHTR has been receiving CSS grants under support to National Parks and Wildlife Sanctuaries. During 2013-14, the total Central grant was RS110.04lakh of which for National Chambal Gharial Sanctuary Rs.1.95lakh, Darrah Sanctuary Rs.32.06lakh and Jawahar Sagar Sanctuary Rs.28.66lakh was approved. In addition, small amount of Rs.3lakh was approved under Integrated Forest Management Scheme and Rs.44.37lakh was approved under 13 th Finance Commission for protection and conservation of forests. Against the total release of Rs.62.67lakh for the three Wildlife Sanctuaries an amount of Rs.47.07lakh was spent. No expenditure was made on integrated forest management scheme and only Rs.1lakh was spent against 13 th Finance Commission.
Some specific allocation for management of priority action. Funds are inadequate and there is some delay in release, partially utilized.	Fair ✓			
Comprehensive planning and allocation that meets the most important objectives. Generally funds released with not much delay and mostly utilized.	Good			
Comprehensive planning and allocation of resources for attainment of most objectives. Funds generally released on-time and are fully utilized.	Very good			

***Obtain details of funds released by NTCA and their utilization by TR in the last 3 years and indicate them under 'Remarks'. Also comment on the problems associated with fund allocations and their utilization.**

3.4 Are financial resources from the State linked to priority action and funds adequate, timely released and utilized for the management of Tiger Reserve?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Resource allocation is ad-hoc, funds are inadequate and seldom released in time and not utilized.	Poor		Annual Progress Report and discussions with the officials of the MHTR	State share for CSS 1) The state govt. has released an amount of Rs.236.07lakh under planned scheme during 2013-14. Various schemes include forest conservation and protection, integrated forest protection, maintenance, small works, modernization of protection. This also included support from 13 th Finance Commission and NABARD. Against this, around 74% Rs.175.05lakh have been spent. 2) The Annual Plan of Operation for various schemes has been submitted to the State that is being reviewed. 3) In addition, state govt. also provided Rs.40.42lakh under Rajasthan Protected Area Conservation Society against which an expenditure of INR28.17lakh was made in 2012-2013. No funds were released during 2013-14. Similarly under CAMPA, an amount of Rs.13.14lakh was released in the year 2013-14 and an expenditure of Rs.7.79lakh was made. No funds were reportedly released under 2013-14.
Some specific allocation for management of priority action. Funds are inadequate and there is some delay in release, partially utilized.	Fair ✓			
Comprehensive planning and allocation that meets the most important objectives. Generally funds released with not much delay and mostly utilized.	Good			
Comprehensive planning and allocation of resources for attainment of most objectives. Funds generally released on-time and are fully utilized.	Very good			

***Obtain details of funds released by State and their utilization by TR in the last 3 years and indicate them under 'Remarks'. Also comment on the problems associated with fund allocation and their utilization.**

3.5 What level of resources are provided by NGOs?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
NGOs contribute nothing for the management of the TR.	Poor		Discussion with NGOs	1) Dr. L. K. Dadhich, Environmental Biologist, Member of Environment Society
NGOs make some contribution to management of the TR but opportunities for collaboration are not systematically explored.	Fair			- Organized a seminar on tigers and biodiversity in the Modi Institute of Management and Technology, Dadabari, Kota
NGOs contributions are systematically sought and negotiated for the management of some TR level activities.	Good ✓			- Runs a programme titled 'environmentalizing schools' where students are made aware about plants and their values
NGOs contributions are systematically sought and negotiated for the management of many TR level activities.	Very good			- Organized two training programmes for frontline staff of the Forest Dept. on field botany - Two Ph.D. thesis are undergoing at MMIT, one on carbon sequestration and another on ecosystem service of Mukandara National Park
				2) Mr. Tapeswar Singh, Mukandara Wildlife and Environment Society (started working in 2009)
				- Conducted 20 Awareness and education programmes for villagers and school children in the past four years
				- Involved villagers and talked on relocation, willing to work with the Forest Dept. for relocation
				- Participates in the waterhole census
				3) Mr. Brajesh Vijaybargia, Tarun Bharat Sangh
				- Suggests the Forest Dept. in water & tiger related matters
				- Observes death anniversary of the tiger that was killed on railway track in 2003, with participation from politicians and forest dept.
				- Suggests Indian Railways on mitigation measures, railway has reduced the speed to 40km/ hr in a stretch of 10km for avoiding any more such accidents
				- Participates in Chambal Suddhikaran Yojana
				4) Mr. R. S. Tomar, Hon. Wildlife Warden of Kota District, member of Hadoti Naturalist Society
				- Helps with boats for river patrolling, and so far have helped in seizure of more than 300 fishing boats in the past 16 years
				- Trains boatmen of the Forest Dept. on sailing and helps in maintenance of boats
				- Have been monitoring large nesting site of long-billed vultures
				5) Mr. Bharat Singh, President, Hadoti Naturalist Society and Ex-Minister, PWD, Govt. of Rajasthan

4. Process

4.1 Does the TR have manpower resources trained in wildlife conservation for effective TR management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No trained officers and frontline staff in the TR.	Poor			1) Lack of specific training among field staff for wildlife and tiger conservation has been noted. 2) Staff at all levels have not undergone any professional training, although for frontline staff, training on legal matters was organized by WWF-India. 3) Being a newly notified Tiger Reserve, efforts for getting the staff trained in wildlife conservation has to start.
Some trained officers and few trained frontline staff, posted in the TR.	Fair ✓			
All trained officers and and fair number of trained frontline staff posted in the TR.	Good			
All trained officers and most of the trained frontline staff is posted in the TR.	Very good			

***Indicate % of trained staff in various categories. The number and thematic areas of the 'Internal Training' programmes organized in the TR in the last 3 years may be taken into account. Has the TR prepared a 'Staff Development Plan'? Is it being implemented?**

4.2 Is TR staff management performance linked to achievement of management objectives?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No linkage between staff management performance and management objectives.	Poor			Normally all promotions are related to state policy.
Some linkage between staff management performance and management objectives, but not consistently or systematically assessed.	Fair ✓			
Management performance for most staff is directly linked to achievement of relevant management objectives.	Good			
Management performance of all staff is directly linked to achievement of relevant management objectives.	Very good			

4.3 Is there effective public participation in TR management* and does it show in making a difference?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no public participation in TR management.	Poor		Discussion with environmental NGOs	1) Unstructured dialogues with villagers 2) Participatory programs with NGOs mentioned above for population estimation of wildlife - Hadoti Naturalist Society, Rajasthan Jal Biradari, Mukandara Wildlife and Environment Society. They are also involved for awareness generation in and around the MHTR. 3) There is also participation of Kota University in research on wildlife. Dr. Fatima Sultana, Assistant Professor with the Kota University. She completed her Ph.D. titled "Faunal Diversity of Dara WLS" from the same University in 2007. Conservation recommendations from the Ph.D. was helpful for the Forest Dept. to understand the scale of biotic pressures in the sanctuary, it also highlighted competition between livestock and wild herbivores. Presently 20 students/ annum of Wildlife Science in Kota University have the opportunity to study wildlife related issues in MHTR. Dr. Sultana reported presence of sambar, chital and honey badger. She also suggested that Laxmipura village and surrounding areas have high wildlife values. Studies on connectivity with other adjoining forest divisions are on the cards.
Opportunistic public participation in some of the relevant aspects of TR management.	Fair			
Systematic public participation in most of the relevant aspects of TR management.	Good ✓			
Comprehensive and systematic public participation in all important and relevant aspects of TR management.	Very good			

***The involvement of NGOs/ NGLs in population estimation may be taken into account**

4.4 Is there a responsive system for handling complaints and comments* about TR management?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Ad-hoc approach to handling complaints.	Poor		3. Discussion with officials of MHTR	4. Departmental procedure exists for complaints from staff of MHTR 5. Public grievance cell at state level is present. 6. No 'Suggestions Register' is present.
Complaints handling system operational but not responsive to individual issues and with limited follow up.	Fair ✓			
Coordinated system logs and responds effectively to most complaints.	Good			
All complaints systematically logged in coordinated system and timely response provided with minimal repeat complaints.	Very good			

***Does the TR maintains 'Suggestions Register'? What actions are taken to deal with suggestions?**

4.5 Does TR management address the livelihood issues* of resource dependent communities, especially of women?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No livelihood issues are addressed by TR management.	Poor		Discussion with MHTR officials & Indicative TRP	1. Indicative TCP discusses livelihood options for the EDCs in chapter 6 of the Buffer Plan. The Theme Plan recognizes the principle of buffer management based on the principle of co-existence and suggests fuelwood plantations, provision of LPG and smokeless stoves, development of pastures, livestock healthcare, water resources and dairy development as opportunities for improving livelihood of EDC members. The plan also envisages use of eco-tourism as livelihood option. 2. Presently there are 22 EDCs in MTR. The functioning of the EDCs is at an early stage, and the entire programme requires improvement to empower the EDCs and bring them into participatory mode of management. 3. An ecotourism programme for the Rauntha EDC in Darrah WLS of MTR, centering on the Rauntha Palace is being developed by the management. 4. Based on the expenditure made by MTR during last financial year, approximately about 1.02 lakh mandays of employment was generated.
Few livelihood issues are addressed by TR management.	Fair ✓			
Substantial livelihood issues are addressed by TR management.	Good			
Livelihood issues of resource dependent communities especially of women are addressed effectively by TR managers.	Very good			

***The number of mandays generated in the last 3 years may be taken into account. Are funds received from District Agencies and other sources? Provide details of funds received in last 3 years.**

4.6 Has the TR planned and implemented the voluntary 'Village Relocation' from the Core/ Critical Tiger Habitat (CTH)?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No planning and no implementation	Poor		Indicative TCP Discussions with MTR officials, local NGOs and villagers	Chapter 7 of Core Area Plan of the Indicative TCP discusses village relocation plan. There are 16 villagers in the core area of MHTR of which 14 have been proposed to be relocated. The issue of relocation of villages from the core area has started in 2009 soon after the declaration of National Park. Since the Tiger Reserve notification has come to effect in 2013, relocation plans have started very recently. There is general ground swell for relocation support among NGOs and eminent member of civil society. There is a general agreement that forest land adjoining Kota town may be considered for relocation of villagers from core of MHTR. The APO for 2014-15 to NTCA includes provisions for financial support for relocation.
Plans have been made but no implementation	Fair ✓			
Plans have been made and some implementation is in progress	Good			
Plans have been made and are being actively implemented/ no human habitation in the CTH	Very good			

***Assessment will look into the village relocation planning process including availability of manpower, financial resources and NGO support, if any. Is there a mechanism to address the complaints received in respect of relocation process? Effort must be made to assess post-relocation success or otherwise.**

5. Output

5.1 Is adequate information on TR management publicly available?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no information on TR management publicly available.	Poor ✓		Discussion with park authorities and stakeholders	MHTR brochure is available. Some information on MHTR is reportedly found on the website of Rajasthan Forest Department (www.rajforest.nic.in). Information availability to public is elementary.
Publicly available information is general and has limited relevance to management accountability and the condition of public assets.	Fair			
Publicly available information provides detailed insight into major management issues and condition of public assets.	Good			
Comprehensive reports are routinely available in public domain on management and condition of public assets.	Very good			

5.2 Are visitor services and facilities appropriate and adequate?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Visitor services and facilities do not exist.	Poor		Indicative TCP chapter 11	Tourist and visitor services are at a primitive stage. Two new NIC have been set-up at Jawahar Sagar and Kolipura. Brochure on MHTR is available. Indicative TCP discusses ecotourism and interpretation related matters and proposes visitor facilities, guide services, movement of vehicles for tourism and also determines carrying capacity of tourism and identifies 12 routes for visitor experience. Those services are at planning stages.
Visitor services and facilities are very basic.	Fair ✓			
Visitor services and facilities are monitored from time to time and are fairly effective.	Good			
Visitor services and facilities are conscientiously maintained, regularly upgraded and monitored for visitor satisfaction	Very good			

***Include the existence and quality of visitor and interpretation centers, including skills and capabilities of personnel manning these, TR related publications, films, videos; arrangements of stay (including places serving refreshments and food owned and managed by TR), watch towers and hides including safety factors, vehicles assigned for visitors including riding elephants, if any and their deployment, drinking water, rest rooms, garbage disposal, attended and self guided services in the field, visitor feedback on the quality of wilderness experience.**

5.3 Are research/ monitoring related trends systematically evaluated and routinely reported and used to improve management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no systematic evaluation or routine reporting of trends.	Poor		Discussion with park authorities and stakeholders	Dr. Fatima Sultana stressed on the need for research on priority species in MHTR
Some evaluation and reporting undertaken but neither systematic nor routine.	Fair✓			
Systematic evaluation and routine reporting of trends undertaken.	Good			
Systematic evaluation and comprehensive reporting of trends undertaken and attempts made at course corrections as relevant.	Very good			

***Not all TRs attract projects and researchers and with exceptions, little research takes place on the TRs own steam because of systemic limitations. However, monitoring of some critical issues is expected e.g. population of tiger, co-predators and prey with insights into their demography and distribution (some opportunistic sampling by sightings, signs and spatial distribution during assessment would be extremely useful in terms of expert impression and as a pulse), monitoring incidence of livestock grazing, fires, weeds, sources of water, a variety of illegal activities typically associated with the reserve, wildlife health (e.g. epidemics, immunization of livestock) regeneration and change in vegetation, visitors and their activities, offence cases, ex-gratia payments etc. Efforts must be made to assess the planning and implementation of Phase-IV monitoring protocols and the success of implementation of M-Stripes (wherever applicable). Are the 'Sykes and Horill' monitoring plots maintained and data analyzed?**

5.4 Is there a systematic maintenance schedule and funds in place for management of infrastructure/assets?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No systematic inventory or maintenance schedule.	Poor		Discussion with park authorities	Standard departmental procedures are followed
Inventory maintenance is adhoc and so is the maintenance schedule.	Fair✓			
Systematic inventory provides the basis for maintenance schedule but funds are inadequate.	Good			
Systematic inventory provides the basis for maintenance schedule and adequate funds are made available.	Very good			

6. Outcomes

6.1 Are populations of threatened species declining, stable or increasing?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Populations of key threatened/ endangered species are declining.	Poor✓		Discussion with park authorities	Inadequate information
Some threatened/ endangered species populations declining, some are increasing, most others are stable.	Fair			
Several threatened/ endangered species populations increasing, most others are stable.	Good			
All threatened/ endangered species populations either increasing or stable.	Very good			

***This needs to practically relate to the natural ecosystem potential rather than being driven merely by numbers and visibility. The assessment score may be elaborated under remarks.**

6.2 Is the population of tigers showing a declining, stable or increasing trend?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Population of tiger is showing a declining trend	Poor✓		Discussion with park authorities and stakeholders	No tiger presence in recent times. Last tiger was killed by train-hit three years back.
Population of tiger is stable	Fair			
Population of tiger is showing an increasing trend	Good			
Population of tiger has significantly increased	Very good			

***This assessment should be based in the context of available population estimate (2010-11) and the outcomes of the currently ongoing Phase-IV analyses.**

6.3 Have the threats* to the TR being reduced/ minimized? Or is there an increase?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Threats to the TR have not abated but have enhanced.	Poor		Discussion with stakeholders and park manager	7) Threats have been recorded in this newly notified Tiger Reserve. It is important to prepare a strategy for threat mitigation in the long run.
Some threats to the TR have abated, others continue their presence	Fair✓			
Most threats to the TR have abated. The few remaining are vigorously being addressed	Good			
All threats to the TR have been effectively contained and an efficient system is in place to deal with any emerging situation	Very good			

***Does the TR have a Disaster Risk Management Plan to deal with existing as well as emerging threats?**

6.4 Are the expectations of visitors* generally met or exceeded?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Expectations of visitors generally not met.	Poor		Discussion with stakeholders and park manager	8) Some visitors facilities are available, and apparently local people visit the park for recreation purposes. 9) Improvement of visitor facilities required.
Expectations of many visitors are met.	Fair ✓			
Expectations of most visitors are met.	Good			
Expectations of all most all visitors are met.	Very good			

***What is the compliance status on Supreme Court/ NTCA Guidelines on Ecotourism in TRs?**

6.5 Are local communities supportive of TR management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Local communities are hostile.	Poor		Discussion with stakeholders and park manager	5) There is tremendous support available from the local people, especially from political leaders, NGO representatives. These need to be channelized for effective management of the TR.
Some are supportive.	Fair			
Most locals are supportive of TR management.	Good ✓			
All local communities supportive of TR management.	Very good			

**There could be many reasons for disenchantment. It could be real because of managerial neglect or the managerial efforts could be appropriate but there could be local elements/organizations who would like to keep the disaffection simmering for their own ulterior motives. Likewise success could be entirely because of the efforts of managers or they might be fortunate in striking partnerships with credible NGOs. Assessment may take the prevailing causes into account.*

7. MEE Score Card*

Framework Element Number	Framework Element Name	Number of Criteria (a)	Maximum Mark per question (b)	Total (a x b)	Marks obtained for the Element	Overall MEE Score and % age
1.	Context	04	10	40	22.50	52.42 %
2.	Planning	07	10	70	40.00	
3.	Inputs	05	10	50	27.50	
4.	Process	06	10	60	32.50	
5.	Outputs	04	10	40	17.50	
6.	Outcomes	05	10	50	22.50	
Total		31		310	162.50	

**Efforts will be made by the NTCA-WII-MEE Team to address the issue of assigning 'differential' weightages to the 31 Assessment Criteria including 'normalization'.*

Assessment Criteria for addressing issues relating to Climate Change & Carbon capture in the Tiger Reserves (TRs)

1. *Additional Criteria on Climate Change: Is the TR being consciously managed to adapt to climate change?*

Condition	Category*	(Tick ✓)	Comment/ Explanation	Next Steps
There have been no efforts to consider adaptation to climate change in management	Poor			
Some initial thought has taken place about likely impacts of climate change, but this has yet to be translated into management plans	Fair			
Detailed plans have been drawn up about how to adapt management to predicted climate change, but these have yet to be translated into active management.	Good			
Detailed plans have been drawn up about how to adapt management to predicted climate change, and these are already being implemented	Very good			

2. *Additional Criteria on Climate Change: Is the TR being consciously managed to prevent carbon loss and to encourage further carbon capture?*

Condition	Category*	(Tick ✓)	Comment/ Explanation	Next Steps
Carbon storage and carbon dioxide capture have not been considered in management of the TR	Poor			
Carbon storage and carbon dioxide capture have been considered in general terms, but has not yet been significantly reflected in management	Fair			
There are active measures in place to reduce carbon loss from the TR, but no conscious measures to increase carbon dioxide capture	Good			
There are active measures in place both to reduce carbon loss from the TR and to increase carbon dioxide capture	Very good			

Management Effectiveness Evaluation (MEE) of Melghat Tiger Reserve

1. Context

1.1 Are the values of the TR well documented, assessed and monitored?

Condition	Category* (Tick ✓)	Reference document(s)	Remarks
Values not systematically documented, assessed and monitored.	Poor	1. The draft Tiger Conservation plan(2012-13 to 2021-22)	The values of the Melghat tiger reserve are very well documented in the tiger conservation plan and various references quoted. One of the best studied tiger reserves in the country, the values of the park are well documented and known to management. Special habitats and species of high conservation values have been identified and documented. Socio economic and cultural values have also been documented and through process of rehabilitation of villages from core area the changes are monitored.
Values generally identified but not systematically assessed and monitored.	Fair	2. Flora of Melghat by Dr M A A Dhore (1988)	
Most values systematically identified, assessed and monitored.	Good ✓	3. Addition to Flora of Melghat by Dr P Y Bhugaonkar (1999)	
All values systematically identified, assessed and monitored.	Very good	4. Grasses of Melghat by Dr Muradkar (2013)	
		5. Digital flora of Melghat by Dr Muradkar and Mr Kokate (2014).	
		6. Digitized inventory of medicinal plant resources by Dr P Y Bhugaonkar (2009)	
		7. Research projects on various plant taxa and ecology by Amravati University	
		8. Research projects on various animal taxa and ecology by Amravati University	
		9. Fauna of Melghat Tiger Reserve by ZSI (2005).	
		10. Quality of water in Melghat by Dr Rohankar (2005)	
		11. Tourism development plans by JLR, Bangalore	
		12. (2007) and Unison Management Private Ltd., Consultant, Pune (2010).	
		13. WII-US FWLS collaborative project on Satpura Conservation Area	
		14. Osteology of Indian Tiger by Dr R V Pandit (1994)	
		15. Technical Bulletins and Publications by MTR	

1.2 Are the threats to TR values well documented and assessed*?

Condition	Category* (Tick ✓)	Reference document(s)	Remarks
Threats not systematically documented or assessed.	Poor	1. The draft Tiger Conservation plan(2012-13 to 2021-22)	SWOT analysis in Para 6.17 and 6.18 is done for Melghat tiger reserve and the threats are well documented in the draft TCP. In the WII – US FWLS project (..) threats to ecological and social values were assessed and duly incorporated in planning process. Threats are also digitized and available in shape files, which have supported preparation of Security Plan of the TCP. Fire plan.
Threats generally identified but not systematically assessed.	Fair	2. 11 WII-US FWLS collaborative project on Satpura Conservation Area	
Most threats systematically identified and assessed.	Good ✓	3. Remote Sensing and GIS based study of conservation and management of tiger habitat by A.S. Pade (2009), RRSSC (ISRO), Nagpur.	
All threats systematically identified and assessed.	Very good		

*This assessment should be based on number, nature and extent of threats

1.3 Is the 'Core Area' of TR free from human and biotic interference?

Condition	Category* (Tick ✓)	Reference document(s)	Remarks
The 'Core Area' has extensive human and biotic interference.	Poor	1. Draft TCP (2012-13 to 2021-22) 2. Government Resolution No. R & FD/ WLP-1012/CR 122/F-1, dated 3 rd Nov 2012	In Melghat Tiger Reserve there were 33 villages inside the core area. 12 villages from core area have been removed making the Gugamal NP area inviolate.(360 sq km). Villages viz Bori, Koha and Kund were rehabilitated in 2001 -2002. Churni and Vairat villages in Melghat Sanctuary were rehabilitated in 2001-2002. Since 2011-12, 7 more villages viz., Amona, Nagartas,Wan, Dhargad, Gullarghat, Somtana have been relocated from the core area. A total of more than 700 km2 out of 1500 km2 is now free from human intervention.
The 'Core Area' has some human and biotic interference.	Fair		
The 'Core Area' has little human and biotic interference.	Good ✓		
The 'Core Area' has no human and biotic interference.	Very good		However, there are 21 villages still inside the rest of the core for which the park is making sincere efforts. Through ecodevelopment initiatives dependencies of local communities is being reduced. The villages relocated after 2010 were under option I i.e. 10, 00,000 per family packages. The Govt. of Maharashtra GRs were followed in rehabilitating. The source of fund is wholly from State CAMPA, 13 th FC and Tribal sub plan of the state. There is proposal to relocate 2 villages viz., Kelpani and Talai from the core area in 2014-15. In order to reduce the dependency on forest, activities like distribution of LPG, bio-gas, high yielding milch cattles, solar lights, improved chulha, vermicompost pits, improved fruit tree planting, poultry, are taken up for 33 EDC villages with funding from State CAMPA. The Buffer area notified recently is presently with adjoining territorial divisions viz.,East and West Melghat. The working plans of these divisions specifically have wildlife management overlapping working circle. The funds for these prescriptions are provided under state CAMPA and 13 th FC. The major activities include habitat development through SMC works, water development, fire protection, anti-poaching activities and JFM program. In the buffer areas of East & West Melghat Divisions, as per Supreme Court orders there is no felling within 10 km radius of national park & sanctuary. In east melghat division 6 protection camps have been established namely in Chikhaldara Range – Long Point, Baglinga; Jarida Range- Chourepani; Anjangaon Range-Khongda; Ghatang Range- Masondi & Ampadav. In west melghat division 5 protection camps have been established and regular patrolling protocol is followed. WCT, Mumbai has donated the basic items for the camp, the camps have been fenced with the help of State CAMPA funds. The waterholes in Chourepani & Ampadav is desilted and being monitored regularly.

**This assessment should be based on existence and the efforts made by TR management to address issues related to human settlements/ villages inside the core area; livestock grazing, cultivation, encroachments etc, resource extraction/ livelihood dependence of local communities and should reflect the overall interference due to all the above factors. The issue of 'Unified Control' of the 'Core' and 'Buffer' zones under the Field Director would also be taken into account.*

1.4 Has the TR complied with the four Statutory* Requirements (SR) along with Tripartite MoU and three Standard Operation Procedures (SOP)?

Condition	Category* (Tick ✓)	Reference document(s)	Remarks
None of the four SR, no compliance of Tripartite MoU and three SOPs met	Poor	1. Notification No. WLP.10-07/CR-297/F- dated 27 th December, 2007, R&FD Mumbai.	The core area of MTR was notified vide reference 1 and the buffer vide ref. 2. Melghat Tiger Conservation Foundation was registered on 10 th Feb 2009. State Level Steering Committee was constituted vide ref. 4. TCP was submitted to NTCA vide ref. 5 and in response to comments by NTCA, the revised draft has been submitted vide ref. 6. All SOPs from NTCA have been translated in vernacular language, distributed and followed.
Two of the four SR, 50% conditions of the Tripartite MoU and SOPs complied	Fair	2. Notification No. WLP.10-10/CR-139/F-1 dated 29 th September, 2010, R & FD, Mumbai.	
Three of the four SR, 75% conditions of the Tri-partite MoU and SOPs complied	Good✓	3. WLP-10-08/CR-19/F-1, dated 21 st Aug 2008.	The buffer area was notified vide Revenue and Forest Department, M.S. Mumbai Multiple Use Area (part of the buffer 526.38 sq km) is also under the administration of Melghat Tiger Reserve. The remaining area of buffer 784 sq km is under the administration of East Melghat and West Melghat Territorial Divisions, which is still to come under unified control of FD.
All four SR, 100% conditions of the Tripartite MoU and SOPs complied	Very good	4. GR No. WLP 10-06/C. no 296/F-1, dated 13 th Aug 2008.	
		5. Letter no. WLP-0413/CR-152/F-1/ Mantralaya, Mumbai.	
		6. FDs letter no. D-3/MTR/Res./11 22 Amravati dated 01/03/2014.	
			The Tiger Conservation Foundation was established on 10.02.2009. Tiger Conservation Foundations have been registered under Mumbai Public Trust Act 1950. All the income from tourism related activities like Gate fee, entry fee, accommodation etc. are deposited into the foundation and the amount is spent on conservation activities, facilitating eco-tourism activities, eco-development activities of the villages in MTR and staff welfare activities. The expenditure is done based on proper planning as per the operation manual with due approval of Executive Committee and Governing council of the Melghat Tiger Conservation. The Tiger Conservation Foundation received donation from NGOs and individuals in the form of money and kind like staff infrastructure kits for protection camps, training of staff on legal issues, legal fees for special cases etc. The donation to the Tiger Conservation Foundation is exempted from Income Tax under Section 80 G.
			Ecotourism sub-plan was prepared by the committee under the chairmanship of the Divisional Commissioner, Amravati with active participation of all the stake holders. The State level steering committee has been constituted under the chairmanship of Hon'ble Chief Minister of Maharashtra. The 3 SOPs on (i) Straying of Tiger in human dominated landscape, (ii) Tiger Mortality and (iii) Disposal of Carcasses are complied strictly. These SOPs have been translated in Marathi for field staff.

***Statutory requirements are (1) Legal delineation and notification of Core and Buffer Areas; (2) Establishment of Tiger Conservation Foundation; (3) Development of a Tiger Conservation Plan; and (4) Constitution of a State-level Steering Committee under the Chairmanship of the Chief Minister. TA refers agreement between Field Director, State Government and NTCA. The 3 SOPs are on (i) Straying of Tiger in human dominated landscape, (ii) Tiger Mortality and (iii) Disposal of Carcasses**

2. Planning

2.1 Status of Tiger Conservation Plan (TCP)*?

Condition	Category* (Tick ✓)	Reference document(s)	Remarks
No TCP in place.	Poor	1. Letter no. WLP-0413/CR-152/F-1/ Mantralaya, Mumbai. 2. FDs letter no. D-3/MTR/Res/11-22 Amravati dated 01/03/2014	Tiger Conservation Plan of MTR for the period 2012-13 to 2012-22 was submitted to PCCF WL Nagpur vide FDs office letter No. D-3/MTR/Res./681/Amravati Dated 22/10/2010. Meeting of technical committee for the sanction of TCP of MTR has called on 29 th & 30 th of Oct. 2010. The Technical Committee with the PCCF WL suggested some changes in the TCP and through wide departmental consultations the final draft was sent to NTCA vide ref.1. In response to NTCA comments the revised draft has been submitted to PCCF WL with an advance copy to NTCA vide ref.2.
TCP is under preparation	Fair		
TR has a relevant TCP	Good ✓		
TR has a comprehensive and relevant TCP, duly approved by the NTCA	Very good		

***The scientific content and the participatory processes used in preparation of the TCP will be taken into account in assessing the quality of TCP.**

2.2 Does the TR safeguards the threatened biodiversity values?

Condition	Category* (Tick ✓)	Reference document(s)	Remarks
TR does not safeguard the threatened biodiversity values.	Poor	1. Draft TCP (2012-13 to 2021-22) 2. Tiger Security Plan (2014-15). 3. Fire Protection Plan (2014).	The TR does safeguard biodiversity values through a system of well-organized management action. Characterized with rugged terrain, the hills and valleys are well protected. With scanty human habitations which provides natural protection to the area. Further the region is not threatened by any industrialization, mining, urbanization etc.; The management has strengthened the protection activities through 86 protection camps, 42 wireless stations. The patrolling staff is adequately equipped with field equipment like GPs, camera, smart phones walkie-talkie and personal kits. All these have helped in safeguarding the biodiversity values of the area. Presently all the posts of field staffs are filled (above 95%). The daily patrolling by field staff, mobile squad, ex-servicemen squad and their daily reporting is yielding encouraging results. The 7 villages which have been relocated after 2010 have released the prime habitats for the bio-diversity conservation. The eco-restoration of these sites through water and meadow development is showing signs of rapid development in the form of increased sighting of major faunal key species like tiger, leopard sloth bear, gaur etc., and The management has plans to relocate few more villages in immediate future. The VEDC program through massive funding under state CAMPA has resulted in reducing the dependence on forest as well as resolving livelihood issues. The prompt compensation provided under state non-plan funds has helped in resolving the man-animal conflict.
TR safeguards a few threatened biodiversity values.	Fair		
TR safeguards a large number of threatened biodiversity values.	Good ✓		
TR safeguards all threatened biodiversity values.	Very good		

***Remarks need to elaborate on the kind of safeguards and how they work or are intended to work**

2.3 Are stakeholders given an opportunity to participate in planning process?

Condition	Category* (Tick ✓)	Reference document(s)	Remarks
Little, if any opportunity for stakeholder participation in planning.	Poor	1. GR no FDM 2011/CR 100/ F2, dated 5 th Oct 2011.	The various stakeholders viz., the villagers, NGOs, other state departments like ZP, irrigation, tribal, agriculture etc., have been involved in planning process for preparation of micro plans of Ecodevelopment Committees (VEDCs). Government has provided an enabling environment by strengthening JFMCs and EDCs vide ref. 1, and for integration of conservation with development using participatory methods vide ref. 2. In compliance to the Hon Supreme Court of India direction on NTCA guidelines on tourism in TR areas, dated 16 th October 2012, Local Advisory Committee under Chairmanship of Divisional Commissioners of the respective TRs and FD as Member Secretary includes consultations at integrated landscape level. The Governing Body and the Executive Committee of the TCF includes a wide range of official and non-official representation, facilitating greater participation of stakeholders in planning.
Stakeholders participate in some planning.	Fair	2. Gov. Circular no. dated 22 nd Dec 2012.	
Stakeholders participate in most planning processes.	Good ✓	3. GR no WLP 2012/ CR 309 /F1, dated 9 th Nov 2012.	
Stakeholders routinely and systematically participate in all planning processes.	Very good		

**The result of participation must show in the field and not merely reported as a routine exercise.*

2.4 Are habitat management programmes systematically planned, relevant and monitored, and contribute effectively to Tiger and other endangered species conservation?

Condition	Category* (Tick ✓)	Reference document(s)	Remarks
Habitat management programmes are entirely adhoc.	Poor	1. Draft TCP (2012-13 to 2021-22)	Para 7.01 to 7.33 of the TCP discusses in details the habitat management programmes in MTR. Water distribution map on GIS platform is available and priorities identified. The Habitat Management Programmes include increasing the water availability to wild animals by soil and moisture conservation works like construction of loose Boulder structures, earthen dams, contour trenches, de-silting of natural water holes, Vanrai Bhandharas, Cement plugs, gabion structures, recharging the natural streams besides construction of artificial and eco-friendly water holes. In Meadow areas, water availability is made to wild animals in pinch period by using solar pumps. The relocated village sites are mostly in the valley and present opportunities to develop them as meadows. Their management is planned with the assistance of botanist of Chikhaldara college. In the last 4 years, 900 ha. of meadow have been developed. In Melghat one of the unique habitats is 'ballaa' i.e. open grasslands on plateau where herbivores generally move during monsoon and winters. These areas are identified and inventories have been prepared. Another unique habitat in Melghat is 'doh', where the pool of water stagnates along the rivers. This is a perennial source's of water for wildlife during pinch period. Because of presence of moisture in these patches, green grasses are available in summer and herbivores tend to move in these areas. The 'doh' areas are identified and regular desiltation activities are done to increase the availability of water. There are important riparian vegetation patches either on the ballas or narrow valleys which are hotspots of diversity viz., chikhlam, kolamam, amrai, etc., These sites are regularly monitored with the help of staff in protection camps. Lantana and other invasive species are present in some patches of Melghat. These patches are identified and regular removal of lantana and invasive species is done under Habitat Management Programme. In order to expose the field staffs on the latest technique for lantana removal, a national level workshop on meadow management and weed removal was conducted and lantana removal is done through 'Root stock cut method' In the last three years, 85 ha. of lantana removal has been done and continuous monitoring is done to remove new weeds in the treated areas.
Limited planning and monitoring programmes are in place for habitat management.	Fair	2. Annual meadow development plans for relocated sites	
Habitat management programmes are generally planned and monitored.	Good ✓	3. Discussions with Park officials	
Habitat management programmes are thoroughly planned and monitored.	Very good		

**This assessment should be primarily based on habitat management programmes in relation to habitats for species that are threatened (IUCN categories), are habitat specialists, subjected to seasonal movements, wide ranging with emphasis on the breeding and rearing habitat and may include factors such as food, water, shelter (all connotations).Habitat structure, composition, unique patches of vegetation and sensitive sites, sources of water and their distribution are integral. Corridors within buffer zone are critically important. For example, all riparian*

habitats. Have these been addressed? Is there a planning process in place? The management practices dealing with invasive species such as Lantana, Michania etc. would be examined.

2.5 Does the TR has an effective Protection Strategy (PS)* and Security Plan and Security Audit (SA) in place?

Condition	Category* (Tick ✓)	Reference document(s)	Remarks
TR has little or no PS and SA.	Poor	1. Draft TCP (2012-13 to 2021-22)	Para 10.01 to 10.09 of the TCP discusses protection strategies for MTR. A Tiger security Plan has been prepared based on the generic guidelines issued by the NTCA. In the plan the threats and sensitive areas have been identified and patrolling schedules have been prepared and followed scrupulously. There are 83 protection camps in MTR, equipped with wireless and GPS/PDA and with at least a Forest Guard and 4 daily wagers permanently posted. In addition, 11 protection camps have been established in the buffer area under the control of territorial division. A proposal for establishing STPF has been submitted to NTCA vide ref.3. The protection schedules and their follow up is done by monthly/tri- monthly beat inspection by DDs and also by FD periodically. A Cyber Cell for intelligence gathering and sharing has been established at Paratwada under ACF Protection MTR. A Tiger Cell is in place for inter-departmental coordination on security issues which meets regularly.
TR has an adhoc PS and SA.	Fair	2. Tiger security Plan (2014)	
TR has a generally relevant PS and SA but is not very effective.	Good✓	3. Letter No..Desk 22 (4)/ Est/ C. no 246/50/2013-14, dated 4 th Feb 2014.	
TR has a comprehensive and very effective PS and SA.	Very good	4. GR no WLP 10-2000/CR no 10/F1, dated 30 th March 2007	

***This assessment takes inter-alia into account the nature of threats, the number and location of patrolling camps and foot and mobile patrolling, needs that relate to available manpower, terrain difficulties, practicability of area coverage, readiness to contain specific threats with necessary support and facilities. The constitution and functioning of Special Tiger Protection Force (STPF), Number of offences reported, arrests made, prosecution initiated and conviction achieved will be taken into account.**

2.6 Has the TR been effective in the mitigation of human-wildlife conflicts?

Condition	Category* (Tick✓)	Reference document(s)	Remarks
Human-wildlife conflicts are significant but poorly addressed.	Poor	1. GR no WLP 2012/CR no 337/F1, dated 30 th March 2013.	In Melghat Tiger Reserve most of the Human-Animal conflict is due to sloth bear and wild boar. During the last three years, one human death, 26 human injuries and 568 livestock kills cases were reported. An amount of Rs. 45.11 lakh was paid as compensation. The rate of ex-gratia payment for human death has been enhanced from Rs 2 lakh to Rs 5 lakh vide ref. 1. Vide ref. 2 crop compensation has been increased for various crops. Similarly, vide ref.3 the Government has enhanced the rates for cattle kill and injury. In order to expedite the compensation payment to the affected party, financial powers have been delegated at the field level with provisions to draw funds even in the absence of budgetary allocations. Further the power to approve compensation on account of cattle kill, injury and crop damage has been delegated to the ACFs. Special funds are also allotted under Tiger Conservation Foundation for immediate compensation. In order to resolve the conflict, the villages prone to these conflicts have been identified and regular training and awareness programmes are implemented. There is a Rapid Response Unit with adequate equipment and medicines for rescue of wild animals straying in human habitations. The rescue team members are given regular monthly trainings. There have been no major conflict issues in last four years. The Committee notes that over the last three years, the Government of Maharashtra have been taking many decisions to support relocation and improve conservation and every officer that we met spoke highly of the Principal Secretary, Forests for this support.
TR has been able to mitigate few human-wildlife conflicts.	Fair	2. GR no WLP 2012/CR 326/F1, dated 5 th Sept 2013	
TR has been able to mitigate many human-wildlife conflicts.	Good	3. WLP 10.08/CR 270/F1, dated 2 nd July 2010.	
TR has been effective in mitigating all human-wildlife conflicts.	Very good ✓	4. GC no Misc. 2010/CR 21, Budget-4, dated 25 th Feb. 2011	
		5. WLP 0413/ CR 123/F1, dated 25 th Nov. 2013	

***The assessment will take into account the number of incidences reported and payment of compensation made and its timeliness.**

2.7 Is the TR integrated into a wider ecological network/ landscape following the principles of the ecosystem approach?

Condition	Category* (Tick ✓)	Reference document(s)	Remarks
TR not integrated into a wider network/ landscape.	Poor	1. Draft TCP (2012-13 to 2021-22)	Chapterin the TCP discusses on the integrated landscape level connectivity and management. Satpuda Maikal landscape of Melghat Tiger Reserve is located in 6 E Central Highlands Biotic Province of "6 Deccan Peninsula" Bio-geographic zone. The forest areas of Madhya Pradesh and Maharashtra form a large intact tiger habitat, which provides an opportunity to manage tiger populations at landscape scale. The Satpura Conservation Area including MTR extends to about 6000 km ² and connects the major source populations of tiger in Satpuda in Madhya Pradesh and Melghat in Maharashtra. Tiger occupancy in the forest of Betul-Hoshangabad - East Nimar suggests viable corridor connectivity. The corridor passes through degraded forest, agricultural areas, and some low density human settlement areas. Part of the buffer area is presently with adjoining territorial divisions viz., East and West Melghat. The working plans of these divisions specifically have wildlife management overlapping working circle. The funds for these prescriptions are provided under state CAMPA and 13 th FC. In compliance with Hon. Bombay High Court, Nagpur Bench, order dated 30 th April 2004; no felling is done within 10 km from the boundary of national park & sanctuary.
Some limited attempts to integrate the TR into a network/ landscape.	Fair	2. WII- US FWLS Project on Satpura Conservati on Area	
TR is generally quite well integrated into a network/ landscape.	Good ✓	3. Discussion with Park officials	
TR is fully integrated into a wider network/ landscape.	Very good		

***Assessment needs to consider the scope of opportunities on the landscape scale that exist. Consider whether any attempts have been made and what are these? Have all the important corridors been identified? What actions are planned/ implemented for their security? Have the Forest Working Plans and Forest Development Corporation Plans within the identified landscapes taken cognizance of such new requirement? These should have been reflected in TCPs. Is there is any effort to rationalize land use around TR? Is any effort being made to plan and use 'Smart Green Infrastructure'?**

3. Inputs

3.1 Are personnel adequate, well organized and deployed with access to adequate resources in the Tiger Reserve (TR)*?

Condition	Category* (Tick ✓)	Reference document(s)	Remarks
Few, personnel explicitly allocated but poorly supported for TR management.	Poor	1. Draft TCP (2012-13 to 2021-22)	The Melghat Tiger Reserve includes three Divisions, namely Sipna, Gugamal and Akot Wildlife Divisions. There are 13 Ranges, 68 Rounds and 229 Beats in the TR. For managing the TR, there are posts of 3 DCFs, 2 DFOs, 10 ACFs, 17 RFO, 93 Foresters, 277 Forest Guards and 144 Permanent Van Majdoor under the overall charge of the FD. But for 1 DFO, 5 ACFs, 4 RFOs, 9 Foresters and 13 Forest Guards, all positions are filled. 79% of the Forest Guards are under 45 years of age. However, in the case of Foresters majority of them are within 45 to 55 years as there is no direct recruitment at Forester's level. There are 3 wildlife trained officers (WII Diploma) at the level of Field Director and Deputy Directors. There is at least one protection camp for each Round which has an area of about 40 sq km. Staff is well deployed and organized into efficient units.
Some personnel explicitly allocated for TR management but not adequately supported and systematically linked to management objectives.	Fair	2. Staff Developm ent Plan (2014)	
Some personnel with fair support explicitly allocated towards achievement of specific TR management objectives.	Good ✓		
Adequate personnel appropriately supported and explicitly allocated towards achievement of specific TR management objectives.	Very good		

***This assessment should inter-alia be based on number of personnel allocated for attainment of TR objectives at the Range , Round, Beat and Patrolling camps levels or as relevant to the needs (sanctioned posts vis- a- vis existing personnel and needs beyond the sanctioned strengths. It is possible that posts have last been sanctioned several years back that do not now account for the current needs)**

3.2 Are resources (vehicle, equipment, building etc.) adequate, well organized and managed with desired access?

Condition	Category* (Tick ✓)	Reference document(s)	Remarks
Few, if any, resources explicitly allocated for TR management.	Poor	1. Draft TCP (2012-13 to 2021-22) 2. Discussions with park officials	In Melghat Tiger Reserve, there are 25 four wheelers and 10 motor cycles for the purpose of protection. In addition, 5 trucks, 2 fire engines and 5 tractors assist in fire management, water hole monitoring and transport of staff to distant places. All the RFOs have been provided with a four wheeler. There are two donated ambulances to provide medical assistance to the staff and the villagers. In addition, two mini buses at Semadoh ecotourism complex cater to the need of tourist visitation in the tourism zone. The residential buildings for the field staff in Melghat Tiger Reserve are adequate in numbers, but there is need for their regular maintenance. In the last 3 years, many staff quarters especially Type I, Type II and labour sheds have been repaired with support from CAMPA. The protection camps are also strengthened by converting them into pucca structures with proper fence and basic amenities. In view of many lady frontline staff recruited recently, efforts are made to ensure at least one toilet per Round. In 2013-14, the low band wireless communication was changed to high band wireless system with 2 repeater stations, 58 base stations, and 261 walkie talkies. Recently 119 PDAs were also issued to Beat Guards of sensitive beats for effective management system. For animal monitoring there are 587 camera traps, 145 Compass, 41 binoculars, 137 digital camera and 31 range finders.
Some resources explicitly allocated for TR management but not systematically linked to management objectives.	Fair		
Some resources explicitly allocated towards achievement of specific TR management objectives.	Good✓		
Adequate resources explicitly allocated towards achievement of specific TR management objectives.	Very good		

* These form a variety of resources. These may be segregated into immovable (structures) and movable categories and each further may be considered under the essential and desirable categories. It is best to start with what are the minimum needs to attain each objective, what is available and manner of use/deployment. The proportions of the 'essentials' and 'desirables' along the importance gradient of objectives would serve as pointers for score categories. Specific remarks would be vitally important.

3.3 Are financial resources other than those of the State linked to priority actions and are funds adequate, released timely and utilized?

Condition	Category* (Tick ✓)	Reference document(s)	Remarks
Resource allocation is adhoc, funds are inadequate and seldom released in time and not utilized.	Poor	1. Draft TCP (2012-13 to 2021-22). 2. Budget Summary Statement and Utilization Certificate for the past 3 years 3. Discussion with park officials	The funds are utilized based on proper planning and priority of the work listed in the Annual Plan of Operation. Generally, the funds are released during August - September. The second installment of CSS however, is received during the fog end of the financial year. It would be better if the second installment is released by January-February. The total allocation from NTCA under CSS during the last three years was Rs. 14.82 crore and additionally Rs. 7.39 Crore was received for rehabilitation of villagers. The amounts were fully utilized. The annual release including rehabilitation support included Rs. 11.72 crore (2011-12), Rs. 5.16 (2012-13) and Rs. 4.94 (2013-14). Amounts released so were fully utilized by MTR in each year. The Committee noted that the provisions under CSS are mostly for new infrastructure development and wages for protection activities. However, there is need for adequate funding for maintenance of infrastructure, vehicles, roads, buildings and fire protection and office expenses. While the MTR seeks funds as per the provisions made in the TCP, the allocations are limited by the budgetary limits set by the State Government.
Some specific allocation for management of priority action. Funds are inadequate and there is some delay in release, partially utilized.	Fair		
Comprehensive planning and allocation that meets the most important objectives. Generally funds released with not much delay and mostly utilized.	Good✓		
Comprehensive planning and allocation of resources for attainment of most objectives. Funds generally released on-time and are fully utilized.	Very good		

*Obtain details of funds released by NTCA and their utilization by TR in the last 3 years and indicate them under 'Remarks'. Also comment on the problems associated with fund allocations and their utilization.

3.4 Are financial resources from the State linked to priority action and funds adequate, timely released and utilized for the management of Tiger Reserve?

Condition	Category* (Tick ✓)	Reference document(s)	Remarks
Resource allocation is adhoc, funds are inadequate and seldom released in time and not utilized.	Poor	1. Draft TCP (2012-13 to 2021-22).	The funds received from the state are mostly under CAMPA, plan and non-plan. These funds are utilized for priority works like rehabilitation, fire protection, and maintenance of infrastructure, fuel for vehicles, TA bills, road maintenance, OE and eco-tourism. These funds are distributed through budgetary distribution system (BDS), which is computerized and ensures timely release and utilization. Annual release including salaries under Non Plan were 16.72 crore (2011-12), 21.29 crore (2012-13) and Rs 26.27 crore (2013-14). Additionally under Plan, excluding village relocation the amounts released were Rs. 1.47 crore (2011-12), Rs.1.69 crore (2012-13) and Rs.1.57 crore (2013-14). Additionally using convergence, MTR has also received Rs.4.45 Crore from District Planning and Development Committee and Rs. 0.62 Crore from Maharashtra Tourism Development Corporation during the last three years. Under CAMPA the MTR has received Rs. 5.15 crore (2011-12), Rs. 2.4 crore (2012-13) and Rs. 2.11 crore (2013-14) for protection, habitat development and staff welfare. MTR has been receiving funds under 13 th Finance Commission for the past three years, and vide ref.4; the Government has opened up a new budget line in the State Non Plan for forest conservation, development and regeneration, including substantial sums for fire protection. It has received a total of Rs.5.61.crore, excluding village relocation over the last three years and utilized in full. For village relocation, besides the CSS, MTR is also receiving funds from 13 th Finance Commission, CAMPA and State Plan funds, including TSP. The total amount received from these sources over the last three years is Rs. 68.34 crore.
Some specific allocation for management of priority action. Funds are inadequate and there is some delay in release, partially utilized.	Fair	2. Budget Summary Statement and Utilization Certificate s for the past 3 years	
Comprehensive planning and allocation that meets the most important objectives. Generally funds released with not much delay and mostly utilized.	Good	3. GR no FDM – 2013/CR 257 (Part II)/F-2, dated 28 th Feb 2014	
Comprehensive planning and allocation of resources for attainment of most objectives. Funds generally released on-time and are fully utilized.	Very good ✓	4. Discussion with park officials	

**Obtain details of funds released by State and their utilization by TR in the last 3 years and indicate them under 'Remarks'. Also comment on the problems associated with fund allocation and their utilization.*

3.5 What level of resources are provided by NGOs?

Condition	Category* (Tick ✓)	Reference document(s)	Remarks
NGOs contribute nothing for the management of the TR.	Poor	1. Discussion with Park officials	In MTR the NGO's are involved in improving the infrastructure of staffs involved in protection, Training of staffs, Census, awareness creation on wildlife Conservation, research activities, publicity campaigns etc. Wildlife Conservation Trust provided 1 Rapid Response Unit, 21 solar power packs and 3 motorcycles. They also provided camping equipment for 83 protection camp worth approximately Rs 2 crore. They included blankets, cupboards, cots, GPS, digital camera, set of utensils, rain coats, syntax tanks, back packs etc. An amount of Rs. 2.5 lakh was provided towards staff awards. IndusInd bank provided 2 Mahendra jeeps. India Bulls provided 700 solar lamps for the use by field staff. Wildlife Trust of India provided Rs 80,000 for legal support and staff awards.
NGOs make some contribution to management of the TR but opportunities for collaboration are not systematically explored.	Fair		
NGOs contributions are systematically sought and negotiated for the management of some TR level activities.	Good ✓		
NGOs contributions are systematically sought and negotiated for the management of many TR level activities.	Very good		

4. Process

4.1 Does the TR have manpower resources trained in wildlife conservation for effective TR management?

Condition	Category* (Tick ✓)	Reference document(s)	Remarks
No trained officers and frontline staff in the TR.	Poor	1. Draft Staff development plan 2. Desk 1/MTR/Est/899/2014-15, dated 1 st April 2014. 3. Discussions with Park officials	There are 3 wildlife trained officers (Diploma) at the level of Field Director and Deputy Directors. The Staff development plan suggests that there are various trainings imparted to staffs on wild life monitoring, weapons handling, legal issues in wildlife management, VEDC planning, human-wildlife conflict, eco-tourism etc. Staff development plan is prepared and sent for approvals to CWLW vide ref. 3 and training component of the Plan is being implemented. The Forest training Institute at Chikaldara provides short term courses in wildlife management regularly to the field staff of MTR. There is also participation of the FTI trainees in the MTR as part of field training. Annually about 10% of the front line staff is sent for various trainings on wildlife management issues.
Some trained officers and few trained frontline staff, posted in the TR.	Fair		
All trained officers and fair number of trained frontline staff posted in the TR.	Good ✓		
All trained officers and most of the trained frontline staff is posted in the TR.	Very good		

**Indicate % of trained staff in various categories. The number and thematic areas of the 'Internal Training' programmes organized in the TR in the last 3 years may be taken into account. Has the TR prepared a 'Staff Development Plan'? Is it being implemented?*

4.2 Is TR staff management performance linked to achievement of management objectives?

Condition	Category* (Tick ✓)	Reference document(s)	Remarks
No linkage between staff management performance and management objectives.	Poor	GR no TRF 2000/CR no 3/12, dated 6 th August 2002.	While MTR follows the state wide system of promotions based on seniority, the Government have provided incentive for field staff working in remote/tribal areas notified by the Government in the form of 'one scale up' pay scales vide ref. 1. For ACF and below the ACR format contains 17 criteria that includes technical professionalism as one of the criteria. The Cyber Cell of MTR was awarded Sanctuary Asia Award for the year 2013. 2 Forest Guards were also awarded by NDTV Save Tiger Award in 2011-12. MTR celebrates 22 nd Feb. as Project Day to commemorate inauguration of MTR on 22 nd Feb 1974. Every year around 20 field staff and local NGOs rendering meritorious service are felicitated.
Some linkage between staff management performance and management objectives, but not consistently or systematically assessed.	Fair		
Management performance for most staff is directly linked to achievement of relevant management objectives.	Good ✓		
Management performance of all staff is directly linked to achievement of relevant management objectives.	Very good		

4.3 Is there effective public participation in TR management* and does it show in making a difference?

Condition	Category* (Tick ✓)	Reference document(s)	Remarks
Little or no public participation in TR management.	Poor	1. GR no. FDM 2011/CR no 100/F2, dated 5 th October 2011. 2. GR No FDM 2011/CR no 100/F2,	The public participation is a strong point of MTR. The Government vide ref. 1 have issued enabling orders for public participation all over the state and MTR has constituted 33 Village Ecodevelopment Committees in and around MTR. Additionally, the Government has also issued directions in ref.2 for enabling EDC micro plans receiving financial and technical support from development line departments. The ecotourism programme is linked to local community welfare and the Local Advisory Committee (ref. 3) comprising of Commissioner as Chairman, FD as Member Secretary, all peoples' representatives especially MLAs and MLCs, representatives of EDC, academicians, NGOs and line departments are involved in planning and management of
Opportunistic public participation in some of the relevant aspects of TR management.	Fair		
Systematic public participation in most of the relevant aspects of TR management.	Good ✓		
Comprehensive and systematic public participation in all important and relevant aspects of TR management.	Very good		

		dated 22 nd Dec 2011. 3. GR WLP 2012/CR 309/F1, dated 9 th Nov. 2012	ecotourism in the area. In addition, each EDC has been provided with an initial microplan fund of Rs. 10 lakh with an additional amount of Rs. 1.4 lakh as revolving fund. Selection of beneficiaries under various schemes for reducing their dependencies on MTR and all beneficiary schemes are implemented and routed through the EDCs. In villages, where EDCs are not constituted, participatory fire management through MoU is implemented to elicit public participation. In MTR the NGO's are involved in improving the infrastructure of staffs involved in protection, training of staffs, census, awareness creation on wildlife Conservation, research activities and publicity campaigns etc. Such participation has born results of improved management that can be seen in the field.
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Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10 *The involvement of NGOs/ NGLs in population estimation may be taken into account*1

4.4 Is there a responsive system for handling complaints and comments* about TR management?

Condition	Category* (Tick ✓)	Reference document(s)	Remarks
Ad-hoc approach to handling complaints.	Poor	Discussions with Park officials	All the complaints and feedback received at range, division and Field Director level are properly addressed. There is feedback register at Nature Interpretation Centre, Semadoh and Shahanoor for tourists and the suggestions are positively addressed by the TR Management. In addition there is Information Officer and Appellate Officer appointed in each of the range and division offices under RTI. All complaints under RTI are duly registered and information is provided.
Complaints handling system operational but not responsive to individual issues and with limited follow up.	Fair		
Coordinated system logs and responds effectively to most complaints.	Good ✓		
All complaints systematically logged in coordinated system and timely response provided with minimal repeat complaints.	Very good		

***Does the TR maintains 'Suggestions Register'? What actions are taken to deal with suggestions?**

4.5 Does TR management addresses the livelihood issues* of resource dependent communities, especially of women?

Condition	Category* (Tick ✓)	Reference document(s)	Remarks
No livelihood issues are addressed by TR management.	Poor		There are 33 EDCs constituted in MTR in the last three years. In these EDCs, there is representation of women, Tribal's and weaker sections of the village in the Microplan preparation. Each EDC are funded Rs. 10.00 lakh to implement the Micro plan. The amount is mainly spent on activities to reduce dependency of villages on the forests like distribution of LPG, distribution of Biogas, distribution of improved chulla, solar lights, High yielding milch cattle's etc. Besides activities to improve the livelihood of the villagers are also taken like Poultry training, floor machines etc. All these individual beneficiary activities implemented with 25% contribution from beneficiary and 75% from Government. These measures have improved the relationship with local villagers and have helped in reduction of illicit activities. For e.g. in 2012-13, in entire MTR, only 1.3% of the area was affected by fire and in Semadoh Range, MOU was signed with 3 EDCs and there was no incidence of fire. The local villagers are involved as protection camps majors, wireless stations, check posts. The EDCs allots the majors for 3 months for getting employment in MTR in activities like fire line maintenance is done directly by EDC through MOU with Range Forest Officer. In the Buffer areas of Melghat Tiger Reserve, Soil moisture conservation works are carried out under NREGA. The contribution to villagers in the form of eco-tourism is limited only to
Few livelihood issues are addressed by TR management.	Fair		
Substantial livelihood issues are addressed by TR management.	Good		
Livelihood issues of resource dependent communities especially of women are addressed effectively by TR managers.	Very good ✓		

***Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

			Nature guides in Semadoh and Shahanur tourism zones. In each of the EDCs women self-help groups have been established over the last 4 years and these women are engaged in income generation and empowerment activities. Ecotourism is community centric and revenues from tourism activities such guide services, vehicle operations, souvenir shops etc flow to the EDC accounts directly. The number of man days created over the last three years including employment under MREGS in MTR is reported to be 1.20 lakh (2011-12), 1.50 lakh (2012-13) and 2.31 lakh (2013-14). The park has been able to get district development funds to the tune of Rs. 4.45 crore over the last three years.
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***The number of man days generated in the last 3 years may be taken into account. Are funds received from District Agencies and other sources? Provide details of funds received in last 3 years.**

4.6 Has the TR planned and implemented the voluntary 'Village Relocation' from the Core/ Critical Tiger Habitat (CTH)?

Condition	Category* (Tick ✓)	Reference document(s)	Remarks
No planning and no implementation	Poor	1. Management plan	In Melghat Tiger Reserve there were 33 villages inside the core area. Now there are no villages inside the Gugamal NP area.(360 sq km). Villages viz Bori, Koha and Kund were rehabilitated in 2001 -2002. Churni and Vairat villages in Melghat Sanctuary were rehabilitated in 2001-2002. Since 2011-12, 7 villages viz., Amona, Nagartas,Wan, Dhargad, Gullarghat, Somtana bk and Somtana kd were relocated from the core area. The villages relocated after 2010 were under option I i.e. 10, 00,000 per family packages. The Govt. of Maharashtra GRs were followed in rehabilitating (GR annexure). The source of fund is wholly from State CAMPA, 13 th FC and Tribal sub plan of the state. There is proposal to relocate 2 villages viz., Kelpani and Talai from the core area in 2014-15. The NGOs like BASIXS has been handholding the rehabilitated families in Bori, Koha, Khund, Vairat and Churni. Nature Conservation Society is actively involved in rehabilitation of Amona, Nagartas,Wan, Dhargad, Gullarghat, Somtana bk and Somtana kd.
Plans have been made but no implementation	Fair		
Plans have been made and some implementation is in progress	Good ✓		
Plans have been made and are being actively implemented/ no human habitation in the CTH	Very good		

***Assessment will look into the village relocation planning process including availability of manpower, financial resources and NGO support, if any. Is there a mechanism to address the complaints received in respect of relocation process? Effort must be made to assess post-relocation success or otherwise.**

5. Output

5.1 Is adequate information on TR management publicly available?

Condition	Category* (Tick ✓)	Reference document(s)	Remarks
Little or no information on TR management publicly available.	Poor	1. Report, Books, Brochures and pamphlets 2. Documentary online website.	The information on MTR is made available through print media and internet Other issues for getting public support is made through regular press release from the office of Field Director. Quarterly publication of "melvygra" is provides adequate information on MTR management to the public.
Publicly available information is general and has limited relevance to management accountability and the condition of public assets.	Fair		
Publicly available information provides detailed insight into major management issues and condition of public assets.	Good ✓		
Comprehensive reports are routinely available in public domain on management and condition of public assets.	Very good		

5.2 Are visitor services and facilities appropriate and adequate?

Condition	Category* (Tick ✓)	Reference document(s)	Remarks
Visitor services and facilities do not exist.	Poor	1. Report, Books, Brochures and pamphlets, Documentary online website. 2. www.melghattiger.gov.in 3. Face book page project tiger melghat.	There are adequate facilities for visitors at NIC Semadoh and shahanur. The management of NIC Semadoh is handed over to Forest Development Corporation of Maharashtra There are Brouchers, Pamplets, Posters etc. prepared on Melghat Tiger Reserve and are made available to the public through Nature Interpretation Centres. The Narnala WLS has an interpretation centre linked to the Narnala Fort at Shahnoor. The interpretation centre also offers visitor facilities like tents and a guest house, and has adventure sports facilities like valley crossing, rappelling, rope ladder and for engaging adults and children while they are at the centre. The Forest Training Institute Chikeldhara has developed a spider museum that is unique and has a collection of about 400 species of spiders.
Visitor services and facilities are very basic.	Fair		
Visitor services and facilities are monitored from time to time and are fairly effective.	Good ✓		
Visitor services and facilities are conscientiously maintained, regularly upgraded and monitored for visitor satisfaction	Very good		

***Include the existence and quality of visitor and interpretation centers, including skills and capabilities of personnel manning these, TR related publications, films, videos; arrangements of stay (including places serving refreshments and food owned and managed by TR), watch towers and hides including safety factors, vehicles assigned for visitors including riding elephants, if any and their deployment, drinking water, rest rooms, garbage disposal, attended and self guided services in the field, visitor feed back on the quality of wilderness experience.**

5.3 Are research/ monitoring related trends systematically evaluated and routinely reported and used to improve management?

Condition	Category* (Tick ✓)	Reference document(s)	Remarks
Little or no systematic evaluation or routine reporting of trends.	Poor	1. Various research reports 2. Discussion with the park officials	There is systematic effort to encourage research activities in MTR. The research activities are a regular part of MTR and had started from 1981. The research activities are mainly done by the Universities and Educational institutions of Amravati and Nagpur. The research activities are on floral diversity and on endangered species like forest owlet. There is regular annual census being conducted as per the NTCA protocol. The herbivore density and minimum tiger number is identified through Tiger IDs using Camera trap technique. The monitoring of illicit activities like grazing, fire, encroachment, poaching is systematic with proper records and actions. Village rehabilitation sites need monitoring.
Some evaluation and reporting undertaken but neither systematic nor routine.	Fair		
Systematic evaluation and routine reporting of trends undertaken.	Good ✓		
Systematic evaluation and comprehensive reporting of trends undertaken and attempts made at course corrections as relevant.	Very good		

***Not all TRs attract projects and researchers and with exceptions, little research takes place on the TRs own steam because of systemic limitations. However, monitoring of some critical issues is expected e.g. population of tiger, co-predators and prey with insights into their demography and distribution (some opportunistic sampling by sightings, signs and spatial distribution during assessment would be extremely useful in terms of expert impression and as a pulse), monitoring incidence of livestock grazing, fires, weeds, sources of water, a variety of illegal activities typically associated with the reserve, wildlife health (e.g. epidemics, immunization of livestock) regeneration and change in vegetation, visitors and their activities, offence cases, ex-gratia payments etc. Efforts must be made to assess the planning and implementation of Phase-IV monitoring protocols and the success of implementation of M-Stripes (wherever applicable). Are the 'Sykes and Horill' monitoring plots maintained and data analyzed?**

5.4 Is there a systematic maintenance schedule and funds in place for management of infrastructure/assets?

Condition	Category* (Tick ✓)	Reference document(s)	Remarks
No systematic inventory or maintenance schedule.	Poor	1. Management Plan	There is a systematic planning to maintain the infrastructure through 'Annual Plan'. However there is shortage of funds to maintenance of infrastructure in Melghat Tiger Reserve.
Inventory maintenance is adhoc and so is the maintenance schedule.	Fair		
Systematic inventory provides the basis for maintenance schedule but funds are inadequate.	Good ✓		
Systematic inventory provides the basis for maintenance schedule and adequate funds are made available.	Very good		

6. Outcomes

6.1 Are populations of threatened species declining, stable or increasing?

Condition	Category* (Tick ✓)	Reference document(s)	Remarks
Populations of key threatened/ endangered species are declining.	Poor		Based on the Annual Census and regular animal monitoring, the population of tiger is stable and there is almost stable density of prey in Melghat Tiger Reserve. With the relocation of 12 villages from the core area there are encouraging signs of carnivore and herbivore increased occupancy. The area is expected to recoup to the carrying capacity in near future. 31 to 39 tigers were reported from Melghat. Under Phase IV monitoring during 2012-13, and 2013-14, the minimum numbers of tigers were estimated to be 29 and 32 respectively. The total prey base is reported to be 8.01 per sq km. Forest owl has been rediscovered in Melghat in 1994 which was followed up with surveys which have shown that it is seen in most of the area of the tiger reserve. Two research projects on food habits and status-conservation are undergoing since 2012, based on NTCA all India tiger estimation in 2010.
Some threatened/ endangered species populations declining, some are increasing, most others are stable.	Fair		
Several threatened/ endangered species populations increasing, most others are stable.	Good ✓		
All threatened/ endangered species populations either increasing or stable.	Very good		

**This needs to practically relate to the natural ecosystem potential rather than being driven merely by numbers and visibility. The assessment score may be elaborated under remarks.*

6.2 Is the population of tigers showing a declining, stable or increasing trend?

Condition	Category* (Tick ✓)	Reference document(s)	Remarks
Population of tiger is showing a declining trend	Poor	1. NTCA report Phase IV report of 2011-12, 2012-13	In 2010-11, there were estimated tiger populations of 31-39. In the phase-IV monitoring in 2011-12, the minimum number of tiger in MTR was 29 and in phase-IV monitoring 2012-13, the minimum number was 32. This shows there is a stable population of tiger in Melghat. With the relocation of 12 villages from the core area there are encouraging signs of carnivore and herbivore increased occupancy. The area is expected to recoup to the carrying capacity in near future. The ongoing camera trap exercise by WII researchers is indicating very positive results.
Population of tiger is stable	Fair		
Population of tiger is showing an increasing trend	Good ✓		
Population of tiger has significantly increased	Very good		

**This assessment should be based in the context of available population estimate (2010-11) and the outcomes of the currently ongoing Phase-IV analyses.*

6.3 Have the threats* to the TR being reduced/ minimized? Or is there an increase?

Condition	Category* (Tick ✓)	Reference document(s)	Remarks
Threats to the TR have not abated but have enhanced.	Poor	1. Offence report of last three years.	Offence trend in the last three years shows a declining trend even the fire incidences show a declining trend. In the Tiger Security Plan the issue of Disaster Risk Management is covered.
Some threats to the TR have abated, others continue their presence	Fair		
Most threats to the TR have abated. The few remaining are vigorously being addressed	Good ✓		
All threats to the TR have been effectively contained and an efficient system is in place to deal with any emerging situation	Very good		

***Does the TR has a Disaster Risk Management Plan to deal with existing as well as emerging threats?**

6.4 Are the expectations of visitors* generally met or exceeded?

Condition	Category* (Tick ✓)	Reference document(s)	Remarks
Expectations of visitors generally not met.	Poor	1. Eco-tourism sub-plan.	The eco-tourism sub-plan is prepared based on the Supreme Court and NTCA guidelines on Eco-tourism only 12.64% of the core area is identified as tourism zone with carrying capacity for each gate. Due to rugged terrain and less density of animal, generally there is poor sighting. However, efforts are taken to promote Melghat Tiger Reserve as a tourist destination by promoting the Landscape, Rich biodiversity and scenic beauty of Melghat in Monsoon.
Expectations of many visitors are met.	Fair ✓		
Expectations of most visitors are met.	Good		
Expectations of all most all visitors are met.	Very good		

***What is the compliance status on Supreme Court/ NTCA Guidelines on Ecotourism in TRs?**

6.5 Are local communities supportive of TR management?

Condition	Category* (Tick ✓)	Reference document(s)	Remarks
Local communities are hostile.	Poor	1. Management plan	MTR has 80 % of korku tribals who are conservationists by culture. So there is inherent support to TR management. There are 31 EDCs constituted in MTR in the last three years. In these EDCs, there is representation of women, Tribals and weaker sections of the village in the Microplan preparation. Each EDCs are funded Rs. 10.00 lakh to implement the Microplan. The amount is mainly spent on activities to reduce dependency of villages on the forests like distribution of LPG, distribution of Biogas, distribution of improved chulla, solar lights, High yielding milch cattle etc. Besides activities to improve the livelihood of the villagers are also taken like Poultry training, floor machines etc. All these individual beneficiary activities implemented with 25% contribution from beneficiary and 75% from Government. These measures have improved the relationship with local villagers and have helped in reduction of illicit activities. For e.g. in 2012-13, in entire MTR, only 1.3% of the area was affected by fire and in Semadoh Range, MOU was signed with 3 EDCs and there was no incidence of fire. However, with the FRA provisions for individual rights there is increased tendency of claims for encroachments.
Some are supportive.	Fair		
Most locals are supportive of TR management.	Good ✓		
All local communities supportive of TR management.	Very good		

***There could be many reasons for disenchantment. It could be real because of managerial neglect or the managerial efforts could be appropriate but there could be local elements/organizations who would like to keep the disaffection simmering for their own ulterior motives. Likewise success could be entirely because of the efforts of managers or they might be fortunate in striking partnerships with credible NGOs. Assessment may take the prevailing causes into account.**

7. MEE Score Card*

Framework Element Number	Framework Element Name	Number of Criteria (a)	Maximum Mark per question (b)	Total (a x b)	Marks obtained for the Element	Overall MEE Score and % age
1.	Context	04	10	40	30.00	75.00 %
2.	Planning	07	10	70	55.00	
3.	Inputs	05	10	50	40.00	
4.	Process	06	10	60	47.00	
5.	Outputs	04	10	40	27.50	
6.	Outcomes	05	10	50	32.50	
Total		31		310	232.50	

**Efforts will be made by the NTCA-WII-MEE Team to address the issue of assigning 'differential' weightages to the 30 Assessment Criteria including 'normalization'.*

Assessment Criteria for addressing issues relating to Climate Change & Carbon capture in the Tiger Reserves (TRs)

1. *Additional Criteria on Climate Change: Is the TR being consciously managed to adapt to climate change?*

Condition	Category* (Tick ✓)	Comment/ Explanation	Next Steps
There have been no efforts to consider adaptation to climate change in management	Poor	Each beat guard has delineated an area of 5 ha and protected the natural regeneration. In MTR 906 ha of area is protected by beat guards.	To consolidate these areas near the fringe villages of buffer area in order to have more tree cover and thereby increasing the carbon sequestration with the help of EDCs
Some initial thought has taken place about likely impacts of climate change, but this has yet to be translated into management plans	Fair		
Detailed plans have been drawn up about how to adapt management to predicted climate change, but these have yet to be translated into active management.	Good		
Detailed plans have been drawn up about how to adapt management to predicted climate change, and these are already being implemented	Very good		

2. *Additional Criteria on Climate Change: Is the TR being consciously managed to prevent carbon loss and to encourage further carbon capture?*

Condition	Category* (Tick ✓)	Comment/ Explanation	Next Steps
Carbon storage and carbon dioxide capture have not been considered in management of the TR	Poor		
Carbon storage and carbon dioxide capture have been considered in general terms, but has not yet been significantly reflected in management	Fair		
There are active measures in place to reduce carbon loss from the TR, but no conscious measures to increase carbon dioxide capture	Good		
There are active measures in place both to reduce carbon loss from the TR and to increase carbon dioxide capture	Very good		

Management Effectiveness Evaluation (MEE) of Pench Tiger Reserve

1. Context

1.1 Are the values of the TR well documented, assessed and monitored?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Values not systematically documented, assessed and monitored.	Poor		1) The TCP was submitted by GOM to NTCA vide letter dated 11/03/2011. As per the discussion held on 12/03/2013, in the office of NTCA has raised some points vide its letter dated 22/03/2013. 2) 16 Research projects sanctioned by the CWLW from 2005 – 2013 and 4 projects sanctioned by the Field Director, Pench have been commissioned 3) Discussion with the Field Director, senior officials and field staff of the Forest Department 4) All India Tiger Monitoring Exercise for 2014 (Phase III protocol of NTCA – WII) being carried out 5) All India Tiger monitoring Exercise is being done simultaneously in collaboration with Pench – Madhya Pradesh 6) Water quality is being monitored for protection purposes (checking toxicity of water) 7) Values documented in the two Nature Interpretation Centres, at Sillari and Ambhakori 8) Publication: (1) Sahgal, B. & Raman, L. 2012. Sanctuary Asia's Wild Maharashtra. Sanctuary Asia, Mumbai. (2) Bhamburkar, P. & Notey, S. S. 2013. Wild Animals of Central India – Mammals. AMF Publications, Nagpur.	<u>TR VALUES WELL DOCUMENTED</u> • Revised TCP following the latest NTCA guidelines will be submitted before 15/06/2014.
Values generally identified but not systematically assessed and monitored.	Fair			
Most values systematically identified, assessed and monitored.	Good	✓		
All values systematically identified, assessed and monitored.	Very good			

1.2 Are the threats to TR values well documented and assessed*?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Threats not systematically documented or assessed.	Poor		1) SWOT analysis has been carried out 2) TCP chapter 6.5 for core and buffer and chapter 4.5 for corridor; 3) TCP chapter 7, 2.2 of buffer plan and chapter 4.2 of core plan	1) All threats for core, buffer and corridors have been identified and documented 2) Invasive species at the plantation areas and relocated village sites are being addressed, although it has not been recorded as a threat, needs to be taken care of
Threats generally identified but not systematically assessed.	Fair			
Most threats systematically identified and assessed.	Good	✓		
All threats systematically identified and assessed.	Very good			

*This assessment should be based on number, nature and extent of threats

1.3 Is the 'Core Area' of TR free from human and biotic interference?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
The 'Core Area' has extensive human and biotic interference.	Poor		Issues have been discussed TCP 4.6 of core plan	1. Only one village, Fulzari, is within the core of the TR, relocation process is ongoing. Details are in TCP 4.6. 2. No agriculture and no encroachments, however, some livestock grazing has been reported.
The 'Core Area' has some human and biotic interference.	Fair			
The 'Core Area' has little human and biotic interference.	Good✓			
The 'Core Area' has no human and biotic interference.	Very good			

*This assessment should be based on existence and the efforts made by TR management to address issues related to human settlements/ villages inside the core area; livestock grazing, cultivation, encroachments etc, resource extraction/ livelihood dependence of local communities and should reflect the overall interference due to all the above factors. The issue of 'Unified Control' of the 'Core' and 'Buffer' zones by under the Field Director would also be taken into account.

1.4 Has the TR complied with the four Statutory* Requirements (SR) along with Tripartite MoU and three Standard Operation Procedures (SOP)?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
None of the four SR, no compliance of Tripartite MoU and three SOPs met	Poor		<ul style="list-style-type: none"> Core or CTH notification vide WLP10-07/C.R.297/F-1 Mantralaya, Mumbai dated 27th December 2007 Buffer notification vide WLP.10-10/C.R.108/F-1 Mantralaya, Mumbai dated 29th September 2010 Tiger Conservation Foundation vide GR no. WLP10 -08/CR-19/F1 Mantralaya, Mumbai dated 5th May 2010 State Level Steering Committee vide GR no. WLP 10-06/CR-296/F1 Mantralaya, Mumbai dated 13th August 2008. This was modified later vide GR no. WLP 10-06/CR-296 (1)/F1 Mantralaya, Mumbai dated 7th February 2013. All SOPs have been received from NTCA. 	<ul style="list-style-type: none"> The TCP was submitted by GOM to NTCA vide letter dated 11/03/2011. As per the discussion held on 12/03/2013, in the office of NTCA has raised some points vide its letter dated 22/03/2013. Revised TCP following the latest NTCA guidelines will be submitted before 15/06/2014. The Foundation has been registered vide 63846 dated 15th December 2008, by the Charity Commissioner, Nagpur All SOPs have been translated in Marathi, and distributed among the field officers
Two of the four SR, 50% conditions of the Tripartite MoU and SOPs complied	Fair			
Three of the four SR, 75% conditions of the Tri-partite MoU and SOPs complied	Good	✓		
All four SR, 100% conditions of the Tripartite MoU and SOPs complied	Very good			

*Statutory requirements are (1) Legal delineation and notification of Core and Buffer Areas; (2) Establishment of Tiger Conservation Foundation; (3) Development of a Tiger Conservation Plan; and (4) Constitution of a State-level Steering Committee under the Chairmanship of the Chief Minister. TA refers agreement between Field Director, State Government and NTCA. The 3 SOPs are on (i) Straying of Tiger in human dominated landscape, (ii) Tiger Mortality and (iii) Disposal of Carcasses

2. Planning

2.1 Status of Tiger Conservation Plan (TCP)*?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No TCP in place.	Poor		1) Local Advisory Committee on ecotourism vide GR No. WLP2012/CR -309/ F-1 of 9 th December 2012, Mumbai 2) Govt. Circular No. FDM2011/F-100/F-2 Mantralaya, Mumbai, 22 nd December 2011 on planning and implementation of eco-development programme 3) Discussion with the Field Director and senior officers of Pench Tiger Reserve	1) The TCP was submitted by GOM to NTCA vide letter dated 11/03/2011. As per the discussion held on 12/03/2013, in the office of NTCA has raised some points vide its letter dated 22/03/2013. Revised TCP following the latest NTCA guidelines will be submitted before 15/06/2014. 2) Consultation processes limited to buffer area notification and tourism have been carried out 3) Local advisory body has been constituted and consultations took place on 11 th February 2013 and 29 th September 2013
TCP is under preparation	Fair			
TR has a relevant TCP	Good	✓		
TR has a comprehensive and relevant TCP, duly approved by the NTCA	Very good			

*The scientific content and the participatory processes used in preparation of the TCP will be taken into account in assessing the quality of TCP.

2.2 Does the TR safeguards the threatened biodiversity values?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR does not safeguard the threatened biodiversity values.	Poor		1) TCP chapter no. 7.2.2. 2) TCP chapter no. 10.6 3) TCP chapter no. 10.4 4) District level tiger cell GR no. WLP10-2000/CR10/F1 Mantralaya Mumbai dated 1 st August 2003 5) State level and Division level tiger cell GR no. WLP 10-2000/CR10/F1 Mantralaya Mumbai, 30 th March 2007	<u>FOLLOWING SAFEGUARDS ARE IN PLACE</u> 1) Theme plan for protection in the TCP is in place. 2) Tiger Security Plan following NTCA guidelines is being implemented in the field 3) Fire plan is being implemented in the field 4) Tiger cell is present with Field Director along with the IG – Police and DCF along with the SP 5) Poaching has been controlled in the Tiger Reserve. 6) Illegal fishing at Totladoh dam is a major problem for the management – STPF is being pressed into action for regulating this. More support is required from the State Police and Administration. 7) Local level intelligence gathering mechanism is in place, regular meeting with <i>Police Patil</i> is ongoing. 8) Combined patrolling is being done with staff of Territorial Divisions and that of Madhya Pradesh Forest Department 9) Tourism has been regulated 10) The Park is well protected in a total of five Ranges with 15 Checkposts, 29 anti-poaching camps; 58 Forest Guards in core; 61 Forest Guards in buffer, 7 each Foresters in core and buffer; 3 RFOs and 1 ACF for STPF with 81 Forest Guards and 26 Forest Watchers, 14 nos. 4 wheeler vehicles, 17 nos. motorbikes and 3 motorised boats; 14 nos. pump action 12 bore shotguns; 16 nos. 7.62mm Self-Loading Rifles, 3 nos. 9mm pistols; 10 PDAs; 17 wireless base stations, 3 repeaters and 33 wireless handsets in the core; 11) <i>wireless protocol is being procured for Buffer area.</i>
TR safeguards a few threatened biodiversity values.	Fair			
TR safeguards a large number of threatened biodiversity values.	Good			
TR safeguards all threatened biodiversity values.	Very good	✓		

*Remarks need to elaborate on the kind of safeguards and how they work or are intended to work

2.3 Are stakeholders given an opportunity to participate in planning process?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little, if any opportunity for stakeholder participation in planning.	Poor		1) Local Advisory Committee on ecotourism vide GR No. WLP2012/CR - 309/ F-1 of 9 th December 2012, Mumbai	<u>STAKEHOLDERS DO TAKE PART IN OVERALL PLANNING PROCESSES</u> 1) Preliminary discussion with the stakeholders took place during the planning process 2) Buffer zone planning does take stakeholders into consultation, involving 40 villages and presence of EDCs in each of those villages is reported. 3) Micro-plans for buffer areas are being prepared through consultation with local committees – that for 15 villages prepared; 10 are under process. 4) The state Government has issued enabling directions for implementation of participatory approach in wildlife management. 5) Village proposed to be relocated has been planned through intensive consultation 6) Ecotourism plan, as part of the TCP has been prepared in consultation with the stakeholders including local communities. 7) Ecotourism is being promoted as an incentive for local communities. 8) Involvement of NGOs (WCT, Satpuda Foundation & WWF) and academic institutions in the conservation process has been reported.
Stakeholders participate in some planning.	Fair			
Stakeholders participate in most planning processes.	Good	✓	2) Discussions with the Field Director, PTR	
Stakeholders routinely and systematically participate in all planning processes.	Very good		3) District level coordination committee for eco-development planning and implementation in buffer zones, Govt. Circular no. FDM 2011/ CR-100/F2 Mantralaya, Mumbai dated 22 nd December 2011	

*The result of participation must show in the field and not merely reported as a routine exercise.

2.4 Are habitat management programmes systematically planned, relevant and monitored, and contribute effectively to Tiger and other endangered species conservation?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Habitat management programmes are entirely adhoc.	Poor		TCP chapter no. 7.2.4. for habitat management	<u>HABITAT MANAGEMENT IS BEING DONE FOR TIGERS, CO-PREDATORS & PREY</u> 1) Invasive species like <i>Lantana</i> sp., <i>Parthenium</i> sp. and <i>Hyptis</i> sp. eradication has been done from used areas to create foraging habitats for prey species, plantation of grass is done - <i>Dichanthium</i> sp. <i>Chloris schima</i> , etc. 2) Protection plan is in place 3) Watershed development and water-resource management is carried out very well. Physical infrastructure include inverted check dams, <i>Bhumagat Bandhara</i> , water ponds, dykes, dug-points and use of solar power for extraction of water and recharging water holes are good practices noted. Water release is being ensured through Irrigation Dept. for maintaining minimum e-flows in the Pench river. All these have also helped in creating and maintenance of riparian habitats. 4) Fodder plots are being developed – need to be improved. 5) Bambooo area management needs to be taken up. Some plots for bamboo regeneration needs to be carried out. 6) Habitat management for threatened avian species like vultures and waterfowl need to be taken up.
Limited planning and monitoring programmes are in place for habitat management.	Fair		TCP chapter no. 7.2.5. for special habitat	
Habitat management programmes are generally planned and monitored.	Good	✓		
Habitat management programmes are thoroughly planned and monitored.	Very good			

*This assessment should be primarily based on habitat management programmes in relation to habitats for species that are threatened (IUCN categories), are habitat specialists, subjected to seasonal movements, wide ranging with emphasis on the breeding and rearing habitat and may include factors such as food, water, shelter (all connotations). Habitat structure, composition, unique patches of vegetation and sensitive sites, sources of water and their distribution are integral. Corridors within buffer zone are critically important. For example, all riparian habitats. Have these been addressed? Is their a planning process in place? The management practices dealing with invasive species such as *Lantana*, *Michania* etc. would be examined.

2.5 Does the TR has an effective Protection Strategy (PS)* and Security Plan and Security Audit (SA) in place?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR has little or no PS and SA.	Poor		For constitution of Special Tiger Protection Force (STPF) vide GR no. FST-07/13/CR -325/ F-4 Mantralaya, Mumbai dated 28 th November 2013	<u>YES, IT HAS NECESSARY COMPONENTS</u> 1) Security Audit is being done through MEE process. 2) Protection infrastructures vide Remarks of 2.2. 3) STPF has been distributed uniformly across the Tiger Reserve, and also depending on threat perception. They are also involved in Long Range Foot Patrolling. 4) During the last 3 years, 112 nos. of cases have been booked in the core area of the TR. Cases where offenders have not been found, were dropped. 26 persons were arrested. 12 cases are in court and no conviction yet. 5) The park has conceived a comprehensive protection strategy which has been strengthened by recruitment of young people in the frontline staff, STPF and also includes EDCs in protection strategy. Support from the state government in protection of the park is tremendous.
TR has an adhoc PS and SA.	Fair			
TR has a generally relevant PS and SA but is not very effective.	Good			
TR has a comprehensive and very effective PS and SA.	Very good	✓		

**This assessment takes inter-alia into account the nature of threats, the number and location of patrolling camps and foot and mobile patrolling, needs that relate to available manpower, terrain difficulties, practicability of area coverage, readiness to contain specific threats with necessary support and facilities. The constitution and functioning of Special Tiger Protection Force (STPF), Number of offences reported, arrests made, prosecution initiated and conviction achieved will be taken into account.*

2.6 Has the TR been effective in the mitigation of human-wildlife conflicts?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Human-wildlife conflicts are significant but poorly addressed.	Poor			<u>HWC HAS BEEN NEGLIGIBLE DURING LAST 3 YEARS</u> 1) Human death – 1 (INR2 lac paid as <i>ex-gratia</i> in 2012-2013) 2) No cattle kill and crop damage has been reported with the Tiger Reserve authorities, however, it is possible that the crop damage cases are reported to the nearby territorial divisions.
TR has been able to mitigate few human-wildlife conflicts.	Fair			
TR has been able to mitigate many human-wildlife conflicts.	Good			
TR has been effective in mitigating all human-wildlife conflicts.	Very good	✓		

**The assessment will take into account the number of incidences reported and payment of compensation made and its timeliness.*

2.7 Is the TR integrated into a wider ecological network/ landscape following the principles of the ecosystem approach?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR not integrated into a wider network/ landscape.	Poor		Tiger Conservation Plan - Corridor	<u>TR HAS BEEN INTEGRATED IN THE WIDER ECOLOGICAL NETWORK</u> 1) TR is part of the Satpuda Maikal Tiger Conservation Landscape in Central India and along with the Pench TR, MP, forms an important source population for this landscape. 2) It is also an integrated part of the Kanha – Pench corridor as well as
Some limited attempts to integrate the TR into a network/ landscape.	Fair			
TR is generally quite well integrated into a network/ landscape.	Good	✓		
TR is fully integrated into a wider network/ landscape.	Very good			

				for the Pench – Navegaon – Nagzira - Tadoba linkage 3) Buffer areas delineated and identified, however, full administration is not with the FD – Pench TR 4) TCP for Corridor has been prepared and necessary management interventions for corridors are prescribed for integration in the Forest Division working plans and FDCM plans
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***Assessment needs to consider the scope of opportunities on the landscape scale that exist. Consider whether any attempts have been made and what are these? Have all the important corridors been identified? What actions are planned/implemented for their security? Have the Forest Working Plans and Forest Development Corporation Plans within the identified landscapes taken cognizance of such new requirement? These should have been reflected in TCPs. Is there is any effort to rationalize landuse around TR? Is any effort being made to plan and use 'Smart Green Infrastructure'?**

3. Inputs

3.1 Are personnel adequate, well organized and deployed with access to adequate resources in the Tiger Reserve (TR)*?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Few, personnel explicitly allocated but poorly supported for TR management.	Poor		1) TCP 2) Discussion with the FD, Pench TR	<u>YES ADEQUATE STAFFING HAS BEEN NOTED</u> 1) 5 Ranges, 11 Ranges and 49 Beats 2) Vacancy of Forest Guard – 1 in core, nil in buffer 3) Forester – 2 in core and 1 in buffer 4) Camping gear has been provided 5) STPF is intensively involved in protection 6) 46 <i>Van major</i> in core and 10 in buffer – these personnel has been made permanent through a court order, in view of their continuation of service in the previous years 7) In addition, temporary watchers are being hired as per requirement 8) Park has a Veterinary doctor, appointed through Pench Tiger Conservation Foundation. 9) The park has not recruited any Ecologist/ Biologist/ Communicators so far, they are being provided by academic institutions and NGOs.
Some personnel explicitly allocated for TR management but not adequately supported and systematically linked to management objectives.	Fair			
Some personnel with fair support explicitly allocated towards achievement of specific TR management objectives.	Good			
Adequate personnel appropriately supported and explicitly allocated towards achievement of specific TR management objectives.	Very good	✓		

***This assessment should inter-alia be based on number of personnel allocated for attainment of TR objectives at the Range , Round, Beat and Patrolling camps levels or as relevant to the needs (sanctioned posts vis- a- vis existing personnel and needs beyond the sanctioned strengths. It is possible that posts have last been sanctioned several years back that do not now account for the current needs)**

3.2 Are resources (vehicle, equipment, building etc.) adequate, well organized and managed with desired access?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Few, if any, resources explicitly allocated for TR management.	Poor		1) TCP 2) Discussion with the FD, Pench TR	<u>NECESSARY INFRASTRUCTURE IS PRESENT, REPLACEMENT AND ADVANCEMENT IS REQUIRED</u> 1) Need family quarters for STPF staff 2) Need four wheel drive vehicles & motorbikes for STPF staff 3) Advanced patrolling equipment, e.g. thermal image sensing night vision device, mapping GPS, GIS software and hardware, remote surveillance device like drones are required. 4) Wireless infrastructure for buffer area is required.
Some resources explicitly allocated for TR management but not systematically linked to management objectives.	Fair			
Some resources explicitly allocated towards achievement of specific TR management objectives.	Good	✓		
Adequate resources explicitly allocated towards achievement of specific TR management objectives.	Very good			

* These form a variety of resources. These may be segregated into immovable (structures) and movable categories and each further may be considered under the essential and desirable categories. It is best to start with what are the minimum needs to attain each objective, what is available and manner of use/deployment. The proportions of the 'essentials' and 'desirables' along the importance gradient of objectives would serve as pointers for score categories. Specific remarks would be vitally important.

3.3 Are financial resources other than those of the State linked to priority actions and are funds adequate, released timely and utilized?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Resource allocation is adhoc, funds are inadequate and seldom released in time and not utilized.	Poor		1) Annual Progress Reports 2) Discussions with park officials	<u>ALL RECEIVED FUNDS FULLY SPENT Centrally Sponsored Schemes</u> 1) NTCA Receipts 2011-12 INR2.95 crore, 2012-13 INR2.66 crore, 2013-14 INR3.86 crore (funds requested to NTCA have been received fully) 2) 13 Finance Commission grants – 2011-12 INR76 lac, 2012-13 INR 82.5 lac, 2013-14 INR 1.22 crore 3) CAMPA – 2011-12 INR 98 lac, 2012-13 INR 92 lac, 2013-14 INR 64 lac 4) Funding required for further Research & Monitoring 5) Funds are released smoothly 6) Statewide electronic Budget Distribution System (BDS) is working well
Some specific allocation for management of priority action. Funds are inadequate and there is some delay in release, partially utilized.	Fair			
Comprehensive planning and allocation that meets the most important objectives. Generally funds released with not much delay and mostly utilized.	Good	✓		
Comprehensive planning and allocation of resources for attainment of most objectives. Funds generally released on-time and are fully utilized.	Very good			

*Obtain details of funds released by NTCA and their utilization by TR in the last 3 years and indicate them under 'Remarks'. Also comment on the problems associated with fund allocations and their utilization.

3.4 Are financial resources from the State linked to priority action and funds adequate, timely released and utilized for the management of Tiger Reserve?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Resource allocation is ad-hoc, funds are inadequate and seldom released in time and not utilized.	Poor		1. Annual Financial Reports 2. Discussions with park officials	<i>State share for CSS</i> 1) State share for NTCA funds 2011-12 INR1.12 crore, 2012-13 INR1.01 crore and 2013-14 INR0.97 crore 2) State ecotourism 2011-12 INR17lac, 2012-13 nil, and 2013-14 INR42 lac 3) Building 2011-12 INR10lac, 2012-13 INR42lac and 2013-14 INR 3 lac. 4) TSP 2013-14 INR1 crore for LPG connections (CCF – Wildlife including Bor & other sanctuaries)
Some specific allocation for management of priority action. Funds are inadequate and there is some delay in release, partially utilized.	Fair			
Comprehensive planning and allocation that meets the most important objectives. Generally funds released with not much delay and mostly utilized.	Good			
Comprehensive planning and allocation of resources for attainment of most objectives. Funds generally released on-time and are fully utilized.	Very good	✓		

***Obtain details of funds released by State and their utilization by TR in the last 3 years and indicate them under 'Remarks'. Also comment on the problems associated with fund allocation and their utilization.**

3.5 What level of resources are provided by NGOs?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
NGOs contribute nothing for the management of the TR.	Poor		Discussion with officials and NGOs.	<u>MOST OF THE NGO SUPPORT IS PROVIDED 'IN KIND'</u> 1) Srishthi Paryavaran Mandal, Nagpur provided INR2lac to the Tiger Conservation Foundation in FY2013-14 2) Ms. Reshma Shera provided INR10lac for solar pumps in FY 2013-2014 3) WCT support, refer to page 15 of compilation 4) Hemendra Kothari Foundation, Mumbai and Satpuda Foundation provide medical treatment facilities through camps in 40 buffer villages 5) Park authorities do approach familiar NGOs and solicit support
NGOs make some contribution to management of the TR but opportunities for collaboration are not systematically explored.	Fair			
NGOs contributions are systematically sought and negotiated for the management of some TR level activities.	Good	✓		
NGOs contributions are systematically sought and negotiated for the management of many TR level activities.	Very good			

4. Process

4.1 Does the TR have manpower resources trained in wildlife conservation for effective TR management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No trained officers and frontline staff in the TR.	Poor		Discussion with officials	<u>SHORT TERM TRAININGS UNDERTAKEN</u> 1) 2 officers were trained in WII for 3 months certificate course 2) Forest Rangers Colleges, Chandrapur and Chikaldhara train Range Officers and Foresters through short term courses at regular interval. Part of those courses contain wildlife conservation 3) All field staff have been trained in wildlife law by WCT through a 4 days capsule course 4) All frontline staff have been trained in tiger monitoring by Shri Ravikiran Govekar 5) Staff development plan does not exist
Some trained officers and few trained frontline staff, posted in the TR.	Fair			
All trained officers and and fair number of trained frontline staff posted in the TR.	Good	✓		
All trained officers and most of the trained frontline staff is posted in the TR.	Very good			

*Indicate % of trained staff in various categories. The number and thematic areas of the 'Internal Training' programmes organized in the TR in the last 3 years may be taken into account. Has the TR prepared a 'Staff Development Plan'? Is it being implemented?

4.2 Is TR staff management performance linked to achievement of management objectives?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No linkage between staff management performance and management objectives.	Poor			<u>THE PROMOTION POLICY IS GOVERNEND BY STATE GOVERNMENT RULES</u> 1) Shri M. S. Reddy, IFS, Field Director, Pench Tiger Reserve received Sanctuary Asia Wildlife Service Award 2012 and the award money of INR40,000 was put in the Tiger Conservation Foundation by the Field Director.
Some linkage between staff management performance and management objectives, but not consistently or systematically assessed.	Fair			
Management performance for most staff is directly linked to achievement of relevant management objectives.	Good	✓		
Management performance of all staff is directly linked to achievement of relevant management objectives.	Very good			

4.3 Is there effective public participation in TR management* and does it show in making a difference?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no public participation in TR management.	Poor			<u>THERE IS ACTIVE PARTICIPATION OF GENERAL PUBLIC</u> 1) Wildlife Week is celebrated every year with good participation from local school children 2) Global Tiger Day is celebrated 3) World Environment Day is celebrated 4) Students from Taluka level get 75% concession, those from district level get 50% concession and those from the state of Mharashtra get 25% concession. 5) Children's nature camps are organized 6) World Wildlife Day is celebrated, with children from tribal areas 7) Satpuda Foundation & BNHS help in awareness
Opportunistic public participation in some of the relevant aspects of TR management.	Fair			
Systematic public participation in most of the relevant aspects of TR management.	Good	✓		
Comprehensive and systematic public participation in all important	Very good			

and relevant aspects of TR management.				generation programs 8) Cultural programs involving indigenous communities are being promoted 9) Communities are involved for identifying and recruiting daily wagers 10) Support base is increasing
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**The involvement of NGOs/ NGLs in population estimation may be taken into account*

4.4 Is there a responsive system for handling complaints and comments* about TR management?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Ad-hoc approach to handling complaints.	Poor		Discussion with the FD and field officers	<u>COMPLAINT & COMMENTS LOG BOOK IS MAINTAINED AT THE CHECK POSTS, MAINLY FOR TOURISTS, SUGGESTION BOOKS ARE KEPT AT NIC</u> 1. Official mechanisms in place for redressal 2. Every Monday, general public is allowed to report their grievance at the district level, with the District Commissioner, the day is designated as 'Loksahi Day', and all concerned officers have to stay at their headquarters mandatorily.
Complaints handling system operational but not responsive to individual issues and with limited follow up.	Fair			
Coordinated system logs and responds effectively to most complaints.	Good	✓		
All complaints systematically logged in coordinated system and timely response provided with minimal repeat complaints.	Very good			

**Does the TR maintains 'Suggestions Register'? What actions are taken to deal with suggestions?*

4.5 Does TR management address the livelihood issues* of resource dependent communities, especially of women?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No livelihood issues are addressed by TR management.	Poor		Discussion with the FD and field officers	<u>LOCAL PARTICIPATION IS ENCOURAGED</u> 1. 40 EDCs & 32 SHGs 2. Participation of local communities is promoted 3. 39 villagers trained in driving tourist vehicles within the park, 20 4X4 vehicles 4. 42 villagers trained in hospitality service 5. 161 people trained in masonry, carpentry, driving, etc. 6. Eco-tourism guide training done for 61 villagers 7. 70 agarbati making machines installed in 7 villages, to be operated by 140 persons 8. Hemendra Kothari Foundation provides funds for hospitality service training
Few livelihood issues are addressed by TR management.	Fair			
Substantial livelihood issues are addressed by TR management.	Good	✓		
Livelihood issues of resource dependent communities especially of women are addressed effectively by TR managers.	Very good			

**The number of mandays generated in the last 3 years may be taken into account. Are funds received from District Agencies and other sources? Provide details of funds received in last 3 years.*

4.6 Has the TR planned and implemented the voluntary 'Village Relocation' from the Core/ Critical Tiger Habitat (CTH)?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No planning and no implementation	Poor		1. TCP 2. Discussions with officials	1) Only one village, Fulzari, is within the core of the TR, relocation process is ongoing. Details are in TCP 4.6. 2) Negotiations over, <i>gram-sabha</i> have given consent. New land has been identified at Sangrampur, in a Judubi jungle (scrub forest). INR4 crore has been sanctioned – 1 st installment of INR1 lac has been given to 15 of the total 118 families. Park Management feels that the entire relocation process would be completed within FY 2014-15. Plotting for all 118 families have been done.
Plans have been made but no implementation	Fair			
Plans have been made and some implementation is in progress	Good	✓		
Plans have been made and are being actively implemented/ no human habitation in the CTH	Very good			

***Assessment will look into the village relocation planning process including availability of manpower, financial resources and NGO support, if any. Is there a mechanism to address the complaints received in respect of relocation process? Effort must be made to assess post-relocation success or otherwise.**

5. Output

5.1 Is adequate information on TR management publicly available?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no information on TR management publicly available.	Poor		Discussions with officials	1. Pench Has a dedicated website www.mahapenchtiger.com 2. Pench also has online reservation system for tourists www.mahaecotourism.gov.in 3. Brochures are available in vernacular language for Pench Tiger Reserve, <i>Vanyajeeb Margdarshak</i> - Naturalist's guide on Pench, <i>Vanyajeeb Pragnanna Margdarshan Pustika</i> – identification guide for flora & fauna of Pench; Introduction to Pench; 4. Tiger monitoring brochure has been translated into Marathi 5. Booklet on Pench 'The Big Tale of Small Tiger Reserve by Mohan Jha and Chaitanya Joshi' 6. In addition annual brochures and pamphlets are available 7. Relevant Sections of Wildlife (Protection) Act of India, 1972 are displayed in posters in all protection camps and check posts 8. Regular programs on television and radio are carried out.
Publicly available information is general and has limited relevance to management accountability and the condition of public assets.	Fair			
Publicly available information provides detailed insight into major management issues and condition of public assets.	Good	✓		
Comprehensive reports are routinely available in public domain on management and condition of public assets.	Very good			

5.2 Are visitor services and facilities appropriate and adequate?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Visitor services and facilities do not exist.	Poor		1) NIC Sillari, Ambhakori & Koltimara 2) Chapter 14 of TCP on tourism & buffer	<u>SOME VISITOR FACILITIES ARE AVAILABLE</u> 1) Three NICs available, only one interpreter available at Sillari 2) Accommodation, 21 DB rooms and 17 bed dormitory at Sillari & 3 DB room and 3 homestay facility for tourists at Koltimara 3) Signage & way finding need improvement, and bilingual 4) Eco-tourism facilities available as mentioned above, in section 4.5 5) Eco-tourism guides trained by BNHS and the Forest Dept. 6) Washrooms available at Silari & NIC 7) Canteen facility available at Sillari 8) First-aid box available in tourism centers & protection camps 9) Drinking water facility available at Sillari 10) Entry of private vehicles need to be banned, apparently this will be implemented from June 2014, only BS III vehicles (Maruti Gypsy and open diesel SUV) that are registered with Pench will be allowed. Battery operated vehicles would get 50% discount. 11) Carrying capacity of vehicles 80 per day 12) Appropriate garbage disposal system needs to be in place 13) Watchtowers need to be improved
Visitor services and facilities are very basic.	Fair			
Visitor services and facilities are monitored from time to time and are fairly effective.	Good	✓		
Visitor services and facilities are conscientiously maintained, regularly upgraded and monitored for visitor satisfaction	Very good			

**Include the existence and quality of visitor and interpretation centers, including skills and capabilities of personnel manning these, TR related publications, films, videos; arrangements of stay (including places serving refreshments and food owned and managed by TR), watch towers and hides including safety factors, vehicles assigned for visitors including riding elephants, if any and their deployment, drinking water, rest rooms, garbage disposal, attended and self guided services in the field, visitor feedback on the quality of wilderness experience.*

5.3 Are research/ monitoring related trends systematically evaluated and routinely reported and used to improve management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no systematic evaluation or routine reporting of trends.	Poor			<u>SOME RESEARCH & MONITORING RESULTS ARE ACTED ON</u> 1. Phase IV tiger monitoring exercise outcomes have been incorporated in the management system. 2. Law Enforcement Monitoring needs to be strengthened 3. Recommendations from report of ecological studies on vultures have been acted upon, Forest Dept. arranged awareness programs in the surrounding villages for banning diclofenac based drugs 4. Awareness for prevention of CDV done 5. SMS alert for forest fire is ongoing 6. Grid based water distribution plan existing 7. Using new technology for better and effective communication – whatsapp, e-group, mass text messaging
Some evaluation and reporting undertaken but neither systematic nor routine.	Fair			
Systematic evaluation and routine reporting of trends undertaken.	Good	✓		
Systematic evaluation and comprehensive reporting of trends undertaken and attempts made at course corrections as relevant.	Very good			

				8. GIS based analysis made by FSI were used to lobbying for maintenance of minimum e-flows in the Pench river 9. Waterhole census being done every year during <i>Buddh Purnima</i> helps in getting a broad trend 10. Three orphan tiger cubs have been released in large enclosures and are being trained for hunting wild prey. Two females might be rehabilitated into the wild subject to getting all approval.
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***Not all TRs attract projects and researchers and with exceptions, little research takes place on the TRs own steam because of systemic limitations. However, monitoring of some critical issues is expected e.g. population of tiger, co-predators and prey with insights into their demography and distribution (some opportunistic sampling by sightings, signs and spatial distribution during assessment would be extremely useful in terms of expert impression and as a pulse), monitoring incidence of livestock grazing, fires, weeds, sources of water, a variety of illegal activities typically associated with the reserve, wildlife health (e.g. epidemics, immunization of livestock) regeneration and change in vegetation, visitors and their activities, offence cases, ex-gratia payments etc. Efforts must be made to assess the planning and implementation of Phase-IV monitoring protocols and the success of implementation of M-Stripes (wherever applicable). Are the 'Sykes and Horill' monitoring plots maintained and data analyzed?**

5.4 Is there a systematic maintenance schedule and funds in place for management of infrastructure/assets?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No systematic inventory or maintenance schedule.	Poor		Standards registers and log books	<u>YES</u> 1) The standard registers and logs of stores and assets are maintained. 2) Reasonable amounts are available for management of infrastructure and assets.
Inventory maintenance is adhoc and so is the maintenance schedule.	Fair			
Systematic inventory provides the basis for maintenance schedule but funds are inadequate.	Good	✓		
Systematic inventory provides the basis for maintenance schedule and adequate funds are made available.	Very good			

6. Outcomes

6.1 Are populations of threatened species declining, stable or increasing?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Populations of key threatened/ endangered species are declining.	Poor		Discussions with officials	<u>SCIENTIFIC TREND ANALYSIS IS UNAVAILABLE FOR NON-TIGER SPECIES</u> Leopards in Phase IV estimation: 2012 (23), 2013 (23) Vultures have been reported to be nesting in the TR (16 nests) Healthy population of ungulates in frequent sightings
Some threatened/ endangered species populations declining, some are increasing, most others are stable.	Fair	✓		
Several threatened/ endangered species populations increasing, most others are stable.	Good			
All threatened/ endangered species populations either increasing or stable.	Very good			

***This needs to practically relate to the natural ecosystem potential rather than being driven merely by numbers and visibility. The assessment score may be elaborated under remarks.**

6.2 Is the population of tigers showing a declining, stable or increasing trend?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Population of tiger is showing a declining trend	Poor			<u>TIGER POPULATION INDICATES A STABILIZING TREND</u> 2009: monitoring by WWF found 13 tigers 2010: monitoring by Dr. Ullas Karanth reported 9 tigers 2012: monitoring by Forest Dept. found 19 tigers 2013: monitoring by Forest Dept. found 19 tigers 2014: monitoring by Forest Dept. found 20 tigers in half of the TR
Population of tiger is stable	Fair			
Population of tiger is showing an increasing trend	Good	✓		
Population of tiger has significantly increased	Very good			

***This assessment should be based in the context of available population estimate (2010-11) and the outcomes of the currently ongoing Phase-IV analyses.**

6.3 Have the threats* to the TR being reduced/ minimized? Or is there an increase?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Threats to the TR have not abated but have enhanced.	Poor			<u>INCIDENTS OF UNAUTHORISED ENTRY IN THE FORESTS HAVE REDUCED</u> 1) Volume needs to be estimated 2) Illegal fishing has been stemmed 3) Grazing has shifted from buffer zone of the TR to the territorial divisions 4) 1029 LPG connections to households have helped in reducing use of fuelwood use 5) Incidents of illegal fishing has reduced in the recent years, STPF has helped in stemming illegal fishing 6) Disaster Risk Management Plan is not available 7) Land use guidelines have been formulated for regulating setting up of resorts, through the Local Advisory Committee 8) ESZ proposal has been sent to GOI for notification in which safeguards have been proposed 9) Mitigation measures for road blockage by highways have been proposed
Some threats to the TR have abated, others continue their presence	Fair			
Most threats to the TR have abated. The few remaining are vigorously being addressed	Good	✓		
All threats to the TR have been effectively contained and an efficient system is in place to deal with any emerging situation	Very good			

***Does the TR have a Disaster Risk Management Plan to deal with existing as well as emerging threats?**

6.4 Are the expectations of visitors* generally met or exceeded?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Expectations of visitors generally not met.	Poor			Visitor facilities have been improved
Expectations of many visitors are met.	Fair			
Expectations of most visitors are met.	Good	✓		
Expectations of all most all visitors are met.	Very good			

***What is the compliance status on Supreme Court/ NTCA Guidelines on Ecotourism in TRs?**

6.5 Are local communities supportive of TR management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Local communities are hostile.	Poor			Communities are supportive to a certain extent
Some are supportive.	Fair			
Most locals are supportive of TR management.	Good	✓		
All local communities supportive of TR management.	Very good			

**There could be many reasons for disenchantment. It could be real because of managerial neglect or the managerial efforts could be appropriate but there could be local elements/organizations who would like to keep the disaffection simmering for their own ulterior motives. Likewise success could be entirely because of the efforts of managers or they might be fortunate in striking partnerships with credible NGOs. Assessment may take the prevailing causes into account.*

7. MEE Score Card*

Framework Element Number	Framework Element Name	Number of Criteria (a)	Maximum Mark per question (b)	Total (a x b)	Marks obtained for the Element	Overall MEE Score and % age
1.	Context	04	10	40	30.00	78.23 %
2.	Planning	07	10	70	62.50	
3.	Inputs	05	10	50	42.50	
4.	Process	06	10	60	45.00	
5.	Outputs	04	10	40	27.50	
6.	Outcomes	05	10	50	35.00	
Total		31		310	242.50	

**Efforts will be made by the NTCA-WII-MEE Team to address the issue of assigning 'differential' weightages to the 31 Assessment Criteria including 'normalization'.*

Assessment Criteria for addressing issues relating to Climate Change & Carbon capture in the Tiger Reserves (TRs)

1. *Additional Criteria on Climate Change: Is the TR being consciously managed to adapt to climate change?*

Condition	Category*	(Tick ✓)	Comment/ Explanation	Next Steps
There have been no efforts to consider adaptation to climate change in management	Poor			
Some initial thought has taken place about likely impacts of climate change, but this has yet to be translated into management plans	Fair			
Detailed plans have been drawn up about how to adapt management to predicted climate change, but these have yet to be translated into active management.	Good			
Detailed plans have been drawn up about how to adapt management to predicted climate change, and these are already being implemented	Very good			

2. *Additional Criteria on Climate Change: Is the TR being consciously managed to prevent carbon loss and to encourage further carbon capture?*

Condition	Category*	(Tick ✓)	Comment/ Explanation	Next Steps
Carbon storage and carbon dioxide capture have not been considered in management of the TR	Poor			
Carbon storage and carbon dioxide capture have been considered in general terms, but has not yet been significantly reflected in management	Fair			
There are active measures in place to reduce carbon loss from the TR, but no conscious measures to increase carbon dioxide capture	Good			
There are active measures in place both to reduce carbon loss from the TR and to increase carbon dioxide capture	Very good			

Management Effectiveness Evaluation (MEE) of Tadoba-Andhari Tiger Reserve

1. Context

1.1 Are the values of the TR well documented, assessed and monitored?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Values not systematically documented, assessed and monitored.	Poor		1. Revised Draft TCP 2008-09 to 2017-18	<u>MOST VALUES DOCUMENTED, AND ASSESSED AND SOME MONITORED</u> 1. Biological Values, Geological and Hydrological. Values, Economic Values, Recreational and Scientific Values identified and described in TCP Section 1.3. 2. Phase III monitoring and Phase IV estimation is continuing to monitor status of tigers, co-predators and prey base. 3. Vegetation plots are laid and monitored for long term vegetational changes as per Para 4.5 revised draft TCP. 4. The park has digital maps with layers on geology, hydrology, vegetation etc which would be used for monitoring diverse values over long period.
Values generally identified but not systematically assessed and monitored.	Fair		2. Various inventory reports (BSI, ZSI, District Gazetteer, etc)	
Most values systematically identified, assessed and monitored.	Good	✓	3. Discussion with Park Officials	
All values systematically identified, assessed and monitored.	Very good		4. Interaction with local stake holders	
			5. NTCA Guidelines on Tiger its co-predator & Prey	
			6. Sample plots & preservation plots.	
			7. Forest Survey Report 2011.	

1.2 Are the threats to TR values well documented and assessed*?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Threats not systematically documented or assessed.	Poor		1. Revised Draft TCP 2008-09 to 2017-18	<u>MAJOR THREATS DOCUMENTED</u> 1. Section 6.8 lists threats to the core, which includes poaching of wild animals, fire and dependency of local communities on bamboo. 2. Section 2.4 of the TCP discusses threats to the buffer area, which includes poaching, fire, encroachment, grazing, and scarcity of water, death in road accidents, and death of animals due to falling in wells. It would be however advisable to include the threats seen in the core area as well. 3. Threats emanating from toxicity and water and air by coal mines and thermal plants, fire, invasive species like <i>Ipomea</i> near the water bodies, temple inside Tadoba & issues related to bamboo regeneration after gregarious flowering need to be included in the TCP.
Threats generally identified but not systematically assessed.	Fair		2. Discussion with field officers	
Most threats systematically identified and assessed.	Good	✓		
All threats systematically identified and assessed.	Very good			

*This assessment should be based on number, nature and extent of threats

1.3 Is the 'Core Area' of TR free from human and biotic interference?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
The 'Core Area' has extensive human and biotic interference.	Poor		1. Revised Draft TCP 2008-09 to 2017-18	LIMITED BIOTIC DISTURBANCES STILL OCCUR 1. The Core area of TadobaAndheri TR had 6 villages, of which 3 villages have been completely relocated and 1 partially relocated. Chapter 5 of the Revised Draft TCP 2008-09 to 2017-18 discusses in details the resource dependency and biotic interferences to the park. 2. Section 4.6 of the TCP describes the process and strategies for relocation of the settlements still existing in the core area. 3. There is one temple in the core area, which is visited periodically but movement of pilgrims regulated by the park authorities. 4. No biotic interference other than the ones discussed above is seen in the park. 5. The buffer area is under unified control of the FD, with one Deputy Director responsible for core zone and the other for the buffer.
The 'Core Area' has some human and biotic interference.	Fair			
The 'Core Area' has little human and biotic interference.	Good	✓		
The 'Core Area' has no human and biotic interference.	Very good			

*This assessment should be based on existence and the efforts made by TR management to address issues related to human settlements/ villages inside the core area; livestock grazing, cultivation, encroachments etc, resource extraction/ livelihood dependence of local communities and should reflect the overall interference due to all the above factors. The issue of 'Unified Control' of the 'Core' and 'Buffer' zones by under the Field Director would also be taken into account.

1.4 Has the TR complied with the four Statutory* Requirements (SR) along with Tripartite MoU and three Standard Operation Procedures (SOP)?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
None of the four SR, no compliance of Tripartite MoU and three SOPs met	Poor		1. WLP 10-07/CR297/F1, dt-27/12/2007. 2. WLP 1009/CR.229/F-1 dt-05/05/2010 3. WLP-2012/CR-256/F-1 dt-22/08/2012. 4. WLP-10-08/C.R. 19/F-1, dated 21/08/2008 5. WLP-10-06/CN.296/F-1 dated 13.08.2008. 6. Three NTCA SOPs received and are followed.	FULLY COMPLIED 1. All the four statutory requirements have been met. 2. In case of revised draft of TCP, it has been resubmitted to NTCA after incorporating suggestions by NTCA vide CWLW, Maharashtra letter No. 22(8/WL/TCP/CR-747/P-VIII (12-13)/5366/2013-14, Nagpur dated 7 th March 2014. 3. The TATR Tiger Conservation Foundation is duly constituted and operational guidelines are in place. 4. The SOPs have been received from NTCA and the management is advised to urgently translate the guidelines in vernacular language for wider dissemination and use.
Two of the four SR, 50% conditions of the Tripartite MoU and SOPs complied	Fair			
Three of the four SR, 75% conditions of the Tripartite MoU and SOPs complied	Good	✓		
All four SR, 100% conditions of the Tripartite MoU and SOPs complied	Very good			

*Statutory requirements are (1) Legal delineation and notification of Core and Buffer Areas; (2) Establishment of Tiger Conservation Foundation; (3) Development of a Tiger Conservation Plan; and (4) Constitution of a State-level Steering Committee under the Chairmanship of the Chief Minister. TA refers agreement between Field Director, State Government and NTCA. The 3 SOPs are on (i) Straying of Tiger in human dominated landscape, (ii) Tiger Mortality and (iii) Disposal of Carcasses

2. Planning

2.1 Status of Tiger Conservation Plan (TCP) *?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No TCP in place.	Poor		1. Revised Draft TCP 2008-09 to 2017-18 2. Discussion with the park officials	<u>FINAL DRAFT SUBMITTED TO NTCA</u> 1. In case of revised draft of TCP, it has been resubmitted to NTCA after incorporating suggestions by NTCA vide CWLW, Maharashtra letter No. 22(8/WL/TCP/CR-747/P-VIII (12-13)/5366/2013-14, Nagpur dated 7 th March 2014.
TCP is under preparation	Fair			
TR has a relevant TCP	Good	✓		
TR has a comprehensive and relevant TCP, duly approved by the NTCA	Very good			

*The scientific content and the participatory processes used in preparation of the TCP will be taken into account in assessing the quality of TCP.

2.2 Does the TR safeguards the threatened biodiversity values?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR does not safeguard the threatened biodiversity values.	Poor		1. Revised Draft TCP 2008-09 to 2017-18 2. WLP-10-2000/CN-10/F1, Mumbai, dt 7/11/2000. 3. WLP-10-2000/CN-10/F1, Mumbai, dt 01/08/2003. 4. TCP Chapter 10 on protection strategies to safeguard values.	<u>YES, QUITE EFFECTIVELY</u> 1. Section 6.8 lists threats to the core, which includes poaching of wild animals, fire and dependency of local communities on bamboo. 2. Section 2.4 of the TCP discusses threats to the buffer area, which includes poaching, fire, encroachment, grazing, and scarcity of water, death in road accidents, and death of animals due to falling in wells. It would be however advisable to include the threats seen in the core area as well. 3. Threats emanating from toxicity and water and air by coal mines and thermal plants, fire, invasive species like <i>Ipomea</i> near the water bodies, temple inside Tadoba& issues related to bamboo regeneration after gregarious flowering need to be included in the TCP. 4. There is a security plan in place for the year 2014-15 as per the guidelines of the NTCA. It has been sent to APCCF wildlife vide letter no. Section-1/Wildlife Crimes/13-14/3763, dt 31-1-2014. 5. The park is well protected by 3 ranges in the core and 6 ranges in buffer with adequate number of manpower. (Annexure). In the core area, there are 23 protection huts, while there are 27 protection huts in buffer. 6. STPF has been constituted under an ACF and 3 ROs and 81 Forest Guards and 25 Forest Watchers have been recruited to protect the park from various threats. 7. The frontline staff is equipped with 178 GPS, Camera trap – 522, SLR – 10, Metal detector - 11, Pistol – 9, Digital Camera – 123, Blower – 15, Tranquilizing gun – 2, Cages -9, PDA -44. 8. There are adequate number of vehicles for improved mobility of the protection force, which is also connected with wireless network. However the buffer area still requires to be
TR safeguards a few threatened biodiversity values.	Fair			
TR safeguards a large number of threatened biodiversity values.	Good	✓		
TR safeguards all threatened biodiversity values.	Very good			

				<p>brought under the wireless network.</p> <p>9. Section 10.4 of the draft TCP provides fire protection strategy. At the divisional level, duly approved fire plans are in place.</p> <p>10. Chapter 11 provides for tourism regulations, which are followed in the park.</p> <p>11. The threats from biotic interferences are taken care of through village relocation programme.</p> <p>12. For better co-ordination between police and forest department instruments are in place at state level, division level and district level. Tiger Cell is constituted to ensure police participation by having the district SP as the chairman.</p>
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***Remarks need to elaborate on the kind of safeguards and how they work or are intended to work**

2.3 Are stakeholders given an opportunity to participate in planning process?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little, if any opportunity for stakeholder participation in planning.	Poor		1. Revised Draft TCP 2008-09 to 2017-18	<p><u>YES</u></p> <p>1. The draft TCP records the process of consultation during the preparation and subsequent revision of the TCP at preface itself.</p> <p>2. Various committees vide orders referred, have been constituted including a range of stakeholders in planning and even implementation of the various programs of the park management.</p> <p>3. In the buffer areas planning, 65 EDC's and local NGOs have participated and the EDC members are actively engaged.</p> <p>4. The village relocation programme has been planned with complete participation of the villagers that were relocated.</p> <p>5. The Tiger Conservation Foundation is in place and includes local stake holder in all planning and implementation.</p>
Stakeholders participate in some planning.	Fair		2. WLP- 2012/C.No. 309/F-1; dated- 09/11/2012.	
Stakeholders participate in most planning processes.	Good	✓	3. WLP- 102000/C.No 118/F1	
Stakeholders routinely and systematically participate in all planning processes.	Very good		4. WLP- 102000/C.No . 10/F1	

***The result of participation must show in the field and not merely reported as a routine exercise.**

2.4 Are habitat management programmes systematically planned, relevant and monitored, and contribute effectively to Tiger and other endangered species conservation?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Habitat management programmes are entirely adhoc.	Poor		1. Revised Draft TCP 2008-09 to 2017-18	<p><u>GENERALLY PLANNING TAKES PLACE</u></p> <p>1. Section 4.1.4, Section 4.2 part of 4.3 of TCP for the core zone and a theme plan section 7.6.3 for habitat management for the buffer area has been included in the TCP. Important habitats have been identified.</p> <p>2. Invasive species management, water management, management of riparian zones etc. have been briefly mentioned in the plan and requires database based planning.</p> <p>3. Water management planning is GIS assisted and monitoring programmes are being visualized for water quality and its use.</p> <p>4. In the buffer area planning, detailed GIS based planning is being done for each eco-development</p>
Limited planning and monitoring programmes are in place for habitat management.	Fair		2. Buffer TCP	
Habitat management programmes are generally planned and monitored.	Good	✓	3. Discussion with park officials	
Habitat management programmes are thoroughly planned and monitored.	Very good			

				<p>committee covering water management and habitat management.</p> <p>5. The rehabilitated village sites are planned to be monitored with the help of scientists and academicians from the neighboring areas.</p> <p>6. Systematic programmes for monitoring habitat recovery and use of habitats in the sites vacated by villagers is required.</p>
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***This assessment should be primarily based on habitat management programmes in relation to habitats for species that are threatened (IUCN categories), are habitat specialists, subjected to seasonal movements, wide ranging with emphasis on the breeding and rearing habitat and may include factors such as food, water, shelter (all connotations).Habitat structure, composition, unique patches of vegetation and sensitive sites, sources of water and their distribution are integral. Corridors within buffer zone are critically important. For example, all riparian habitats. Have these been addressed? Is their a planning process in place? The management practices dealing with invasive species such as Lantana, Michania etc. would be examined.**

2.5 Does the TR has an effective Protection Strategy (PS)* and Security Plan and Security Audit (SA) in place?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR has little or no PS and SA.	Poor		1. Revised TCP 2. Notification no WLP-1009/CN-193/F-1, dt, 12/04/2012, on constitution of STPF	PROTECTION STRATEGY AND SECURITY PLAN IN PLACE 1. The park is well protected by 3 ranges in the core and 6 ranges in buffer with adequate number of manpower. (Annexure). In the core area, there are 23 protection huts, while there are 27 protection huts in buffer.
TR has an adhoc PS and SA.	Fair			2. There is a security plan in place for the year 2014-15 as per the guidelines of the NTCA. It has been sent to APCCF wildlife vide letter no. Section-1/Wildlife Crimes/13-14/3763, dt 31-1-2014.
TR has a generally relevant PS and SA but is not very effective.	Good	✓		3. STPF has been constituted under an ACF and 3 ROs and 81 Forest Guards and 25 Forest Watchers have been recruited to protect the park from various threats. The force was placed on ground in June 2012 and the watchers were recruited in Feb 2014. One sniffer dog is also available. The STPF deployment is properly planned and areas have been earmarked for their deployment and movement. There are two patrolling teams for day and night patrols
TR has a comprehensive and very effective PS and SA.	Very good			4. The frontline staff is equipped with 178 GPS, Camera trap – 522, SLR – 10, Metal detector -11, Pistol – 9, Digital Camera – 123, Blower – 15, Tranquilizing gun – 2, Cages -9, PDA -44. 5. There are adequate number of vehicles for improved mobility of the protection force, which is also connected with wireless network. However the buffer area still requires to be brought under the wireless network. 6. Section 10.4 of the draft TCP provides fire protection strategy. At the divisional level, duly approved fire plans are in place. 7. Chapter 11 provides for tourism regulations, which are followed in the park. 8. The threats from biotic interferences are taken care of through village relocation programme. 9. For better co-ordination between police and

				<p>forest department state level, division level and district level meetings take place as and when required. The Tiger Cell is constituted with district SP as Chairman to ensure police participation in park protection.</p> <p>10. TATR has booked 726 offence cases, of which 259 cases have been disposed. Of the 467 balance cases, 202 cases are pending for enquiry and 201 cases are in various courts. 53 cases are pending with authorized officer and 11 pending for recovery.</p> <p>11. After STPFs induction, the park has been able to ward off the threats from big mobs (A group of 36 people were arrested inside the core area with the help of STPF).</p> <p>12. Monsoon patrolling is a regular feature, for which elephants are also used. One mobile squad is available with buffer and one with the core, which add to the patrolling effectiveness.</p> <p>13. The position of Police Patil is a unique arrangement in Maharashtra, in which a prominent villager in each village is empowered to take cognizance of offences and report to police.</p> <p>14. Secret Service funds are in place, which are being used in crime cases.</p>
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***This assessment takes inter-alia into account the nature of threats, the number and location of patrolling camps and foot and mobile patrolling, needs that relate to available manpower, terrain difficulties, practicability of area coverage, readiness to contain specific threats with necessary support and facilities. The constitution and functioning of Special Tiger Protection Force (STPF), Number of offences reported, arrests made, prosecution initiated and conviction achieved will be taken into account.**

2.6 Has the TR been effective in the mitigation of human-wildlife conflicts?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Human-wildlife conflicts are significant but poorly addressed.	Poor		1. Revised Draft TCP 2008-09 to 2017-18 2. WLP 0413/CN 123/F1, dt- 25/11/2013.	<u>EFFECTIVELY MANAGED</u>
TR has been able to mitigate few human-wildlife conflicts.	Fair			1. Section 5.4 and 7.6.4, Volume 2 TCP (buffer) discusses in brief strategies for mitigating human wild life conflict.
TR has been able to mitigate many human-wildlife conflicts.	Good			2. Over the last three years, the park has reported 5288 conflict cases, which include 4 human deaths and 1892 cattle deaths. Rs. 2.17crore was paid as compensation.
TR has been effective in mitigating all human-wildlife conflicts.	Very good	✓		3. Timely compensation is paid without any budgetary restriction and the ACFs have been empowered to sanction the amount. 4. 31 km of solar fencing has been provided around the villages in the buffer. 5. Rapid Response units, consisting of forest frontline staff under the charge of the Range Officer and equipped with the van and rescue equipments (Chandrapur) for handling conflict are available to TATR management, when required. A new van is being provided to the park exclusively. A veterinary officer is provided by the Tiger Foundation.

***The assessment will take into account the number of incidences reported and payment of compensation made and its timeliness.**

2.7 Is the TR integrated into a wider ecological network/ landscape following the principles of the ecosystem approach?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR not integrated into a wider network/ landscape.	Poor		1. Revised Draft TCP 2008-09 to 2017-18 (Volume 3)	<u>CONNECTIVITIES IDENTIFIED</u> 1. The corridors between TATR to NavegaonNagzira and Pench in the North, between TATR to Indravati in the Southeast have been identified. 2. Part of the landscape is included in the Buffer and part of it is proposed in Ecologically Sensitive Zone.
Some limited attempts to integrate the TR into a network/ landscape.	Fair			
TR is generally quite well integrated into a network/ landscape.	Good	✓		
TR is fully integrated into a wider network/ landscape.	Very good			

***Assessment needs to consider the scope of opportunities on the landscape scale that exist. Consider whether any attempts have been made and what are these? Have all the important corridors been identified? What actions are planned/implemented for their security? Have the Forest Working Plans and Forest Development Corporation Plans within the identified landscapes taken cognizance of such new requirement? These should have been reflected in TCPs. Is there is any effort to rationalize landuse around TR? Is any effort being made to plan and use 'Smart Green Infrastructure'?**

3. Inputs

3.1 Are personnel adequate, well organized and deployed with access to adequate resources in the Tiger Reserve (TR)*?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Few, personnel explicitly allocated but poorly supported for TR management.	Poor		1. Revised Draft TCP 2008-09 to 2017-18 2. Desk/1/B/Survey/Reorganization/145 dt. 9/06/10	<u>STAFF NUMBERS ADEQUATE</u> 1. Section 8.2 and Section 8.5 of the TCP Volume 1 & 2 describes staff & its deployment. 2. At the time of the Committee's visit, the TR had 408 sanctioned posts, against which 32 posts are vacant. There are 2 ACF vacancies and 2 RFO vacancies along with 10 forest guards and 3 foresters. 3. The proposal for reorganization of Rounds and Beats for improved protection has been submitted to Competent Authority vide ref 2 and it is pending for a long time. 4. The induction of 81 STPF staff, well trained in hand combat, weapon use and use of equipment like wireless and GPS, has strengthened protection 5. About 55% of the field staff is in the age group of 20-30 and about 25% of the staff in the age group of 30-40. 6. The Staff has adequate number of weapons and communication equipment.
Some personnel explicitly allocated for TR management but not adequately supported and systematically linked to management objectives.	Fair			
Some personnel with fair support explicitly allocated towards achievement of specific TR management objectives.	Good			
Adequate personnel appropriately supported and explicitly allocated towards achievement of specific TR management objectives.	Very good	✓		

***This assessment should inter-alia be based on number of personnel allocated for attainment of TR objectives at the Range , Round, Beat and Patrolling camps levels or as relevant to the needs (sanctioned posts vis- a- vis existing personnel and needs beyond the sanctioned strengths. It is possible that posts have last been sanctioned several years back that do not now account for the current needs)**

3.2 Are resources (vehicle, equipment, building etc.) adequate, well organized and managed with desired access?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Few, if any, resources explicitly allocated for TR management.	Poor		1. Revised Draft TCP 2008-09 to 2017-18 2. Discussion with field officials	1. The frontline staff is equipped with 178 GPS, Camera trap – 522, SLR – 10, Metal detector -11, Pistol – 9, Digital Camera – 123, Blower – 15, Tranquilizing guns – 2, Cages -9, PDA -44. 2. There are 29 four wheelers and 23 two wheelers for improved mobility of the protection force. 3. For communication, there is 1 repeater base station, 14 wireless base stations, 1 mobile station and 69 walkie-talkies. 4. In core area, there are 23 protection huts, while there are 27 protection huts in buffer area. 5. There are 116 residential buildings.
Some resources explicitly allocated for TR management but not systematically linked to management objectives.	Fair			
Some resources explicitly allocated towards achievement of specific TR management objectives.	Good	✓		
Adequate resources explicitly allocated towards achievement of specific TR management objectives.	Very good			

* These form a variety of resources. These may be segregated into immovable (structures) and movable categories and each further may be considered under the essential and desirable categories. It is best to start with what are the minimum needs to attain each objective, what is available and manner of use/deployment. The proportions of the 'essentials' and 'desirables' along the importance gradient of objectives would serve as pointers for score categories. Specific remarks would be vitally important.

3.3 Are financial resources other than those of the State linked to priority actions and are funds adequate, released timely and utilized?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Resource allocation is adhoc, funds are inadequate and seldom released in time and not utilized.	Poor		1. APO 2013-14, 13 th Finance Commission 2. NTCA & GOM fund allotment letters.	<u>ADEQUATE SUPPORT FROM NTCA</u> 1. Over the last three years, the NTCA provided an amount of Rs 59.50 Cr and the 13 th Finance Commission provided Rs 4.88 Cr. This constitutes about 45% of the total allocation to the park. 2. Against this allotment, the park has been able to spend 97% of the amount. 3. The funds are provided as per the provisions in the annual plan prepared by the park and are always linked to the priority action. The Committee was informed that the funds are released timely and utilized. 4. Of the total amount provided by the NTCA, Rs 46.26 Cr have been allotted for rehabilitation of villages from the core area.
Some specific allocation for management of priority action. Funds are inadequate and there is some delay in release, partially utilized.	Fair			
Comprehensive planning and allocation that meets the most important objectives. Generally funds released with not much delay and mostly utilized.	Good	✓		
Comprehensive planning and allocation of resources for attainment of most objectives. Funds generally released on-time and are fully utilized.	Very good			

*Obtain details of funds released by NTCA and their utilization by TR in the last 3 years and indicate them under 'Remarks'. Also comment on the problems associated with fund allocations and their utilization.

3.4 Are financial resources from the State linked to priority action and funds adequate, timely released and utilized for the management of Tiger Reserve?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Resource allocation is adhoc, funds are inadequate and seldom released in time and not utilized.	Poor		1. APOs for the last three years and discussions	<u>EXCELLENT SUPPORT FROM STATE GOVERNMENT</u> 1. Over the last three years, the State Government provided an amount of Rs 69.35 Cr and this constitutes about 55% of the total allocation to the park. 2. Against this allotment, the park has been able to spend 99% of the amount. 3. The funds are provided as per the provisions of the annual plan prepared by the park and are always linked to the priority action. The committee was informed that the funds are released timely and utilized. 4. The State Funds include CAMPA, Plan, Non-Plan, TSP & OTSP & NTSP. 5. The treasury procedure in respect of staff salary and TA occasionally gets delayed.
Some specific allocation for management of priority action. Funds are inadequate and there is some delay in release, partially utilized.	Fair			
Comprehensive planning and allocation that meets the most important objectives. Generally funds released with not much delay and mostly utilized.	Good			
Comprehensive planning and allocation of resources for attainment of most objectives. Funds generally released on-time and are fully utilized.	Very good	✓		

*Obtain details of funds released by State and their utilization by TR in the last 3 years and indicate them under 'Remarks'. Also comment on the problems associated with fund allocation and their utilization.

3.5 What level of resources are provided by NGOs?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
NGOs contribute nothing for the management of the TR.	Poor		1. NGO's such as TRACT, WCT, Satpuda foundation, ECO-Pro, WWF-India, BNHS, Pratham	<u>ACTIVE ROLE OF NGOs</u> National and international NGO's are providing infrastructural support, generating awareness, planning, man-animal conflict and training support. Hence they are playing an active role in supporting the park.
NGOs make some contribution to management of the TR but opportunities for collaboration are not systematically explored.	Fair			
NGOs contributions are systematically sought and negotiated for the management of some TR level activities.	Good	✓		
NGOs contributions are systematically sought and negotiated for the management of many TR level activities.	Very good			

4. Process

4.1 Does the TR have manpower resources trained in wildlife conservation for effective TR management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document	Remarks
No trained officers and frontline staff in the TR.	Poor		1. Revised Draft TCP 2008-09 to 2017-18	STAFF GET PERIODIC TRAININGS IN WL MANAGEMENT
Some trained officers and few trained frontline staff, posted in the TR.	Fair			1. The Field Director and Deputy Directors of Core and Buffer areas and one ACF have been trained in wildlife management in WII.
All trained officers and and fair number of trained frontline staff posted in the TR.	Good	✓		2. Two staff are trained in sniffer dog handling for 3 months in Bhopal.
All trained officers and most of the trained frontline staff is posted in the TR.	Very good			3. The frontline staff is not trained exclusively in wildlife management, but is offered short courses along with the training in wildlife management. 4. Similarly various refresher workshops on man-animal conflict, micro-planning, wild life census, etc are organized for frontline staff. 5. By examining the service books of the frontline staff, training gaps have been recorded and gaps are being fulfilled. 6. The STPF staff has been trained for 6 months at Chandrapur and Chikhaldara on forestry and wildlife, weapon use, self defense, rock climbing, jungle combat, etc.

*Indicate % of trained staff in various categories. The number and thematic areas of the 'Internal Training' programmes organized in the TR in the last 3 years may be taken into account. Has the TR prepared a 'Staff Development Plan'? Is it being implemented?

4.2 Is TR staff management performance linked to achievement of management objectives?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No linkage between staff management performance and management objectives.	Poor		1. Staff management performance is mainly based on the management objectives and task assigned for wildlife conservation. 2. Annual assessment is done for staff at all levels. 3. Common Performa used for all staff across the state.	1. ACR of frontline staff is based on 17 criteria.
Some linkage between staff management performance and management objectives, but not consistently or systematically assessed.	Fair			2. No specific Performa for wildlife staff – but in the assessment there is scope for identifying and evaluating capacity and work in wildlife.
Management performance for most staff is directly linked to achievement of relevant management objectives.	Good	✓		3. For the frontline staff grade promotion is given upto ACF is available.
Management performance of all staff is directly linked to achievement of relevant management objectives.	Very good			

4.3 Is there effective public participation in TR management* and does it show in making a difference?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no public participation in TR management.	Poor		1. Revised Draft TCP 2008-09 to 2017-18 2. Micro-plan 3. Tourism plan for the park 4. Relocation plan 5. ESZ proposal formulation 6. Celebration of important days.	There is effective public participation in various activities of park management such as planning and implementation of various activities. Government orders are available to mandate EDC meetings and other consultation with the forest staff. Local stake-holders and including NGOs like ECO-Pro participate in human-animal conflict mitigation. Public days like Wildlife week, World Forest Day, etc., are celebrated. Meritorious students are awarded through TATR foundation. Park management recognizes the value of public participation and making necessary efforts to achieve this.
Opportunistic public participation in some of the relevant aspects of TR management.	Fair			
Systematic public participation in most of the relevant aspects of TR management.	Good	✓		
Comprehensive and systematic public participation in all important and relevant aspects of TR management.	Very good			

*The involvement of NGOs/ NGLs in population estimation may be taken into account

4.4 Is there a responsive system for handling complaints and comments* about TR management?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Ad-hoc approach to handling complaints.	Poor		1. Sankirn2013/C N 51/18 2. www.mahatadobatiger.com	The Government orders are available for handling complaints in time bound manner for VIP's. At the field level procedures exist to receive complaints from the public / staff for redressal. Feedback forms are available on website; telephone numbers of officers are available on public domain. Complaint registers are maintained at Field Directors Office, Deputy Directors Office, and Range Office. District level toll-free number limited to calls from district. Number 7507951817 is available with DFO Territorial Non Buffer.
Complaints handling system operational but not responsive to individual issues and with limited follow up.	Fair			
Coordinated system logs and responds effectively to most complaints.	Good	✓		
All complaints systematically logged in coordinated system and timely response provided with minimal repeat complaints.	Very good			

*Does the TR maintains 'Suggestions Register'? What actions are taken to deal with suggestions?

4.5 Does TR management addresses the livelihood issues* of resource dependent communities, especially of women?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No livelihood issues are addressed by TR management.	Poor			The buffer area contains 79 villages with a population of 15,000 families of which 4797 families. 15 youths have been trained in hospitality management and 15 in construction all of which are employed. 66 guides in core and 20 guides in buffer are working as tourist guides. Eco-tourism is being promoted through 3 EDC's and there is a proposal to promote further ecotourism. 5 Agarbatti preparation projects are being proposed. 333 people are engaged as fire watchers, protection labours and beat helpers. 20 Hybrid cattles have been provided through EDC's. Rs 5.7 Cr has been provided to the EDC's for eco-development.
Few livelihood issues are addressed by TR management.	Fair			
Substantial livelihood issues are addressed by TR management.	Good	✓		
Livelihood issues of resource dependent communities especially of women are addressed effectively by TR managers.	Very good			

*The number of mandays generated in the last 3 years may be taken into account. Are funds received from District Agencies and other sources? Provide details of funds received in last 3 years.

4.6 Has the TR planned and implemented the voluntary 'Village Relocation' from the Core/ Critical Tiger Habitat (CTH)?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No planning and no implementation	Poor		1. WLP/10-2000/F-118/F-1/dated – 05/03/2003. 2. WLP-1012/CN. 122/ F-1/ dt- 3/11/2012	Of the 6 villages in the core 3 complete villages and one partial village has been shifted from the core. The FCA proposal for the village PalasgaonSingru is being processed. The relocated villagers have been given 18 basic facilities including schooling, hospital, gram panchayat office etc along with 2 Ha of land for Option II beneficiaries. Various departments are participating in rehabilitating the villagers.
Plans have been made but no implementation	Fair			
Plans have been made and some implementation is in progress	Good	✓		
Plans have been made and are being actively implemented/ no human habitation in the CTH	Very good			

***Assessment will look into the village relocation planning process including availability of manpower, financial resources and NGO support, if any. Is there a mechanism to address the complaints received in respect of relocation process? Effort must be made to assess post-relocation success or otherwise.**

5. Output

5.1 Is adequate information on TR management publicly available?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no information on TR management publicly available.	Poor		1. www.mahatadobatiger.com 2. Brochures 3. Stickers 4. Posters 5. Booklet on tiger conservation 6. Booklet (chalawaghancyasamrajyat) 7. Guidelines on TATR 8. CD for TATR	Information on TATR is available on public domain and made available to schools, visitors free of cost. New articles and stories are regularly published in print and electronic media. However interpretation programmes display material and signages require improvement.
Publicly available information is general and has limited relevance to management accountability and the condition of public assets.	Fair			
Publicly available information provides detailed insight into major management issues and condition of public assets.	Good	✓		
Comprehensive reports are routinely available in public domain on management and condition of public assets.	Very good			

5.2 Are visitor services and facilities appropriate and adequate?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Visitor services and facilities do not exist.	Poor		1. Revised Draft TCP 2008-09 to 2017-18	Chapter XI for core area discusses tourism management in brief. There are 6 entry points for tourist in core area. There is one tourism complex at Kolsa and one at Moharli in Buffer. The visitor complexes in Kolara and Moharli have been transferred to FDCM, which includes 2 dormitories of 20 each, 4 suites & 4 tents in Moharli and 5 suites in Kolara. In addition MTDC has 15 suites available and there are 13 private resorts, which operate along the park. An old interpretation centre at Moharli is the only facility for interpretation and requires up gradation. Interpretative programmes on visitors routes at entry gates are required. Interpretative programmes are required. Bio-digesters and indian toilets are available at Moharli, Kolara, Khatoda and Navegaon gates. 2 elephants are also available for taking the visitors in the park. There are three towers in buffer zone, which are used for tourism. Around 9 Kgs of garbage is collected from the 6 entry gates. 73 registered gypsies take the visitors to the park
Visitor services and facilities are very basic.	Fair			
Visitor services and facilities are monitored from time to time and are fairly effective.	Good	✓		
Visitor services and facilities are conscientiously maintained, regularly upgraded and monitored for visitor satisfaction	Very good			

***Include the existence and quality of visitor and interpretation centers, including skills and capabilities of personnel manning these, TR related publications, films, videos; arrangements of stay (including places serving refreshments and food owned and managed by TR), watch towers and hides including safety factors, vehicles assigned for visitors including riding elephants, if any and their deployment, drinking water, rest rooms, garbage disposal, attended and self guided services in the field, visitor feedback on the quality of wilderness experience.**

5.3 Are research/ monitoring related trends systematically evaluated and routinely reported and used to improve management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no systematic evaluation or routine reporting of trends.	Poor		1. NTCA monitoring protocol for tiger, co-predator and prey. 2. Vegetation plots. 3. Phase III monitoring 4. Research studies by BSI, TFRI, ZSI & independent researchers.	Phase III monitoring of tiger and prey base is a continuous process. Vegetation plots have been placed and the monitoring will start soon. Check list of mammals, birds, reptiles, amphibians are available. IUCN based classification of species has been made. Monitoring of preservation plots is planned. Inventory of grasses & legumes in grassland areas in the relocated villages have been inventoried and suggestion for their improvement has been given. It is necessary to have proper analysis of vegetation and animal use in rehabilitated sites, meadows and wetlands. Programmes for regular monitoring of changes are prepared by academicians / scientists in addition the air and water quality monitored on regular basis & likely changes in the plant and animals. Chapter 8 of the draft plan includes research priorities and research projects need to include in the light of discussion.
Some evaluation and reporting undertaken but neither systematic nor routine.	Fair			
Systematic evaluation and routine reporting of trends undertaken.	Good	✓		
Systematic evaluation and comprehensive reporting of trends undertaken and attempts made at course corrections as relevant.	Very good			

**Not all TRs attract projects and researchers and with exceptions, little research takes place on the TRs own steam because of systemic limitations. However, monitoring of some critical issues is expected e.g. population of tiger, co-predators and prey with insights into their demography and distribution (some opportunistic sampling by sightings, signs and spatial distribution during assessment would be extremely useful in terms of expert impression and as a pulse), monitoring incidence of livestock grazing, fires, weeds, sources of water, a variety of illegal activities typically associated with the reserve, wildlife health (e.g. epidemics, immunization of livestock) regeneration and change in vegetation, visitors and their activities, offence cases, ex-gratia payments etc. Efforts must be made to assess the planning and implementation of Phase-IV monitoring protocols and the success of implementation of M-Stripes (wherever applicable). Are the 'Sykes and Horill' monitoring plots maintained and data analyzed?*

5.4 Is there a systematic maintenance schedule and funds in place for management of infrastructure/assets?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No systematic inventory or maintenance schedule.	Poor			Fund allocation and its utilization are systematically done. However maintenance schedule of infrastructural assets is required to be prepared.
Inventory maintenance is adhoc and so is the maintenance schedule.	Fair			
Systematic inventory provides the basis for maintenance schedule but funds are inadequate.	Good	✓		
Systematic inventory provides the basis for maintenance schedule and adequate funds are made available.	Very good			

6. Outcomes

6.1 Are populations of threatened species declining, stable or increasing?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Populations of key threatened/ endangered species are declining.	Poor		1. Population estimation details of TATR	342 camera traps have been placed in the entire park and the data is collected on regular basis following NTCA guidelines. According to the 2013 population estimation report the leopard population is 24+ 5.5 of the park. Systematic data on other threatened species like wild dog, sloth bear, barking deer, and jungle cat are likely to be available from 2014 onwards.
Some threatened/ endangered species populations declining, some are increasing, most others are stable.	Fair			
Several threatened/ endangered species populations increasing, most others are stable.	Good	✓		
All threatened/ endangered species populations either increasing or stable.	Very good			

*This needs to practically relate to the natural ecosystem potential rather than being driven merely by numbers and visibility. The assessment score may be elaborated under remarks.

6.2 Is the population of tigers showing a declining, stable or increasing trend?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Population of tiger is showing a declining trend	Poor		1. Phase IV tiger monitoring report 2013-14 carried out by WII. 2. Status of tiger and their prey in Chandrapur, West Chanda (FDCM) and Bramhapuri Division (Buffer of TATR) : Phase -IV	The office records indicate a stable trend in tiger population from 43 in summer 2013 report. In the Buffer area of the reserve of the TR a population size of 27 with SE 2.7 is reported during august 2012. The population of the prey base is 25.3 +- 3 per square km. In the buffer area the total prey population is reported to be 35.2 with S.E 6.6 in Chandrapur division. 27.0 with S.E 9.0 in west Chanda division. The data for the last two years is based on methodology as prescribed by NTCA and requires some more time to establish the trend.
Population of tiger is stable	Fair			
Population of tiger is showing an increasing trend	Good	✓		
Population of tiger has significantly increased	Very good			

*This assessment should be based in the context of available population estimate (2010-11) and the outcomes of the currently ongoing Phase-IV analyses.

6.3 Have the threats* to the TR being reduced/ minimized? Or is there an increase?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Threats to the TR have not abated but have enhanced.	Poor		1. Visitor register	3.5 villages have been relocated from the core area and the threats have been decreased. Deployment of STPF has strengthened the protection measures. Establishment of 27 protection huts has strengthened the protection measures. Formation of 63 EDC's and provision of LPG's and other energy saving equipment's has helped in reduction of biomass in the park. All protection huts and staff outposts have been supplied with LPG's reducing the biomass extraction from the park. Fire incidences have come down from 7% in 2012 to about 1% in 2014. Bamboo extraction from the core area has been completely banned however it is allowed in buffer area.
Some threats to the TR have abated, others continue their presence	Fair			
Most threats to the TR have abated. The few remaining are vigorously being addressed	Good	✓		
All threats to the TR have been effectively contained and an efficient system is in place to deal with any emerging situation	Very good			

*Does the TR have a Disaster Risk Management Plan to deal with existing as well as emerging threats?

6.4 Are the expectations of visitors* generally met or exceeded?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Expectations of visitors generally not met.	Poor			Visitor's feedback register is maintained at entry point. However a formal and uniform system of obtaining feedback is needed to be placed on ground. From the discussion it is understood that visitor expectation are largely related to sighting of tiger. Largely visitor's expectations from tiger sighting are met.
Expectations of many visitors are met.	Fair			
Expectations of most visitors are met.	Good	✓		
Expectations of all most all visitors are met.	Very good			

***What is the compliance status on Supreme Court/ NTCA Guidelines on Ecotourism in TRs?**

6.5 Are local communities supportive of TR management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Local communities are hostile.	Poor		1. TCP for Buffer Zone.	Establishment of EDC in the Buffer area, consultative participatory rehabilitation process and local community's participation in the various activities of management has improved the support of local community to the TATR. However livelihood related trainings and opportunities need to be improved for generating still better support. Timely payment of compensation and response to conflict situation by the park help in generating public support.
Some are supportive.	Fair			
Most locals are supportive of TR management.	Good	✓		
All local communities supportive of TR management.	Very good			

***There could be many reasons for disenchantment. It could be real because of managerial neglect or the managerial efforts could be appropriate but there could be local elements/organizations who would like to keep the disaffection simmering for their own ulterior motives. Likewise success could be entirely because of the efforts of managers or they might be fortunate in striking partnerships with credible NGOs. Assessment may take the prevailing causes into account.**

7. MEE Score Card*

Framework Element Number	Framework Element Name	Number of Criteria (a)	Maximum Mark per question (b)	Total (a x b)	Marks obtained for the Element	Overall MEE Score and % age
1.	Context	04	10	40	30.00	75.81 %
2.	Planning	07	10	70	55.00	
3.	Inputs	05	10	50	42.50	
4.	Process	06	10	60	45.50	
5.	Outputs	04	10	40	27.50	
6.	Outcomes	05	10	50	35.00	
Total		31		310	235.00	

***Efforts will be made by the NTCA-WII-MEE Team to address the issue of assigning 'differential' weightages to the 31 Assessment Criteria including 'normalization'.**

Assessment Criteria for addressing issues relating to Climate Change & Carbon capture in the Tiger Reserves (TRs)

1. *Additional Criteria on Climate Change: Is the TR being consciously managed to adapt to climate change?*

Condition	Category*	(Tick ✓)	Comment/ Explanation	Next Steps
There have been no efforts to consider adaptation to climate change in management	Poor			
Some initial thought has taken place about likely impacts of climate change, but this has yet to be translated into management plans	Fair			
Detailed plans have been drawn up about how to adapt management to predicted climate change, but these have yet to be translated into active management.	Good			
Detailed plans have been drawn up about how to adapt management to predicted climate change, and these are already being implemented	Very good			

2. *Additional Criteria on Climate Change: Is the TR being consciously managed to prevent carbon loss and to encourage further carbon capture?*

Condition	Category*	(Tick ✓)	Comment/ Explanation	Next Steps
Carbon storage and carbon dioxide capture have not been considered in management of the TR	Poor			
Carbon storage and carbon dioxide capture have been considered in general terms, but has not yet been significantly reflected in management	Fair			
There are active measures in place to reduce carbon loss from the TR, but no conscious measures to increase carbon dioxide capture	Good			
There are active measures in place both to reduce carbon loss from the TR and to increase carbon dioxide capture	Very good			

Management Effectiveness Evaluation (MEE) of Sahyadri Tiger Reserve

1. Context

1.1 Are the values of the TR well documented, assessed and monitored?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Values not systematically documented, assessed and monitored.	Poor		1. TCP 2013-14 to 2022-23. 2. Academic work on flora, birds, butterflies amphibians etc., by universities & research institutions	Values have been discussed in the TCP para 1.3 of core and buffer plans. One of the World Heritage site (IUCN 1 st July 2012), it is a unit VB of the Western Ghats. The STR is valued for its high Biodiversity values, especially in relation to endemism and rarity of various taxa. The Koyana Chandoli corridor has been studied and values identified even in the private forests in the corridor. Enclosing the Koyana and Chandoli dam the STR has very high watershed values; a place known for Chatrapathi Shivaji's reign, the STR has a number of historical sites which offer high tourism value.
Values generally identified but not systematically assessed and monitored.	Fair			
Most values systematically identified, assessed and monitored.	Good ✓			
All values systematically identified, assessed and monitored.	Very good			

1.2 Are the threats to TR values well documented and assessed*?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Threats not systematically documented or assessed.	Poor		1. TCP 2013-14 to 2022-23.	Threats have been discussed in the TCP para 6.5, and 6.4.1 for the core area and para 2.4 for the buffer area. The Threats to the core include licensed guns (1338 no.) as well as unlicensed guns with the people in about 60 villages surrounding the STR, Feral cattle in the core as well as in buffer, grazing in the buffer area by domestic livestock and fire. With respect to Buffer 206 windmills have caused widening of roads, cutting of slopes and are recognized as a threat. NTFP like Mappia, Tamalpatra, Shikakai in pockets is under threat of illegal collection & so is unregulated tree felling in private areas abutting the STR. Para 1.1.5 of the indicative corridor plan highlights the threats in the corridor which include bauxite mining and night traffic along Amba forests in the corridor.
Threats generally identified but not systematically assessed.	Fair			
Most threats systematically identified and assessed.	Good ✓			
All threats systematically identified and assessed.	Very good			

*This assessment should be based on number, nature and extent of threats

1.3 Is the 'Core Area' of TR free from human and biotic interference?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
The 'Core Area' has extensive human and biotic interference.	Poor		1. TCP 2013-14 to 2022-23. 2. Desk/17/nc/II/ID no 11328 (33)/159/14-15, Nagpur dt 30 th April'14.	After the construction of Chandoli and Koyana dams, as many as 28 villages in Chandoli and 17 villages in Koyana dam were relocated elsewhere from the STR. Presently there are 7 villages in Koyana and 4 villages in Chandoli, which exert some biotic impact on STR. Vide ref.2 proposal has been submitted to GOI to de-reserve 242.39 ha of forest land for rehabilitation of 7 villages of Koyana. Alternate land has been identified for 1 village and relevant process is in vogue for other 3 villages of Chandoli. The Buffer areas in Satara dn, Sangli dn, Kolhapur dn and Ratnagiri dn are yet to be transferred for unified command to the STR.
The 'Core Area' has some human and biotic interference.	Fair			
The 'Core Area' has little human and biotic interference.	Good ✓			
The 'Core Area' has no human and biotic interference.	Very good			

*This assessment should be based on existence and the efforts made by TR management to address issues related to human settlements/ villages inside the core area; livestock grazing, cultivation, encroachments etc, resource extraction/ livelihood dependence of local communities and should reflect the overall interference due to all the above factors. The issue of 'Unified Control' of the 'Core' and 'Buffer' zones by under the Field Director would also be taken into account.

1.4 Has the TR complied with the four Statutory* Requirements (SR) along with Tripartite MoU and three Standard Operation Procedures (SOP)?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
None of the four SR, no compliance of Tripartite MoU and three SOPs met	Poor		1. TCP 2013-14 to 2022-23. 2. GR WLP-2012/ CR no 240/f-1, Mantralaya Mumbai dt 21 st August 2012. 3. GR no WLP-2011/CR no 260-f-1, Mantralaya, Mumbai dt 8 th Nov 2011. 4. Registration no.E 2643 dt 4 th May 2012. 5. Ir.no.F1-18/2013/NTCA, dt 25 th Oct 2013.	The core and buffer zone have been duly notified vide ref .2. Tiger Foundation has been constituted vide ref.3, and duly registered under Mumbai Public Trust Act 1950 vide ref.4. TCP for 2013-14 to 2022-23 has been duly approved by NTCA vide ref.5. State level Steering Committee under the Chairmanship of Hon'ble Chief Minister of Maharashtra is constituted for all TRs. The SOPs have been received from NTCA and they are under process of translation into Marathi and further distribution to all staff.
Two of the four SR, 50% conditions of the Tripartite MoU and SOPs complied	Fair			
Three of the four SR, 75% conditions of the Tri-partite MoU and SOPs complied	Good			
All four SR, 100% conditions of the Tripartite MoU and SOPs complied	Very good ✓			

*Statutory requirements are (1) Legal delineation and notification of Core and Buffer Areas; (2) Establishment of Tiger Conservation Foundation; (3) Development of a Tiger Conservation Plan; and (4) Constitution of a State-level Steering Committee under the Chairmanship of the Chief Minister. TA refers agreement between Field Director, State Government and NTCA. The 3 SOPs are on (i) Straying of Tiger in human dominated landscape, (ii) Tiger Mortality and (iii) Disposal of Carcasses

2. Planning

2.1 Status of Tiger Conservation Plan (TCP)*?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No TCP in place.	Poor		1. TCP 2013-14 to 2022-23. 2. Ir.no.F1-18/2013/NTCA, dt 25 th Oct 2013.	TCP as approved by NTCA vide reference 2 is in place.
TCP is under preparation	Fair			
TR has a relevant TCP	Good			
TR has a comprehensive and relevant TCP, duly approved by the NTCA	Very good ✓			

***The scientific content and the participatory processes used in preparation of the TCP will be taken into account in assessing the quality of TCP.**

2.2 Does the TR safeguards the threatened biodiversity values?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR does not safeguard the threatened biodiversity values.	Poor		1. TCP 2013-14 to 2022-23. 2. STR security plan 2013-14 to 2022-23 part B vol. II	TCP discusses in detail the issues related to security and protection of STR in ref.2. The eastern sector of the STR is well protected because of the reservoir, and the western steep escarpments offer natural protection to a greater part of the STR. Vulnerable points have been identified and protected with the help of 17 protection camps and with available number of frontline staff & contract labor. Chapter III of the security plan prescribes fire protection measures and participatory fire protection programme are implemented with the help of 5 EDCs. The protection principle adopted is intensive foot patrolling and use of technology such as GPS, wireless, mobile etc., While the newly recruited frontline staff is young and enthusiastic, owing to difficult terrain additional staff is required. The committee suggests deployment of additional staff including increase in their strength with strong communication network and incentive to strengthen protection of STR.
TR safeguards a few threatened biodiversity values.	Fair ✓			
TR safeguards a large number of threatened biodiversity values.	Good			
TR safeguards all threatened biodiversity values.	Very good			

***Remarks need to elaborate on the kind of safeguards and how they work or are intended to work**

2.3 Are stakeholders given an opportunity to participate in planning process?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little, if any opportunity for stakeholder participation in planning.	Poor		1. TCP 2013-14 to 2022-23.	Like other TRs in Maharashtra STR also exhibits a strong participatory approach in its management. The State Level Steering Committee chaired by the Hon'ble CM and local area committee chaired by the Divisional commissioner & the Governing Body of the STR Foundation offer platform for consultation within decision makers higher bureaucracy and amongst the people's representatives. The Executive Committee of STR Foundation chaired by the FD ensures local area consultation on planning and management of the STR. The village levels Microplans of all EDCs have been prepared
Stakeholders participate in some planning.	Fair			
Stakeholders participate in most planning processes.	Good ✓			
Stakeholders routinely and systematically participate in all planning processes.	Very good			

				& have followed intensive consultation and participatory methods. Additionally the Hon. Wildlife Wardens of all 5 districts and the local NGOs are regularly consulted on various mgmt. issues. The TCP has been prepared in accordance with the NTCA guidelines eliciting wide consultation as referred in the preface of the core/buffer plan of TCP 2013-14 to 2022-23. Commercial development around STR for tourism purpose also requires consultation under provisions of chapter 3 A of Maharashtra Regional and Town planning Act 1960.
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***The result of participation must show in the field and not merely reported as a routine exercise.**

2.4 Are habitat management programmes systematically planned, relevant and monitored, and contribute effectively to Tiger and other endangered species conservation?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Habitat management programmes are entirely adhoc.	Poor		1. TCP 2013-14 to 2022-23.	Habitat management provisions have been included in para 7.2 of core plan. 7.2 of buffer plan. The programmes pertain to recovery of habitats in relocated sites, meadows/savannahs development, removal of unwanted invasive sp, strengthening of existing waterholes and water channels etc., Digital maps are available for planning habitat related programmes. By including STR in the World Heritage Sites the planning support for habitat management and especially for rare endangered endemic species has increased. Noteworthy initiative for improving habitat include proposal for compensating against tree felling (a sort of Tree Credits) in para 2 of the chapter 7 of TCP Buffer area II. Special emphasis on conservation of River Tern, Vultures, caecilians, amphibians, has been given in TCP. Translocation for prey augmentation finds mention in para 7.2.2 of core of sambhar and chital.
Limited planning and monitoring programmes are in place for habitat management.	Fair✓			
Habitat management programmes are generally planned and monitored.	Good			
Habitat management programmes are thoroughly planned and monitored.	Very good			

***This assessment should be primarily based on habitat management programmes in relation to habitats for species that are threatened (IUCN categories), are habitat specialists, subjected to seasonal movements, wide ranging with emphasis on the breeding and rearing habitat and may include factors such as food, water, shelter (all connotations).Habitat structure, composition, unique patches of vegetation and sensitive sites, sources of water and their distribution are integral. Corridors within buffer zone are critically important. For example, all riparian habitats. Have these been addressed? Is their a planning process in place? The management practices dealing with invasive species such as Lantana, Michania etc. would be examined.**

2.5 Does the TR has an effective Protection Strategy (PS) * and Security Plan and Security Audit (SA) in place?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR has little or no PS and SA.	Poor		1. TCP 2013-14 to 2022-23. 2. STR security plan 2013-14 to 2022-23 part B	TCP discusses in detail the issues related to security and protection of STR in ref.2. The eastern sector of the STR is well protected because of the reservoir, and the western steep escarpments offer natural protection to a greater part of the STR. Vulnerable points have been identified and protected with the help of 17 protection camps and with available number of
TR has an adhoc PS and SA.	Fair			
TR has a generally relevant PS and SA but is not very effective.	Good✓			
TR has a comprehensive and very effective PS and SA.	Very good			

			<p>vol.II</p> <p>3. Order of Chief Judicial Magistrate, Sangli dated 9th April 2014.</p>	<p>frontline staff 18 watchtowers & contract labour. Chapter III of the security plan prescribes fire protection measures and participatory fire protection programme are implemented with the help of 5 EDCs.</p> <p>The protection principle adopted is intensive foot patrolling and use of technology such as GPS, wireless, mobile etc., Commercial development around STR for tourism purpose also requires consultation under provisions of chapter 3 A of Maharashtra Regional and Town planning Act 1960. STR has 6 four wheeler vehicles, 5 engine water launches, and 2 without engines. Wireless equipment 2 repeaters, 11 base station, 24 walkie talkies, 42 GPS instruments, 4 Fire Extinguishers, 48 range finders, 112 camera traps, 27 digital cameras for effective protection. The vehicles seized in mid 2005 in connection with detection of illicit cutting of Nothapodytes nimmoniana (Mappia foetida) commonly known as Narkya, for which cases had been lodged in courts having jurisdiction, orders have been received vide ref.3 to initiate confiscation procedures in this regard and cases are being rigorously pursued.</p> <p>The Security programmes are regularly monitored by senior officers including the FD. Over the last 3 years a total of 99 offence cases have been registered regarding illicit felling, trespass, grazing, fire, encroachment wildlife and others. Conviction has been obtained in case RCC 74/2013 dated 9th Jan 2014, related to poaching of Peacock by Katni gang.</p>
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***This assessment takes inter-alia into account the nature of threats, the number and location of patrolling camps and foot and mobile patrolling, needs that relate to available manpower, terrain difficulties, practicability of area coverage, readiness to contain specific threats with necessary support and facilities. The constitution and functioning of Special Tiger Protection Force (STPF), Number of offences reported, arrests made, prosecution initiated and conviction achieved will be taken into account.**

2.6 Has the TR been effective in the mitigation of human-wildlife conflicts?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Human-wildlife conflicts are significant but poorly addressed.	Poor		1. TCP 2013-14 to 2022-23.	There are very few cases of human-wildlife conflict. 39 cases of crop damage, 1 case of human injury and 3 cases of cattle injury have been reported over the last 3 years. Paras 5.4 of core and buffer discuss mitigation strategy of conflict management. GRs enhancing the compensation. Delegation to ACFs
TR has been able to mitigate few human-wildlife conflicts.	Fair			
TR has been able to mitigate many human-wildlife conflicts.	Good ✓			
TR has been effective in mitigating all human-wildlife conflicts.	Very good			

***The assessment will take into account the number of incidences reported and payment of compensation made and its timeliness.**

2.7 Is the TR integrated into a wider ecological network/ landscape following the principles of the ecosystem approach?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR not integrated into a wider network/ landscape.	Poor		1. TCP 2013-14 to 2022-23. 2. Sahyadri tiger reserve-life under the tiger's umbrella by G. Sai Prakash in Wild Maharashtra brought about by Sanctuary Asia 2012. 3. Johnsingh <i>et.al.</i> 2010, towards a regional conservation strategy for Western Ghats (MoEF project).	Part D Vol. II, indicative plan of the Buffer discusses the corridor potential and the strategies for integrating STR into a wider landscape. The potential of the corridor exists south of STR towards tenuous Crestline corridor linking STR with Radhanagari WLS and further downwards to Anshi-Dandeli TR and Goa forests. Strategies have been prescribed in chapter V of part B Vol. II. The Working plans of Kolhapur forest division by Vikas Gupta, describes the wildlife values and prescribes principles of wildlife management. In Ref 2 and Ref 3, the corridor has been discussed highlighting the values of the area, the extant protection network and the future strategy and potentialities for the area. However application of management action needs strengthening to link important areas in the landscape.
Some limited attempts to integrate the TR into a network/ landscape.	Fair ✓			
TR is generally quite well integrated into a network/ landscape.	Good			
TR is fully integrated into a wider network/ landscape.	Very good			

***Assessment needs to consider the scope of opportunities on the landscape scale that exist. Consider whether any attempts have been made and what are these? Have all the important corridors been identified? What actions are planned/ implemented for their security? Have the Forest Working Plans and Forest Development Corporation Plans within the identified landscapes taken cognizance of such new requirement? These should have been reflected in TCPs. Is there is any effort to rationalize landuse around TR? Is any effort being made to plan and use 'Smart Green Infrastructure'?**

3. Inputs

3.1 Are personnel adequate, well organized and deployed with access to adequate resources in the Tiger Reserve (TR)*?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Few, personnel explicitly allocated but poorly supported for TR management.	Poor		1. TCP 2013-14 to 2022-23	Being a very difficult mountainous area additional staff is reported to be required in the STR. Presently there are 1 FD, 1 DFO, 2 ACFs, 4 RFOs (1 is vacant for past 6 months), 12 Round Officers, 43 Beat Guards (2 vacant) and 11 permanent laborers class IV. The Government has authorized FD to annually recruit front line staff. Of the 43 Forest Guards, 8 are women and of the 4 RFOs 1 is a women officer. The frontline women staff is posted at the beat and given appropriate facility for stay and work. All the Beat Guards are under 30 years and given an orientation to their work for 15 days. The field staff reported that owing to the difficult conditions in which they work they should be provided with an incentive known as one-step higher payment and allowances existing in Police depts. Or as in other TRs. Vulnerable
Some personnel explicitly allocated for TR management but not adequately supported and systematically linked to management objectives.	Fair			
Some personnel with fair support explicitly allocated towards achievement of specific TR management objectives.	Good✓			
Adequate personnel appropriately supported and explicitly allocated towards achievement of specific TR management objectives.	Very good			

			points have been identified and protected with the help of 17 protection camps and with available number of frontline staff 18 watchtowers & contract labour. While 3 positions at the level of ACF and DFO exist, responsibilities in terms of separate jurisdiction in terms of core and buffer are yet to be planned. As per Ref 2, orders exist regulating the transfer of officers of the Government at all levels and authority to effect defined. As per the latest order officials of Class III and Class IV can be affected by the Division level officers (DCF's) and Class I and II by the Govt. for orders to effect transfers within 2 years, the sanction of the panel specially set up is to be obtained prior to issue.
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***This assessment should inter-alia be based on number of personnel allocated for attainment of TR objectives at the Range , Round, Beat and Patrolling camps levels or as relevant to the needs (sanctioned posts vis- a- vis existing personnel and needs beyond the sanctioned strengths. It is possible that posts have last been sanctioned several years back that do not now account for the current needs)**

3.2 Are resources (vehicle, equipment, building etc.) adequate, well organized and managed with desired access?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Few, if any, resources explicitly allocated for TR management.	Poor		1. TCP 2013-14 to 2022-23 2. Mah. Employees Act for transfer and duty, prevention of delay in duty. 2005.	There are 4 ranges, 11 rounds and 44 beats in STR. Due to difficult terrain the vehicular mobility is not possible to most of the STR and therefore the TR depends largely on launches and foot patrol. STR has 6 four wheeler vehicles, 5 engine water launches, and 2 without engines. Wireless equipment 2 repeaters, 11 base station, 24 walkie talkies, 42 GPS instruments, 4 Fire Extinguishers, 48 range finders, 112 camera traps, 27 digital cameras for effective protection. Including the Protection Huts, the STR has 31 buildings distributed appropriately across the Park. As prescribed in the TCP new Protection Huts, watchtowers, check posts, etc., would be constructed subject to availability of funds. The CCF & FD Kolhapur wildlife is in the process of moving to a more roomy accommodation and plans to construct an office for the FD are too in the anvil subject to availability of funds. Likewise residential facilities for the FD as well as DFO which are not available currently are to be proposed. Office of the DFO STR at Karad is now functional in a rented building, and a proposal to an official accommodation is on the anvil.
Some resources explicitly allocated for TR management but not systematically linked to management objectives.	Fair✓			
Some resources explicitly allocated towards achievement of specific TR management objectives.	Good			
Adequate resources explicitly allocated towards achievement of specific TR management objectives.	Very good			

*** These form a variety of resources. These may be segregated into immovable (structures) and movable categories and each further may be considered under the essential and desirable categories. It is best to start with what are the minimum needs to attain each objective, what is available and manner of use/deployment. The proportions of the 'essentials' and 'desirables' along the importance gradient of objectives would serve as pointers for score categories. Specific remarks would be vitally important.**

3.3 Are financial resources other than those of the State linked to priority actions and are funds adequate, released timely and utilized?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Resource allocation is adhoc, funds are inadequate and seldom released in time and not utilized.	Poor		1. Annual progress report and budget statement.	The STR has been receiving funds at proposed by them in their annual plan of operations from the NTCA, the amount sanctioned included Rs. 84.82 lakhs (2011-12), Rs 110.82 lakh (2012-13) and Rs.207.796 lakhs (2013-14) against which the release were Rs 28.82 lakh, 107.687 lakh and Rs.173.066 lakh respectively. The funds were utilized fully. The STR reported no difficulty in fund allocation and utilization.
Some specific allocation for management of priority action. Funds are inadequate and there is some delay in release, partially utilized.	Fair			
Comprehensive planning and allocation that meets the most important objectives. Generally funds released with not much delay and mostly utilized.	Good✓			
Comprehensive planning and allocation of resources for attainment of most objectives. Funds generally released on-time and are fully utilized.	Very good			

***Obtain details of funds released by NTCA and their utilization by TR in the last 3 years and indicate them under 'Remarks'. Also comment on the problems associated with fund allocations and their utilization.**

3.4 Are financial resources from the State linked to priority action and funds adequate, timely released and utilized for the management of Tiger Reserve?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Resource allocation is adhoc, funds are inadequate and seldom released in time and not utilized.	Poor		1. Annual progress report and budget statement.	The State Government has been generously providing funds to the STR over the last 3 years. A substantial amount has been released for Rehabilitation of villages within the TR and the amounts received were Rs.767.04 lakhs (11-12) and 252.66 lakhs (12-13). The amounts have been utilized for the rehabilitation of 5 villages from the Core. From the State plan the STR has received Rs.15.17 lakhs (11-12), and Rs.23.43 lakhs (13-14), no funds were received in the year under State plan in the year 11-12. In addition the STR also received financial support under 13 Financial commission wherein Rs.5.88 lakhs (11-12) Rs.20.49 (12-13) and Rs.23.43 lakhs (13-14), received and amounts expended fully by the STR. Further as part of convergence of funds from other line departments the District Planning and Development Committee (DPDC) also provides funds to STR. The releases included Rs.91.27 lakhs (11-12) Rs.215.39 lakhs (12-13) and Rs.309.05 lakhs (13-14) for infrastructure development including repairs to roads, funds from CAMPA to the tune of Rs.12.82 lakhs in (11-12), 78.75 lakhs (12-13), 19.128 lakhs (13-14) have also been available to STR, infrastructure development, and translocation of prey base. All the funds so received and accounted for have been utilized.
Some specific allocation for management of priority action. Funds are inadequate and there is some delay in release, partially utilized.	Fair			
Comprehensive planning and allocation that meets the most important objectives. Generally funds released with not much delay and mostly utilized.	Good✓			
Comprehensive planning and allocation of resources for attainment of most objectives. Funds generally released on-time and are fully utilized.	Very good			

***Obtain details of funds released by State and their utilization by TR in the last 3 years and indicate them under 'Remarks'. Also comment on the problems associated with fund allocation and their utilization.**

3.5 What level of resources are provided by NGOs?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
NGOs contribute nothing for the management of the TR.	Poor		1. TCP 2013-14 to 2022-23 2. Discussion with STR officials & NGOs.	NGOs actively participate in the various activities of STR. WCT Mumbai provided Rs.6.30 lakhs for rehabilitation of villagers of Dicholi in Koyana WLS and also provided a Rescue & Rapid Response Van. Local NGOs like River Valley expedition and Research society Sangli, Creative Nature Friends, karad , Animal Rahat,Sangli, Green nature Society, Sangli , Pugmarks etc., participate in Census Activity, immunization of livestock, providing information, legal support, mitigation of man-animal conflict, and providing training to the staff.
NGOs make some contribution to management of the TR but opportunities for collaboration are not systematically explored.	Fair			
NGOs contributions are systematically sought and negotiated for the management of some TR level activities.	Good ✓			
NGOs contributions are systematically sought and negotiated for the management of many TR level activities.	Very good			

4. Process

4.1 Does the TR have manpower resources trained in wildlife conservation for effective TR management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No trained officers and frontline staff in the TR.	Poor		1. TCP 2013-14 to 2022-23 2. Discussion with STR officials	The FD who was in charge till mid March 2014 since July 2011, was trained in the Diploma Course of WII. The DFO STR has undergone 1 modular course of 1 month duration on Eco Development planning and implementation at WII. For the past 3 years the frontline staff is being given In-house weekly courses on Wildlife management, handling of GPS, eco development planning, mitigation of man-animal conflict, forest and wildlife laws etc., New recruits at forest guard level are given a 15 day orientation training at the Forest Training Institutes of the State. Annual trips to Dandeli, Bhadra, Anshi for the frontline staff and trips to Panna and Periyar for the higher officials have been learnt to take place. The TCP has devised an HRD plan in para 8.5 of the core vol I, 13.4 of core, training need assessment (TNA) has been made in para 8.4 of the core plan. Some of the senior officers had also worked in STR in the sub-ordinate positions in the past which has helped in maintaining continuity of thought and action in planning and implementation.
Some trained officers and few trained frontline staff, posted in the TR.	Fair			
All trained officers and fair number of trained frontline staff posted in the TR.	Good ✓			
All trained officers and most of the trained frontline staff is posted in the TR.	Very good			

***Indicate % of trained staff in various categories. The number and thematic areas of the 'Internal Training' programmes organized in the TR in the last 3 years may be taken into account. Has the TR prepared a 'Staff Development Plan'? Is it being implemented?**

4.2 Is TR staff management performance linked to achievement of management objectives?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No linkage between staff management performance and management objectives.	Poor		Discussion with park Officials	Performance of staff is assessed annually. No rewards or incentives to staff were reported.
Some linkage between staff management performance and management objectives, but not consistently or systematically assessed.	Fair ✓			
Management performance for most staff is directly linked to achievement of relevant management objectives.	Good			
Management performance of all staff is directly linked to achievement of relevant management objectives.	Very good			

4.3 Is there effective public participation in TR management* and does it show in making a difference?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no public participation in TR management.	Poor		1. TCP 2013-14 to 2022-23 2. Discussion with STR officials	Like other TRs of Maharashtra, public participation is a strong USP of STR. The entire village relocation programme and eco-development programme are community centric, transparent and highly participatory. The population estimation exercises include active participation of NGOs, college students. EDC members and staff from the neighboring forest divisions. STR formation day, Republic Day floats, wildlife week celebrations are all participative by the NGOs.
Opportunistic public participation in some of the relevant aspects of TR management.	Fair			
Systematic public participation in most of the relevant aspects of TR management.	Good ✓			
Comprehensive and systematic public participation in all important and relevant aspects of TR management.	Very good			

*The involvement of NGOs/ NGIs in population estimation may be taken into account

4.4 Is there a responsive system for handling complaints and comments* about TR management?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Ad-hoc approach to handling complaints.	Poor		1. TCP 2013-14 to 2022-23 2. Mah. Employee s Act for transfer and duty, prevention of delay in duty. 2005.	An Internal Grievance redressal system is in place, wherein complaints received are noted in register, enquired into and decisions taken. Complaints received are directed to the concerned offices for due enquiry and decisions taken. Further Government Act under ref.2 outlines that no complaint or reference shall lie unattended for more than 7 days at a place, and that the issue is to be resolved within 45 days from the opening of the file. NICs keep registers where visitor's register complaint books are available.
Complaints handling system operational but not responsive to individual issues and with limited follow up.	Fair			
Coordinated system logs and responds effectively to most complaints.	Good ✓			
All complaints systematically logged in coordinated system and timely response provided with minimal repeat complaints.	Very good			

*Does the TR maintains 'Suggestions Register'? What actions are taken to deal with suggestions?

4.5 Does TR management addresses the livelihood issues* of resource dependent communities, especially of women?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No livelihood issues are addressed by TR management.	Poor		1. TCP 2013-14 to 2022-23 2. Discussions with STR officials.	The Approved TCP contains one complete volume on Buffer zone management on the principle of Inclusiveness. The Eco Development Committee have been provided with financial resources to procure LPG connections, solar lights, smokeless chulhas, Homestead tents, etc., The 5 EDCs in Koyana WLS who have been provided with Rs.10 lakh each and contributed 25 % on this amount to generate energy alternative and livelihood options. Finance has been made by CAMPA. The convergence funds are made available through DPDC. On an average STR provides 1.60 lakh man-days of employment to local populace annually.
Few livelihood issues are addressed by TR management.	Fair			
Substantial livelihood issues are addressed by TR management.	Good ✓			
Livelihood issues of resource dependent communities especially of women are addressed effectively by TR managers.	Very good			

***The number of man-days generated in the last 3 years may be taken into account. Are funds received from District Agencies and other sources? Provide details of funds received in last 3 years.**

4.6 Has the TR planned and implemented the voluntary 'Village Relocation' from the Core/ Critical Tiger Habitat (CTH)?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No planning and no implementation	Poor		1. TCP 2013-14 to 2022-23 2. Discussion with STR officials.	The Village Relocation programme is completely supported by the State Government and 5 villages from Koyana WLS namely Zadoli, Shirsinghe, Nahimbe-Ambeghar, Nahimbe-Sirsinghe and Dicholi have been completely relocated to outside the STR. Of the 7 villages remaining now, 5 more viz., Adoshi, Madoshi, Kirkhindi, Kusapur and Rawandi are in the last stages of rehabilitation planning and the STR officials are confident that these will be rehabilitated in 2014-15. The rehabilitation planning and process is highly participatory with active involvement of local hon. wildlife wardens, NGOs, officials, the Princi. Secty (forests) and the Minister (Forests) personally review the progress. The STR officials oversee mechanisms of transfer of rights in the relocated sites and also enable provision of basic facilities.
Plans have been made but no implementation	Fair			
Plans have been made and some implementation is in progress	Good ✓			
Plans have been made and are being actively implemented/ no human habitation in the CTH	Very good			

***Assessment will look into the village relocation planning process including availability of manpower, financial resources and NGO support, if any. Is there a mechanism to address the complaints received in respect of relocation process? Effort must be made to assess post-relocation success or otherwise.**

5. Output

5.1 Is adequate information on TR management publicly available?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no information on TR management publicly available.	Poor		Sahyadri tiger reserve-life under the tiger's umbrella by G. Sai prakash in Wild Maharashtra brought about by Sanctuary Asia 2012.	Kolhapur wildlife division is developing an exclusive web-site named 'Kolhapur wildlife' exclusively features and developments of STR and other PA s in jurisdiction. Further information regarding STR and other wildlife activity is hosted on the Maharashtra Forest Department Website entitled 'www.mahaforest.gov.in' Bookelet entitled 'Biodiversity of Sahyadri in Marathi and English is available at all the NICs and wildlife offices. Film on STR entitled ' Chala Ek hovu ya' meaning 'Come on lets be one' has been brought out. Numerous brochures, calendars, badges, have been brought out. Film on the Rehabilitation is underway. Articles in newspapers, and coffee books under ref.1, bring out the value of biodiversity and uniqueness of the STR. However the objective of making TR management transparent and accountable to civil society requires that information related to management of TR including technical, administrative and financial are made available, which required to be improved.
Publicly available information is general and has limited relevance to management accountability and the condition of public assets.	Fair✓			
Publicly available information provides detailed insight into major management issues and condition of public assets.	Good			
Comprehensive reports are routinely available in public domain on management and condition of public assets.	Very good			

5.2 Are visitor services and facilities appropriate and adequate?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Visitor services and facilities do not exist.	Poor		1. TCP 2013-14 to 2022-23 2. Discussion with STR officials.	NICs are set up at 2 places Met-Indoli in Koyana, Mandur in Chandoli.NP and provide essential information on STR. Visitor facilities have been provided in the form of a dormitory at Mandur (16 persons) and Met-Indoli (16 persons), Tented accommodation at Met-Indoli (10 persons). Accommodation for 10 persons in 3 quarters at Rasati, are in readiness after the monsoon. Public Toilets are also available. The target audiences are local visitors and minimum facility accordingly in place. The EDCs of the area run the facility. Informative signages have been provided along the roads leading to STR tourism areas. The EDC collects the entry fee as well caution deposit against carrying of plastic, which is returned when the party comes back without throwing the plastic. Of the amount so collected 50 % goes to EDC and the rest to the STR foundation. The committee felt that the Interpretative facility and Visitors comfort are bare minimum and require up gradation. The tourism zone has been identified in the TCP and the visitors are allowed to go only to the areas indicated. The details are given in the Eco-Tourism plan of TCP Vol. II.
Visitor services and facilities are very basic.	Fair			
Visitor services and facilities are monitored from time to time and are fairly effective.	Good ✓			
Visitor services and facilities are conscientiously maintained, regularly upgraded and monitored for visitor satisfaction	Very good			

*Include the existence and quality of visitor and interpretation centers, including skills and capabilities of personnel manning these, TR related publications, films, videos; arrangements of stay (including places serving refreshments and food owned and managed by TR), watch towers and hides including safety factors, vehicles assigned for visitors including riding elephants, if any and their deployment, drinking water, rest rooms, garbage disposal, attended and self guided services in the field, visitor feedback on the quality of wilderness experience.

5.3 Are research/ monitoring related trends systematically evaluated and routinely reported and used to improve management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no systematic evaluation or routine reporting of trends.	Poor		1. TCP 2013-14 to 2022-23 2. Discussion with STR officials.	25 research projects including Ph.D programme have been sanctioned during the last 10 years. The Research Need has been identified under Para 8.1 of Vol. I core, and research projects to fill the gaps find mention in the TCP. However STR doesn't have a dedicated Research Staff which can be provided under the financial support of the Foundation. The tiger, co predator and prey base monitoring has been started as per the guidelines of the NTCA and 37 line transects and 112 camera traps have been placed in the field. However, in view of the land situation, the terrain difficulty and visibility the STR requires technical support to analyze the data and produce results. The frontline staff is well trained in handling GPS, compass, range finder etc., and maintain regular track log which are regularly submitted to the Range officers which are in turn to the higher authority on a periodic basis. At the level of FD regular monitoring of offence cases, cases in courts of law are regularly pursued and reported upon.
Some evaluation and reporting undertaken but neither systematic nor routine.	Fair			
Systematic evaluation and routine reporting of trends undertaken.	Good ✓			
Systematic evaluation and comprehensive reporting of trends undertaken and attempts made at course corrections as relevant.	Very good			

**Not all TRs attract projects and researchers and with exceptions, little research takes place on the TRs own steam because of systemic limitations. However, monitoring of some critical issues is expected e.g. population of tiger, co-predators and prey with insights into their demography and distribution (some opportunistic sampling by sightings, signs and spatial distribution during assessment would be extremely useful in terms of expert impression and as a pulse), monitoring incidence of livestock grazing, fires, weeds, sources of water, a variety of illegal activities typically associated with the reserve, wildlife health (e.g. epidemics, immunization of livestock) regeneration and change in vegetation, visitors and their activities, offence cases, ex-gratia payments etc. Efforts must be made to assess the planning and implementation of Phase-IV monitoring protocols and the success of implementation of M-Stripes (wherever applicable). Are the 'Sykes and Horill' monitoring plots maintained and data analyzed?*

5.4 Is there a systematic maintenance schedule and funds in place for management of infrastructure/assets?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No systematic inventory or maintenance schedule.	Poor			
Inventory maintenance is adhoc and so is the maintenance schedule.	Fair			
Systematic inventory provides the basis for maintenance schedule but funds are inadequate.	Good ✓			
Systematic inventory provides the basis for maintenance schedule and adequate funds are made available.	Very good			

6. Outcomes

6.1 Are populations of threatened species declining, stable or increasing?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Populations of key threatened/ endangered species are declining.	Poor			STR being a nascent TR, the monitoring protocol on population trends are at a initial stage of implementation. The sampling design in respect of Line-Transect requires further precision as the data so far obtained on animal population trend obtained statistically do not really reflect the proper situation on the ground, i.e., needs further correlation. The man power required for systematic sampling in the STR which is highly undulating is much more than available and requires strengthening.
Some threatened/ endangered species populations declining, some are increasing, and most others are stable.	Fair ✓			
Several threatened/ endangered species populations increasing, most others are stable.	Good			
All threatened/ endangered species populations either increasing or stable.	Very good			

**This needs to practically relate to the natural ecosystem potential rather than being driven merely by numbers and visibility. The assessment score may be elaborated under remarks.*

6.2 Is the population of tigers showing a declining, stable or increasing trend?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Population of tiger is showing a declining trend	Poor		1. TCP 2013-14 to 2022-23 2. Discussion with STR officials. 3. Ir. no. RFO Chandoli/B/monitoring /662/ 2013-14 dated 19 th March 2014. 4. Ir. no. RFO Chandoli /B/monitoring/630 dated 1 st March 2014.	The camera traps had shown 2 tigers in the year 2011. However further camera trap presence of Tiger has not been reported. The STR official however report presence of 2 in Koyana 3 in Chandoli thereby totaling to 5 in STR. It would be advisable to send the pictures of those 2 tigers of 2011 to National Database in order to ascertain whereabouts of these tigers. The STR regularly collects Tiger scats and a set of 93 scats (ref.3) and 148 scats (ref.4) have been sent to WII for further analysis and report.
Population of tiger is stable	Fair ✓			
Population of tiger is showing an increasing trend	Good			
Population of tiger has significantly increased	Very good			

**This assessment should be based in the context of available population estimate (2010-11) and the outcomes of the currently ongoing Phase-IV analyses.*

6.3 Have the threats* to the TR being reduced/ minimized? Or is there an increase?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Threats to the TR have not abated but have enhanced.	Poor		1. CEC letter no in IA 1310/20 10	Mining threat along the South Eastern side of Chandoli NP of STR has been reduced as the mines have been closed mainly due to effect of Madhav Gadgil's report on Western Ghats and Kasturirangan report on Western Ghats. The threat of windmills towards the eastern side of Koyana WLS of STR have been raised along with rest houses etc in the notified area, in the form of a complaint before CEC, who after due examination recommended to the Apex Court vide ref.no.1- as per which a penalty to the tune of approx. 34 crore is recommended to be collected from each of the agency and deposited in the STR foundation, and to be used exclusively for the development of the villages in the STR Buffer. By distribution of LPG, solar lamps, and smokeless
Some threats to the TR have abated, others continue their presence	Fair			
Most threats to the TR have abated. The few remaining are vigorously being addressed	Good ✓			
All threats to the TR have been effectively contained and an efficient system is in place to deal with any emerging situation	Very good			

				challahs amongst the EDC, the ill effects of cutting of forests for fuel wood has reduced. This was explained in the meeting of 5 EDCs in the buffer zone on 30 th April 2014 at Morni in Koyana WLS 450 feral cattle from the precincts of Chandoli NP have been removed successfully and for the removal of balance 100 odd cattle plans are afoot. In order to improve prey base in Chandoli NP, experiments are afoot to translocate spotted deer and sambhar from Rajiv Gandhi Zoo, Pune and Sagareshwar WLS.
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***Does the TR have a Disaster Risk Management Plan to deal with existing as well as emerging threats?**

6.4 Are the expectations of visitors* generally met or exceeded?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Expectations of visitors generally not met.	Poor			The STR is known more for its scenic beauty, forts, and the plateaus. Visitors by and large come to see them. Over the last 3 years a total of 24,756 persons visited STR, averaging about 8000 per year. However with World Heritage Tag and especially the Kas Plateau in the vicinity the numbers could be enhanced. As the EDCs are actively involved in all programmes of STR it offers a good opportunity for improvement of their livelihood as well besides providing opportunity STR interpretation to a large scale of society.
Expectations of many visitors are met.	Fair ✓			
Expectations of most visitors are met.	Good			
Expectations of all most all visitors are met.	Very good			

***What is the compliance status on Supreme Court/ NTCA Guidelines on Ecotourism in TRs?**

6.5 Are local communities supportive of TR management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Local communities are hostile.	Poor		Ir A/Buffer/147 dt 21 st Nov 2012.	By and large since the major part of STR is bereft of inhabitation, and with the ongoing participatory process of rehabilitation for remaining villages, the conduct of the participatory exercise by the ACFs amongst as many as 58 Gram Sabhas elucidating the STR its values scope etc., the comments both in for and against (19) have been duly reported to higher authority by the DFO STR. During the meeting of 5 EDCs at Morani on held on 30 th April 2014, it has been realized that there is a need to have a permanent all weather road passing through upto Valvan Shindi.
Some are supportive.	Fair			
Most locals are supportive of TR management.	Good ✓			
All local communities supportive of TR management.	Very good			

***There could be many reasons for disenchantment. It could be real because of managerial neglect or the managerial efforts could be appropriate but there could be local elements/organizations who would like to keep the disaffection simmering for their own ulterior motives. Likewise success could be entirely because of the efforts of managers or they might be fortunate in striking partnerships with credible NGOs. Assessment may take the prevailing causes into account.**

7. MEE Score Card*

Framework Element Number	Framework Element Name	Number of Criteria (a)	Maximum Mark per question (b)	Total (a x b)	Marks obtained for the Element	Overall MEE Score and % age
1.	Context	04	10	40	32.50	69.35 %
2.	Planning	07	10	70	47.50	
3.	Inputs	05	10	50	35.00	
4.	Process	06	10	60	42.50	
5.	Outputs	04	10	40	27.50	
6.	Outcomes	05	10	50	30.00	
Total		31		310	215.00	

***Efforts will be made by the NTCA-WII-MEE Team to address the issue of assigning 'differential' weightages to the 31 Assessment Criteria including 'normalization'.**

Assessment Criteria for addressing issues relating to Climate Change & Carbon capture in the Tiger Reserves (TRs)

1. *Additional Criteria on Climate Change: Is the TR being consciously managed to adapt to climate change?*

Condition	Category*	(Tick ✓)	Comment/ Explanation	Next Steps
There have been no efforts to consider adaptation to climate change in management	Poor			
Some initial thought has taken place about likely impacts of climate change, but this has yet to be translated into management plans	Fair			
Detailed plans have been drawn up about how to adapt management to predicted climate change, but these have yet to be translated into active management.	Good			
Detailed plans have been drawn up about how to adapt management to predicted climate change, and these are already being implemented	Very good			

***Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

2. *Additional Criteria on Climate Change: Is the TR being consciously managed to prevent carbon loss and to encourage further carbon capture?*

Condition	Category*	(Tick ✓)	Comment/ Explanation	Next Steps
Carbon storage and carbon dioxide capture have not been considered in management of the TR	Poor			
Carbon storage and carbon dioxide capture have been considered in general terms, but has not yet been significantly reflected in management	Fair			
There are active measures in place to reduce carbon loss from the TR, but no conscious measures to increase carbon dioxide capture	Good			
There are active measures in place both to reduce carbon loss from the TR and to increase carbon dioxide capture	Very good			

***Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

Cluster: II

S.No.	Name of Tiger Reserve	Page No.
10	Bandhavgarh Tiger Reserve, Madhya Pradesh	164
11	Satpura Tiger Reserve, Madhya Pradesh	180
12	Kanha Tiger Reserve, Madhya Pradesh	194
13	Panna Tiger Reserve, Madhya Pradesh	211
14	Pench Tiger Reserve, Madhya Pradesh	227
15	Sanjay – Dubri Tiger Reserve, Madhya Pradesh	243

Management Effectiveness Evaluation (MEE) of Bandhavgarh Tiger Reserve

1. Context

1.1 Are the values of the TR well documented, assessed and monitored?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Values not systematically documented, assessed and monitored.	Poor		Draft TCP of Core (Chapters 1 and 2), Management Plan for BTR (Chapter 1)	<p>The TR in the Deccan Peninsular Central Highlands is a diverse mix of habitats supporting a corresponding latitude of fauna. The TR supports threatened species like <i>Cuon alpinus</i>, <i>Vulpus bengalensis</i>, <i>Melursus ursinus</i>, <i>Lutragale perscipillata</i>, <i>Panthera tigris</i>, <i>Panthera pardus</i>, and Python molurs. Chowsingha and Chinkara are also found in the TR. Also, 37 species of mammals, 250 species of birds and more than 100 species of butterfly and many reptiles have been recorded. Floral diversity includes 515 plant species in four forest types. Rare species of plants such as <i>Drosera peltata</i> and Buch (<i>Acorus calamus</i>) are also recorded in the TR.</p> <p>Also, the TR is of great historical significance. Bandhagarh fort, caves, rock paintings (in Panpatha Sanctuary) and carvings (Tala Range) are of important features of cultural and historical values. The area was under shooting range of Rewa State. The TR is a catchment of several perennial rivers viz. Son, Umrar, Janad, Johila and Halpal. There are 13 old tanks created by cutting sandstone rocks on the plateau of Bandhavgarh hillock. These tanks serve as rainwater harvesting structure. Marshes are also conspicuous features in the TR. The marshes, together with meadows (called <i>Wahs</i>) constitute an important ecological niche. The area enjoyed considerable protection under the Baghelkings, it was kept as an exclusive '<i>Shikargah</i>' for the Royal Families and was free from hunting and disturbance. Bandhavgarh hills with its escarpments provide roosting, nesting and perching points for raptors. Bandhavgarh provide rich mix of microhabitats which offers research opportunities to national and regional institutions. Easy sighting of tiger makes it a preferred destination of tourists. It is a crucial portion of a large landscape comprising of Sanjay TR, Guru Ghasidas National Park (in Chhattisgarh) and Palamau TR in Jharkhand.</p> <p>Important ecosystems such as grasslands are being monitored by external agencies (SFRI). Two weather monitoring stations are also run by ISRO. The TR has started monitoring the grasslands and grass herbarium has been prepared.</p> <p>NTCA's observation on TCP mentions strengthening the "Statement of Significance" section reflecting the importance of BTR as a Tiger Source Population.</p>
Values generally identified but not systematically assessed and monitored.	Fair	✓		
Most values systematically identified, assessed and monitored.	Good			
All values systematically identified, assessed and monitored.	Very good			

1.2 Are the threats to TR values well documented and assessed*?

Assessment criteria ⁺				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Threats not systematically documented or assessed.	Poor		TCP Core (Chapter 6, Management Plan of BTR)	The TR has done SWOT analysis to document the threats, which include biotic pressure on the core by 12 villages (Cattle population- 8482, human population-5374), grazing pressure, human-wildlife conflict leading to antagonism with local people, Umaria-Rewa and Umaria-Satna State Highways, passing through 12 km stretch of the TR, MFP collection (96 villages around the Core Zone collect Mahua and Amla in tons), poaching of wildlife (21 poaching cases, 13 in Core (2011-13) and 8 in buffer after July 2013) are some key threats to the TR. Fragmentation of Badhavgarh-Sanjay corridor is also a major threat to the TR. Mining (coal mining) in the areas adjacent to core in Magadhi and Khitauli ranges has also been a recognized threat.
Threats generally identified but not systematically assessed.	Fair			
Most threats systematically identified and assessed.	Good	✓		
All threats systematically identified and assessed.	Very good			

⁺This assessment should be based on number, nature and extent of threats

1.3 Is the 'Core Area' of TR free from human and biotic interference?

Assessment criteria ⁺				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
The 'Core Area' has extensive human and biotic interference.	Poor		TCP – Core (Appendix-68)	The village relocation in the TR started way back in 1978-79. Two villages- Bathan and SanhaTola were relocated during the period. After that, in 2011-13, two more villages Kumarwah-Kalwah and Magdhi forest villages have been relocated. Currently, there are 12 villages in the Core zone of the TR. More than 5000 human and 8000 cattle in these villages are dependent on the resources of the core zone.
The 'Core Area' has some human and biotic interference.	Fair			
The 'Core Area' has little human and biotic interference.	Good	✓		
The 'Core Area' has no human and biotic interference.	Very good			

⁺This assessment should be based on existence of human settlements/ villages inside the core area; livestock grazing, cultivation, encroachments etc, resource extraction/ livelihood dependence of local communities and should reflect the overall interference due to all the above factors. The issue of 'Unified Control' of the 'Core' and 'Buffer' zones under the Field Director would also be taken into account.

1.4 Has the TR complied with the four statutory* requirements?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
None of the four SR, no compliance of Tripartite MoU and three SOPs met	Poor			Core and Buffer areas have been notified, Tiger Conservation Foundation and Steering Committees are constituted at State level. The TCP is not approved. The Draft TCP has been submitted to NTCA, which has suggested changes / modifications in the Plan. Tripartite MoU has been signed but Field Director has been transferred frequently in the last two year. Within 2 years two Field Directors have been transferred. The SOPs have been followed. The SOP issued by the NTCA has been translated in Hindi and distributed upto Dy. Range Officer level.
Two of the four SR, 50% conditions of the Tripartite MoU and SOP complied.	Fair			
Three of the four SR, 75% conditions of the Tripartite MoU and SOPs complied.	Good	✓		
All four SR, 100% conditions of the Tripartite MoU and SOPs complied.	Very good			

⁺Statutory requirements are (1) Legal delineation and notification of Core and Buffer Areas; (2) Establishment of Tiger Conservation Foundation; (3) Development of a Tiger Conservation Plan; and (4) Constitution of a State-level Steering Committee under the Chairmanship of the Chief Minister. TA refers agreement between Field Director, State Government and NTCA. The 3 SOPs are on (i) Straying of Tiger in human dominated landscape, (ii) Tiger Mortality and (iii) Disposal of Carcasses.

2. Planning

2.1 Status of Tiger Conservation Plan (TCP)?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No TCP in place.	Poor		Draft TCP and comments of NTCA on the TCP	The TCP for Core was drafted and submitted to NTCA, on which NTCA has suggested several changes and additions. TCP for Buffer and Corridor areas have not been drafted.
TCP is under preparation	Fair	✓		
TR has a relevant TCP	Good			
TR has a comprehensive and relevant TCP, duly approved by the NTCA.	Very good			

** The scientific content and the participatory processes used in preparation of the TCP will be taken into account in assessing the quality of TCP*

2.2 Does the TR safeguards the threatened biodiversity values?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR does not safeguard the threatened biodiversity values.	Poor		TCP of Core (Chapter 4 and 10), Fire Protection Plan	<p>The TR has taken proactive measures to establish the population of Indian Bison, which got extinct from the TR in 1998. Later, during 2010-12, 50 gaurs were reintroduced in the reserve. Population of the species has gone up to 73 in spite of predation by tiger. Grasslands were managed in a manner to provide fodder to Gaur population (no burning of grasslands in Gaur areas), waterholes development etc were undertaken in re-introduction area. The gaurs have occupied 4 different areas in the TR. The TR has constructed 4 enclosures (3 enclosures of 6 ha each, and one 2 ha) for rearing and training for re-wilding of orphans tiger cubs. Till date, 3 tigers (2 males, 1 female) from these enclosures have been released in the wild (2 in Bandhavgarh TR, 1 male shifted to Satpura TR).</p> <p>Grassland management, de-weeding of unpalatable species like <i>Sida</i>, peripheral removal of brushwood has been undertaken to maintain the grasslands. Soil-moisture conservation works, improvement of water sources, creation of new water points, weed removal, etc have been conducted to maintain the floral and faunal assemblage of the unique ecosystem. The TR has made inventory of grasses in the grasslands.</p> <p>To protect the area from forest fire, proactive measures have been taken by the TR. This has resulted into minor incidences of fire in the last three years.</p> <p>To prevent spread of diseases from livestock to wild populations nearly 38000 cattle have been vaccinated in the recent years.</p> <p>Felling of trees in the reserve especially in buffer is matter of concern. Even resort owners depend upon the firewood brought from forests. Tiger Management must crack it's whip.</p>
TR safeguards a few threatened biodiversity values.	Fair			
TR safeguards a large number of threatened biodiversity values.	Good	✓		
TR safeguards all threatened biodiversity values.	Very good			

**Remarks need to elaborate on the kind of safeguards and how they work or are intended to work*

2.3 Are stakeholders given an opportunity to participate in planning process?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little, if any opportunity for stakeholder participation in planning.	Poor		TCP (Chapter No. 7) and discussion with the TR Officials	<p>The stakeholders identified by the park management comprise of EDCs, Tour operators, Guide association, Taxi Owners Union, Resort Owners, District Administration and NGOs. Meetings with stakeholders are organized and minutes are recorded. The coordination committee is a permanent committee and will continue to meet regularly to address emerging issues. Local Area Committee has been constituted but meetings have not been convened.</p> <p>There are 94 JFM committees including EDCs in the villages established and regular meetings are held for obtaining their feedback on the action plan proposed for implementation under APO.</p> <p>Opportunity is given to stakeholders to participate in planning process.</p> <p>Meetings with NGOs are organized to discuss important action points related to conservation and management in the TR. However, the meeting records were without proceedings, and only the attendance of the participants was recorded.</p>
Stakeholders participate in some planning.	Fair	✓		
Stakeholders participate in most planning processes.	Good			
Stakeholders routinely and systematically participate in all planning processes.	Very good			

*The result of participation must show in the field and not merely reported as a routine exercise.

2.4 Are habitat management programmes systematically planned, relevant and monitored, and contribute effectively to Tiger and other endangered species conservation?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Habitat management programmes are entirely adhoc.	Poor		TCP Core Chapter 7	<p>The thematic planning on Habitat Management of the TR includes Grassland Management, augmentation of water resources, soil & moisture conservation and habitat manipulation. The prescriptions for habitat management include provisions of rotational grazing for wild herbivores, studies on grasses, restocking of grasslands, expansion of grasslands through clearing the grassland areas / patches infested with woody tree species and shrubs. The reserve implements habitat improvement measures which results in improved population of herbivores and carnivores. However, there is no systematic plan of habitat monitoring.</p>
Limited planning and monitoring programmes are in place for habitat management.	Fair	✓		
Habitat management programmes are generally planned and monitored.	Good			
Habitat management programmes are thoroughly planned and monitored.	Very good			

*This assessment should be primarily based on habitat management programmes in relation to habitats for species that are threatened (IUCN categories), are habitat specialists, subjected to seasonal movements, wide ranging with emphasis on the breeding and rearing habitat and may include factors such as food, water, shelter (all connotations). Habitat structure, composition, unique patches of vegetation and sensitive sites, sources of water and their distribution are integral. Corridors within buffer zone are critically important. For example, all riparian habitats. Have these been addressed? Is there a planning process in place? The management practices dealing with invasive species such as Lantana, Michania etc would be examined.

2.5 Does the TR has an effective Protection Strategy (PS)* and Security Plan and Security Audit (SA) in place?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR has little or no PS and SA.	Poor		Indicative TCP (Para No. 11), TCP (Core, Chapter 10) Fire Protection Plan	The management conducts regular patrolling, night patrolling and foot patrolling in the TR. Regular surprise checking of local market and public places is conducted. The TR has constituted Tiger Protection Force (3 units) in the TR comprised of ex-military personnel (6 Jawan + 1 gunman) and local villagers (15 EDC members in one unit). The Force is supervised by respective range officers. The force builds effective intelligence network. The force carries intensive night patrolling throughout the reserve. Local markets are checked on weekly basis to contain trade of wildlife product. For effective protection the TR has established 56 forest patrolling camps at strategic locations. However, there is no written Security Plan for the reserve. In the last three years 14 cases related to wildlife offence were registered, of which complaints for 12 cases have been filed in the court and the cases are pending. Complaints for two cases have not been filed in the court. There is a fire protection plan for the reserve to protect and prevent fire in the TR.
TR has an adhoc PS and SA.	Fair	✓		
TR has a generally relevant PS and SA but is not very effective.	Good			
TR has a comprehensive and very effective PS and SA.	Very good			

**This assessment takes inter-alia into account the nature of threats, the number and location of patrolling camps and foot and mobile patrolling, needs that relate to available manpower, terrain difficulties, practicability of area coverage, readiness to contain specific threats with necessary support and facilities. The constitution and functioning of Special Tiger Protection Force (STPF), Number of offences reported, arrests made, prosecution initiated and conviction achieved will be taken into account.*

2.6 Has the TR been effective in the mitigation of human-wildlife conflicts?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Human-wildlife conflicts are significant but poorly addressed.	Poor		Document submitted by TR, TCP (Chapter 5.4)	To reduce human-wildlife conflict interface of Core areas in Tala and Kalwah ranges are completely fenced by chain link. In Magdhi, 30% of the perimeter of core area is fenced and 10% of the core area in Khitaulirange is fenced. In rest of the areas CPT has also been created. The HW conflict is an account of injury and damage caused to the villagers by tiger, leopard, bear, wolf and jackal. During the year 2011-14, 6 cases of human deaths have been reported. Injury during the period was 185, while the period recorded 2111 cattle killing cases. All conflict cases have been compensated. The compensations have been paid promptly as per the guidelines (MP LokSeva Guarantee Adhiniyam, 2010) The instances of crop raiding are not included as the compensation is paid by revenue department. Fences have been erected in strategic stretches to reduce the crop-raiding instances. Families in many villages are found to be agitated for delay in payment of crop compensation. Forest Department must move state Government for restoring that power with them.
TR has been able to mitigate few human-wildlife conflicts.	Fair			
TR has been able to mitigate many human-wildlife conflicts.	Good	✓		
TR has been effective in mitigating all human-wildlife conflicts.	Very good			

** The assessment will take into account the number of incidences reported and payment of compensation made and its timelines.*

2.7 Is the TR integrated into a wider ecological network/ landscape following the principles of the ecosystem approach?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR not integrated into a wider network/ landscape.	Poor		Documents provided by the TR	Bandhavgarh TR lies between two PAs: Kanha Tiger Reserve in the southern side and Sanjay National Park in north-eastern side. The TR is a major source population to replenish wild animals in the Corridor Area in between these protected areas. The forest area of this corridor is administered by various forest divisions. The connectivity is fragmented, and requires planned measures to be implemented to make these corridors viable. No specific measures have been taken / prescribed for strengthening these corridors. This might be done in the TCP of the Corridor Areas.
Some limited attempts to integrate the TR into a network/ landscape.	Fair	✓		
TR is generally quite well integrated into a network/ landscape.	Good			
TR is fully integrated into a wider network/ landscape.	Very good			

***Assessment needs to consider the scope of opportunities on the landscape scale that exist. Consider whether any attempts have been made and what are these? Have all the important corridors been identified? What actions are planned / implemented for their security? Have the Forest Working Plans and Forest Development Corporation Plans within the identified landscapes taken cognizance of such new requirement? These should have been reflected in TCPs. Is there any effort to rationalize landuse around TR? Is any effort being made to plan and use 'Smart Green Infrastructure'?**

3. Inputs

3.1 Are personnel adequate, well organized and deployed with access to adequate resources in the Tiger Reserve (TR)?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Few, personnel explicitly allocated but poorly supported for TR management.	Poor		Documents provided by the TR	The TR is managed by permanent as well as contractual manpower. In the TR, sanctioned posts of various levels of staff are as follows; ACF:6, RFO : 14 (vacant-2), Dy. Ranger: 13 (vacant-2), Forester: 45 (vacant-4), Forest Guard: 164 (Vacant-44), Godown keeper:1, Mahavat: 12 (Vacant-11), Chara cutter:12, Head Clerk:1, Steno:1, Accountant:1 (Vacant-1), Accounts Superintendent:1 (vacant-1), UDC:3, LDC:5 (vacant-1), Asst. Draftsman:1, Drive :6 (vacant-3), Wireless operator:1, Wireless technician:1, Peon:9, Daftari:1, Veterinary Officer:1. Also 90 seasonal labours are deployed for fire protection for 4 months. To conduct monsoon patrolling 93 additional workers are provided for 4 months. Due to vacancy in positions, there is a shortage of staff. The staff are well aware about their duties and responsibilities and are deployed based on strategic planning considering the requirement to meet the emerging threats. The staffs have been provided with adequate equipment to effectively carry out their duties. There are 71 beats in core area and 68 beats in the buffer area. There are 96 patrolling camps in core zone. There is no patrolling camp in the buffer
Some personnel explicitly allocated for TR management but not adequately supported and systematically linked to management objectives.	Fair			
Some personnel with fair support explicitly allocated towards achievement of specific TR management objectives.	Good	✓		
Adequate personnel appropriately supported and explicitly allocated towards achievement of specific TR management objectives.	Very good			

***Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

				zone. The beats and patrolling camps are well equipped. Range headquarters have arms (50), range finders (72), compass (78), camera trap (198), camera (154), binoculars (75), metal detector (8), solar lights (101), GPS (78) etc. All patrolling camps and forest ranges are provided with first-aid box (186). The veterinary wing is equipped with tranquilizing guns (2) and other equipment and supplies necessary to deal with wildlife cases.
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***This assessment should inter-alia be based on number of personnel allocated for attainment of TR objectives at the Range , Round, Beat and Patrolling camps levels or as relevant to the needs (sanctioned posts vis- a- vis existing personnel and needs beyond the sanctioned strengths. It is possible that posts have last been sanctioned several years back that do not now account for the current needs)**

3.2 Are resources (vehicle, equipment, building etc.) adequate, well organized and managed with desired access?

Assessment criteria ⁺				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Few, if any, resources explicitly allocated for TR management.	Poor		Document provided by TR.	Vehicles (30 four- wheelers, and 42 two wheelers), fire arms (50), wireless sets (24 fixed sets, 22 vehicle set and 297 working hand sets), GPS (78), camera trap (198), camera (154), range finders (72), binoculars (75) have been provided to the staff manning the core zone. However, no such facility is available to the staff in recently transferred buffer zone, which has been under unified control of the TR since July 2013. It is important to mention that the wireless provider companies are not coming up for replacement of the sets. It is learned that they have not the licence of competent authorities. There are 298 buildings including the accommodation, offices and patrolling camps. However, 9 patrolling camps located in core zone are in temporary structure. In buffer, there is no patrolling camp. But, 5 Van-Chowkis have been constructed recently. The buildings are well maintained and have been put to desired use. The buildings are inadequate, especially in buffer zone to serve the purpose of achieving the management objectives.
Some resources explicitly allocated for TR management but not systematically linked to management objectives.	Fair			
Some resources explicitly allocated towards achievement of specific TR management objectives.	Good	✓		
Adequate resources explicitly allocated towards achievement of specific TR management objectives.	Very good			

***Assessment: These form a variety of resources. These may be segregated into immovable (structures) and movable categories and each further may be considered under the essential and desirable categories. It is best to start with what are the minimum needs to attain each objective, what is available and manner of use/deployment. The proportions of the 'essentials' and 'desirables' along the importance gradient of objectives would serve as pointers for score categories. Specific remarks would be vitally important.**

3.3 Are financial resources other than those of the State linked to priority actions and are funds adequate, released timely and utilized?

Released timely and utilized

Assessment criteria*																			
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks															
Resource allocation is adhoc, funds are inadequate and seldom released in time and not utilized.	Poor		Records maintained and produced by FD office.	Funds allocated by NTCA in the last three years is as below; <table><tr><th>Year</th><th>Allotment</th><th>Expenditure</th></tr><tr><td>2011-12</td><td>2594.233</td><td>2593.938</td></tr><tr><td>2012-13</td><td>576.958</td><td>409.670</td></tr><tr><td>2013-14</td><td>455.09</td><td>455.08</td></tr><tr><td colspan="3">Amount is in Rs. Lakh.</td></tr></table>	Year	Allotment	Expenditure	2011-12	2594.233	2593.938	2012-13	576.958	409.670	2013-14	455.09	455.08	Amount is in Rs. Lakh.		
Year	Allotment	Expenditure																	
2011-12	2594.233	2593.938																	
2012-13	576.958	409.670																	
2013-14	455.09	455.08																	
Amount is in Rs. Lakh.																			
Some specific allocation for management of priority action. Funds are inadequate and there is some delay in release, partially utilized.	Fair																		
Comprehensive planning and allocation that meets the most important objectives. Generally funds released with not much delay and mostly utilized.	Good	✓																	
Comprehensive planning and allocation of resources for attainment of most objectives. Funds generally released on-time and are fully utilized.	Very good																		

**Obtain details of funds released by NTCA and their utilization by TR in the last 3 years and indicate them under 'Remarks'. Also comment on the problems associated with funds allocations and their utilization.*

3.4 Are financial resources from the State linked to priority action and funds adequate, timely released and utilized for the management of Tiger Reserve?

utilized for the management of Tiger Reserve.

Assessment criteria*																
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks												
Resource allocation is adhoc, funds are inadequate and seldom released in time and not utilized.	Poor		Submissions by the TR.	Fund allocated by the state government (Plan) in the last three years is given below;												
				<table><tr><th>Year</th><th>Allotment</th><th>Expenditure</th></tr><tr><td>2011-12</td><td>17.34</td><td>17.29</td></tr><tr><td>2012-13</td><td>127.546</td><td>117.46</td></tr><tr><td>2013-14</td><td>269.404</td><td>258.72</td></tr></table>	Year	Allotment	Expenditure	2011-12	17.34	17.29	2012-13	127.546	117.46	2013-14	269.404	258.72
Year	Allotment	Expenditure														
2011-12	17.34	17.29														
2012-13	127.546	117.46														
2013-14	269.404	258.72														
			Amount in Rs. Lakh													
			Apart from the state plan fund, the tiger reserve also received grant under 13 th Finance Commission to undertake activities in Core Area of the TR.													
			<table><tr><th>Year</th><th>Allotment</th><th>Expenditure</th></tr><tr><td>2012-13</td><td>93.58</td><td>93.51</td></tr><tr><td>2013-14</td><td>75.12</td><td>75.12</td></tr></table>	Year	Allotment	Expenditure	2012-13	93.58	93.51	2013-14	75.12	75.12				
Year	Allotment	Expenditure														
2012-13	93.58	93.51														
2013-14	75.12	75.12														
			Amount in Rs. Lakh													
Some specific allocation for management of priority action. Funds are inadequate and there is some delay in release, partially utilized.	Fair															
Comprehensive planning and allocation that meets the most important objectives. Generally	Good															

***Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

funds released with not much delay and mostly utilized.				The requirement of fund for meeting all the expenditure relating to works as per the Management Plan and APO in core as well as in buffer areas is not fully allotted, thus the management has to undertake only few items of works and exclude the remaining from implementation.
Comprehensive planning and allocation of resources for attainment of most objectives. Funds generally released on-time and are fully utilized.	Very good	✓		

***Obtain details of funds released by NTCA and their utilization by TR in the last 3 years and indicate them under 'Remarks'. Also comment on the problems associated with funds allocations and their utilization.**

3.5 What level of resources are provided by NGOs?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
NGOs contribute nothing for the management of the TR.	Poor		Tiger Reserve records	The TR receives support from NGOs. The supports are routed through MP Tiger Foundation Society. The major funding is from WCT. The organization provided support in terms of kinds (Solar Integrated System: 140; Solar power generation system: 10; Solar camp light with helmet: 60; anti-poaching equipment: 60; fiber chair: 632; digital camera: 151; GPS: 139; mosquito net: 648; hunter shoes: 648; winter jacket: 648; blanket: 648; Syntax tank: 134; Cycle: 692; Bolero camper: 2; First-aid kit: 172; Metal detector: 8 etc). Apart from these items the organization has also provided anti-poaching equipment and helped in equipping the protection camps and frontline staff. The contributions are systematically sought by the TR management for various tiger reserve level activities.
NGOs make some contribution to management of the TR but opportunities for collaboration are not systematically explored.	Fair			
NGOs contributions are systematically sought and negotiated for the management of some TR level activities.	Good			
NGOs contributions are systematically sought and negotiated for the management of many TR level activities.	Very good	✓		

4. Process

4.1 Does the TR have manpower resources trained in wildlife conservation for effective TR management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No trained officers and frontline staff in the TR.	Poor		Submissions made by the TR	PG Diploma trained (WII): Out of 8, only one official has received PG Diploma in WL. Certificate Course (WII): out of 23 rangers and dy. ranger, none has done Certificate Course. However, veterinarian posted in the reserve has got Certificate in Wildlife Management by WII. Out of 162 forester and forest guards, 146 have done short term in-house courses on wildlife crime, rescue operation, wildlife habitat management and fire protection during their training period.
Some trained officers and few trained frontline staff, posted in the TR.	Fair	✓		
All trained officers and fair number of trained frontline staff posted in the TR.	Good			
All trained officers and most of the trained frontline staff is posted in the TR.	Very good			

***Indicate % of trained staff in various categories. The number and thematic areas of the 'Internal Training' programmes organized in the TR in the last 3 years may be taken into account. Has the TR prepared a 'Staff Development Plan'? It is being implemented?**

4.2 Is TR staff management performance linked to achievement of management objectives?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No linkage between staff management performance and management objectives.	Poor		Documents submitted by the TR	The TR staff role and responsibilities are documented generally in the Forest Manual. In the monsoon protection and fire control management plans (which are prepared annually), clear cut works are allotted to the staff involved in work. Also, a monthly schedule with duty-chart for all staff is issued in advance on monthly basis for patrolling and protection related activities at various level of management. The annual work plans are in consonance of the management objectives.
Some linkage between staff management performance and management objectives, but not consistently or systematically assessed.	Fair			
Management performance for most staff is directly linked to achievement of relevant management objectives.	Good	✓		
Management performance of all staff is directly linked to achievement of relevant management objectives.	Very good			

4.3 Is there effective public participation in TR management and does it show in making a difference?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no public participation in TR management.	Poor		TCP and document submitted by the TR.	The Bandhavgarh TR has provided moderate opportunity for public participation in wildlife conservation and management, eco-development activities and habitat improvement works. During interaction with stakeholders, it was alleged by some EDC Presidents that funds are not provided to them for improving the livelihood options of families in the village. Accordingly the dependencies of these families and their cattle on forests have not come down. It is advised to see that eco-development activities are planned and implemented. If the livelihood options are provided then the dependency of fringe villages on the forests of core and buffer will reduce. Local Advisory Committee has also been constituted with representative from various departments and public representative for the purpose of regulating tourism. At the grassroots level there are 166 EDCs. Microplans of the EDCs are not updated since 2002-03. Other groups involved in the management of the TR include; Hotel and Resort Association, Gypsy Owners' Association, Gypsy Drivers Association, and Guides Association. Resort owners use firewood brought from forests illicitly.
Opportunistic public participation in some of the relevant aspects of TR management.	Fair			
Systematic public participation in most of the relevant aspects of TR management.	Good	✓		
Comprehensive and systematic public participation in all important and relevant aspects of TR management.	Very good			

* The involvement of NGOs / NGLs in population estimation may be taken into account.

4.4 Is there a responsive system for handling complaints and comments about TR management?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Ad-hoc approach to handling complaints.	Poor		Data provided by the TR management	The TR maintains Complaint Register in all its offices. Similar register is maintained at tourism facility centres like Entry Gate, Rest Houses and Interpretation Centres. In the last three year, 33 complaints were made of which all except 5 are disposed off. There is a system for redressal of complaints. During the period, 98 RTI applications related to the TR were received, of which all except 16 have been disposed off.
Complaints handling system operational but not responsive to individual issues and with limited follow up.	Fair			
Coordinated system logs and responds effectively to most complaints.	Good	✓		
All complaints systematically logged in coordinated system and timely response provided with minimal repeat complaints.	Very good			

* Does the TR maintain 'Suggestion Register'? What actions are taken to deal with suggestions?

4.5 Does TR management addresses the livelihood issues of resource dependent communities, especially of women?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No livelihood issues are addressed by TR management.	Poor		Records provided by the TR management	The TR management addresses the issues pertaining to livelihood of resource dependent people through Eco-development committees by employing the people through these committees and providing skill enhancement training for generating additional employment opportunities. The payments to the beneficiary are made through the EDCs. Currently there are 145 EDCs in the fringe villages. In the last three years (2011-14), 7.5 lakh man-days were generated by the TR. In the peripheral resorts, employment is given to local communities. The local economy is dependent on the TR. The Gypsy Owners, drivers and guides are also recruited locally. Under Skill Enhancement Program (Kaushal Unnayan Yojana) of the state government, 300 people were trained, of which 220 men were trained for Security Guards and 80 women were trained in Stitching and Tailoring.
Few livelihood issues are addressed by TR management.	Fair			
Substantial livelihood issues are addressed by TR management.	Good	✓		
Livelihood issues of resource dependent communities especially of women are addressed effectively by TR managers.	Very good			

* The number of man days generated in the last three years may be taken into account. Are funds received from District Agencies and other sources? Provide details of funds received in last 3 years.

4.6 Has the TR planned and implemented the voluntary 'Village Relocation' from the Core/ Critical Tiger Habitat (CTH)?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No planning and no implementation	Poor		Documents related to Village Relocation	There were 14 villages inside the Core / Critical Tiger Habitat (6 in NP and 8 in Sanctuary). In the NP, two villages have been relocated and 2 are under process. However, the TR management has submitted a comprehensive plan for relocation of all villages from the Core/Critical Tiger Habitat.
Plans have been made but no implementation	Fair			
Plans have been made and some implementation is in progress	Good	✓		
Plans have been made and are being actively implemented / no human habitation in the CTH	Very good			

*Assessment will look into the village relocation planning process including availability of manpower, financial resources and NGO support, if any. Is there a mechanism to address the complaints received in respect to relocation process? Effort must be made to assess post relocation success or otherwise.

5. Output

5.1 Is adequate information on TR management publicly available?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no information on TR management publicly available.	Poor		Submissions by the TR management	The TR has no exclusive website. However, the MP forest department website provide interface with the common public. The TR has developed few brochures. Several films have been produced by many organizations in the past, highlighting the wildlife glories of the TR. Nature Interpretation Centre at Tala provides an opportunity to the visitors to get exposed to the wildlife values on the TR. Issues of the TR are also shared with the print and electronic media on regular basis.
Publicly available information is general and has limited relevance to management accountability and the condition of public assets.	Fair	✓		
Publicly available information provides detailed insight into major management issues and condition of public assets.	Good			
Comprehensive reports are routinely available in public domain on management and condition of public assets.	Very good			

5.2 Are visitor services and facilities appropriate and adequate?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Visitor services and facilities do not exist.	Poor		TCP Core Chapter 11 and document submitted by the TR	Tala is the main tourist facility centre for the TR. There are 4 rooms in FRH at Tala, 4 family suits and 5 log huts with a total number of 30 beds. Apart from the FRHs, more than 70 resorts are situated near Tala and within 10 km of radius of Tala, which provides accommodation to 1280 people at a time. The TR provides additional facilities to the visitors like; Interpretation Centre, vehicle excursion, animal sightings from elephant back. Also, there are public conveniences in all the three tourism zone Potable drinking water, cafeteria and other basic facilities are adequately provided. Facilities for online booking for park visit exists (mponline.org/forest). The guides and in-charge / facilitators at interpretation centres are trained on regular interval.
Visitor services and facilities are very basic.	Fair			
Visitor services and facilities are monitored from time to time and are fairly effective.	Good			
Visitor services and facilities are conscientiously maintained, regularly upgraded and monitored for visitor satisfaction	Very good	✓		

**Include the existence and quality of visitor and interpretation centers, including skills and capabilities of personnel manning these, TR related publications, films, videos; arrangements of stay (including places serving refreshments and food owned and managed by TR), watch towers and hides including safety factors, vehicles assigned for visitors including riding elephants, if any and their deployment, drinking water, rest rooms, garbage disposal, attended and self guided services in the field, visitor feedback on the quality of wilderness experience.*

5.3 Are research/ monitoring related trends systematically evaluated and routinely reported and used to improve management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no systematic evaluation or routine reporting of trends.	Poor		TCP Core Chapter 8 & 9.	<p>The TR has set Managerial Priorities for conducting research and monitoring in the next 10 years.</p> <p>The TR is implementing Phase-IV monitoring on their own and also collecting six monthly data on prey abundance. PIPs laid in different parts of the Reserve are regularly monitored. In the recent years the TR has actively implemented re-introduction of Gaur in collaboration with WII. SFRI is conducting researches on Grassland composition, ecology and impact of management interventions.</p> <p>Epidemiology of domestic livestock are well documented which helps in taking preventive measures. Last year cattle immunization was done in 100 surrounding villages and 34588 cattle were vaccinated against HS, BQ and FMD.</p> <p>After getting the alert from NTCA on Canine distemper, the TR took proactive initiative actions and collected blood samples of 60 dogs in Core and Buffer areas. The samples were sent to IVRI, Bareilly. The result show that out of 30 analyzed sample, 18 cases were found positive. Based on the findings of the researches, the TR makes mid-course corrections in management strategies.</p>
Some evaluation and reporting undertaken but neither systematic nor routine.	Fair			
Systematic evaluation and routine reporting of trends undertaken.	Good	✓		
Systematic evaluation and comprehensive reporting of trends undertaken and attempts made at course corrections as relevant.	Very good			

***Not all TRs attract projects and researchers and with exceptions, little research takes place on the TRs own steam because of systemic limitations. However, monitoring of some critical issues is expected e.g. population of tiger, co-predators and prey with insights into their demography and distribution (some opportunistic sampling by sightings, signs and spatial distribution during assessment would be extremely useful in terms of expert impression and as a pulse), monitoring incidence of livestock grazing, fires, weeds, sources of water, a variety of illegal activities typically associated with the reserve, wildlife health (e.g. epidemics, immunization of livestock) regeneration and change in vegetation, visitors and their activities, offence cases, ex-gratia payments etc. Efforts must be made to assess the planning and implementation of Phase-IV monitoring protocols and the success of implementation of M-Stripes (wherever applicable). Are the 'Sykes and Horill' monitoring plots maintained and data analyzed.**

5.4 Is there a systematic maintenance schedule and funds in place for management of infrastructure/assets?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No systematic inventory or maintenance schedule.	Poor		Records of TR, TCP Core Chapter 3 and 24.	<p>There are adequate funds for maintenance of vehicle, equipment, buildings and other assets and infrastructure. In addition, the park also raised Rs. 5 to 6 Crore (VikashNidhi) annually through tourism. The amount can meet emergency expenditure, even when the release under other heads is not made timely. Finally when the money is released the amount is re-paid to VikashNidhi.</p> <p>The TR maintains building registers, patrolling camp registers, equipment registers, equipment store registers and has drawn a maintenance schedule so that regular maintenance are carried out.</p>
Inventory maintenance is adhoc and so is the maintenance schedule.	Fair			
Systematic inventory provides the basis for maintenance schedule but funds are inadequate.	Good			
Systematic inventory provides the basis for maintenance schedule and adequate funds are made available.	Very good	✓		

6. Outcomes

6.1 Are populations of threatened species declining, stable or increasing?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Populations of key threatened / endangered species are declining	Poor		TR Census Record, TR monitoring report	The TR has threatened species like Chowsingha, whose population is said to be stable. And, population of Gaur have improved after re-introduction. Virmani (2014) reported 71 vulture nests in the Bandhavgarh fort in 2014. The figure shows an increasing trend over a period of last few years. In the recent years no census figures for leopard are available.
Some threatened/ endangered species populations declining, some are increasing, most others are stable.	Fair			
Several threatened/ endangered species populations increasing, most others are stable.	Good	✓		
All threatened/ endangered species populations either increasing or stable.	Very good			

*This needs to practically relate to the natural ecosystem potential rather than being driven merely by numbers and visibility. The assessment score may be elaborated under remarks.

6.2. Is the population of tigers showing a declining, stable or increasing trend?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Populations of tiger is showing a declining trend	Poor		Phase IV monitoring report	The estimated tiger population in 2009-10 was 59. As per the latest Phase –IV monitoring only in National Park area, 57 tigers have been photographed. Based on the trend, it can be inferred that there would be a significant increase in tiger number in TR. However, in the last three years 12 tiger have died in the tiger reserve, some of these deaths have occurred due to infighting. It is important to work out the reasons of such infighting cases. However some of tiger deaths is due to electrocution.
Population of tiger is stable	Fair			
Population of tiger is showing an increasing trend	Good			
Population of tiger has significantly increased	Very good	✓		

* This assessment should be based in the context of available population estimate (2010-11) and the outcomes if the currently ongoing Phase-IV analyses

6.3 Have the threats* to the TR being reduced / minimized? Or is there an increase?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Threats to the TR have not abated but have enhanced.	Poor		Documents provided by the TR	In the recent years, cases of tiger deaths due to electrocution have been reported outside the TR. The threat could be minimized by regular patrolling resulting into zero death of tiger in the last one year. However, immediately after our visit it is learnt that a tiger got electrocuted. Relocation of two villages has resulted in removal of anthropogenic disturbance from core/ critical tiger habitat. Among the unwanted weeds, Phoenix and Lantana are increasing. However, it is reported that the Lantana bushes are utilized by tiger for littering, thus removal of lantana is not practiced in the TR. Attempts were made to eradicate <i>Sida</i> , <i>Ageratum</i> and <i>Van tulsi</i> from the grasslands. There has been no incidence of disease reported in the TR. The TR management is addressing the critical threats. There is no disaster management plan for the reserve.
Some threats to the TR have abated, others continue their presence	Fair	✓		
Most threats to the TR have abated. The few remaining are vigorously being addressed	Good			
All threats to the TR have been effectively contained and an efficient system is in place to deal with any emerging situation	Very good			

* Does the TR have a Disaster Risk Management Plan to deal with existing as well as emerging threats?

6.4 Are the expectations of visitors' generally met or exceeded?

Assessment criteria ⁺				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Expectations of visitors generally not met.	Poor		Feedback / suggestion registers and visitors book, TCP Core Chapter – 11.	On perusal of comments of visitors on the Visitors Book, it is found that expectations of visitors are met and they are found to be quite satisfied. The visitors in Bandhavgarh are fully satisfied due to better chances of tiger sightings. As per the Tourism map provided by the TR 206.25 sq. km. (28.73% of the core zone) is earmarked for tourism in the core zone, which is contrary to the guidelines of the NTCA. The TR is not sure about the method of calculation of the area opened for tourism purposes. The carrying capacity has been worked out as per the guidelines as computed in the TCP (Chapter 11 TCP Core). As per the calculation, currently, 111 (56 in morning and 55 in evening), vehicles are allowed in the tourism zone on daily basis.
Expectations of many visitors are met.	Fair			
Expectations of most visitors are met.	Good			
Expectations of all most all visitors are met.	Very good	✓		

⁺ What is the compliance status on Supreme Court / NTCA Guidelines in Ecotourism in TRs.

6.5 Are local communities supportive of TR management?

Assessment criteria ⁺				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Local communities are hostile.	Poor		Interaction with the TR management and EDC representatives	The local community is supportive of the TR management due to various reasons such as; a. Cultural bonding of villagers with Tiger. Bagheshwar (deity resembling tiger) is worshiped in the villages. b. Regular interaction of TR management with the villagers. c. Tourism and NGO sector often work as bridge in case of any resentment. d. Timely compensation of cattle depredation losses as per the MP Public Service Guarantee Act, 2010. The villagers complained that crop depredation compensation is not paid. The revenue department is the nodal agency to assess and compensate the losses. This results in resentment among the villagers.
Some are supportive.	Fair			
Most locals are supportive of TR management.	Good	✓		
All local communities supportive of TR management.	Very good			

⁺There could be many reasons for disenchantment. It could be real because of managerial neglect or the managerial efforts could be appropriate but there could be local elements/organizations who would like to keep the disaffection simmering for their own ulterior motives. Likewise success could be entirely because of the efforts of managers or they might be fortunate in striking partnerships with credible NGOs. Assessment may take the prevailing causes into account.

7. MEE Score Card⁺

Framework Element Number	Framework Element Name	Number of Criteria (a)	Maximum Mark per question (b)	Total (a x b)	Marks obtained for the Element	Overall MEE Score and % age
1	Context	4	10	40	27.5	72.58
2	Planning	7	10	70	40	
3	Inputs	5	10	50	42.5	
4	Process	6	10	60	42.5	
5	Outputs	4	10	40	32.5	
6	Outcomes	5	10	50	40	
Total		31		310	225	

**Efforts will be made by the NTCA-WII-MEE Team to address the issue of assigning 'differential' weightages to the 31 Assessment Criteria including 'normalization'.*

Management Effectiveness Evaluation (MEE) of Satpura Tiger Reserve

1. Context

1.1 Are the values of the TR well documented, assessed and monitored?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Values not systematically documented, assessed and monitored.	Poor		Chapter-1.3 of the TCP (Core) and Chapter 1.5 of the TCP (Buffer)	<p>The values of the area have been elaborately documented. The TR is comprised of large ecologically contiguous habitats of 12700 sq. km. which are known for rich biological diversity. It has large number of rare and endemic plant species, especially bryophytes and pteridophytes and has a transition zone of sal and teak forest in the Pachmarhi plateau.</p> <p>The TR has very strong cultural values of archaeological and anthropological significance which comprises of 50 rock shelters with beautiful paintings.</p> <p>The landscape is formed of sandstone and represents the Damodar series, and is of vast geological significance. This landscape also has important ethnographical attributes and is land of Gonds and Korkus, most primitive forest tribes of the region.</p> <p>The values are assessed and monitored systematically over the years in the Tiger Reserve.</p>
Values generally identified but not systematically assessed and monitored.	Fair			
Most values systematically identified, assessed and monitored.	Good	✓		
All values systematically identified, assessed and monitored.	Very good			

1.2 Are the threats to TR values well documented and assessed*?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Threats not systematically documented or assessed.	Poor		Chapter 5.3 of TCP (Core) and para 10.6.4. of TCP (Buffer). Threats have also been mentioned in para 2.6.3 of TCP (Core).	<p>The threat were identified and assessed by SWOT analysis and comprises of biotic pressure from 29 villages in the core and 26 villages in the buffer.</p> <p>Cattle grazing pressure assessed in the Core Area of 15133 ha is 16621 Cattle Units, while number of cattle in Buffer is around 19000.</p> <p>Cultivation of land in draw down area by the communities is other key threat. About 70% of the tiger reserve area is infested by weeds.</p> <p>Large exodus of pilgrims in Pachmarhi leading to pressure on the scarce resources.</p>
Threats generally identified but not systematically assessed.	Fair			
Most threats systematically identified and assessed.	Good	✓		
All threats systematically identified and assessed.	Very good			

*This assessment should be based on number, nature and extent of threats

1.3 Is the 'Core Area' of TR free from human and biotic interference?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
The 'Core Area' has extensive human and biotic interference.	Poor		Documents provided by the TR	The TR has relocated 14 human settlements, which were causing the biggest threat inside the Core area. However, it has yet to relocate 29 settlements, which are dependent on the biomass resource of the TR. Human population in the remaining villages of Core Zone of the tiger reserve is 9281. Altogether, 16621 Cattle Units are exerting pressure on the biomass resources of the core area. Cultivation of the draw down areas is very minimal and does not cause significant disturbance to the area. The unified control of the core and buffer with the Field Director has improved the management of this large landscape.
The 'Core Area' has some human and biotic interference.	Fair	✓		
The 'Core Area' has little human and biotic interference.	Good			
The 'Core Area' has no human and biotic interference.	Very good			

*This assessment should be based on existence of human settlements/ villages inside the core area; livestock grazing, cultivation, encroachments etc, resource extraction/ livelihood dependence of local communities and should reflect the overall interference due to all the above factors. The issue of 'Unified Control' of the 'Core' and 'Buffer' zones under the Field Director would also be taken into account.

1.4 Has the TR complied with the four statutory* requirements?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
None of the four SR, no compliance of Tripartite MoU and three SOPs met	Poor		1. Core/Critical notification: Govt. of MP notification no. F-15-31-2007 dated 24.07.2007 (Core) and F-15-20/2010/10-2 dated 3.1.2011 (Buffer) 2. Tiger Conservation Foundation registration document	<ul style="list-style-type: none"> The legal delineation and notification of core and buffer areas has been done. The MP Government has established a MP Tiger Foundation Society which covers all the tiger reserve of the state (Registered on 15.01.1997 under Societies Registration Act). However, there is no Park level foundation. State level steering committee has been constituted, but its meeting has not taken place. Tripartite MoU has been signed The three SOPs have been followed and there has been no tiger mortality in the last 2 years
Two of the four SR, 50% conditions of the Tripartite MoU and SOP complied.	Fair			
Three of the four SR, 75% conditions of the Tripartite MoU and SOPs complied.	Good	✓		
All four SR, 100% conditions of the Tripartite MoU and SOPs complied.	Very good			

*Statutory requirements are (1) Legal delineation and notification of Core and Buffer Areas; (2) Establishment of Tiger Conservation Foundation; (3) Development of a Tiger Conservation Plan; and (4) Constitution of a State-level Steering Committee under the Chairmanship of the Chief Minister. TA refers agreement between Field Director, State Government and NTCA. The 3 SOPs are on (i) Straying of Tiger in human dominated landscape, (ii) Tiger Mortality and (iii) Disposal of Carcasses.

2. Planning

2.1 Status of Tiger Conservation Plan (TCP)?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No TCP in place.	Poor		Tiger Conservation Plan (Core, buffer and Corridor) for Satpura TR (2008-09 to 2017-18)	The TCP is approved by the Government of Madhya Pradesh and it was submitted to NTCA which has given its observation vide letter no. 1-22/2009-NTCA dated 28.06.2013. Modification has to be carried out accordingly by the Tiger Reserve management.
TCP is under preparation	Fair	✓		
TR has a relevant TCP	Good			
TR has a comprehensive and relevant TCP, duly approved by the NTCA.	Very good			

*** The scientific content and the participatory processes used in preparation of the TCP will be taken into account in assessing the quality of TCP**

2.2 Does the TR safeguards the threatened biodiversity values?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR does not safeguard the threatened biodiversity values.	Poor		Documents provided by the TR	To make the Core Zone inviolate, 14 villages have been relocated which has resulted into evacuation of 2309 ha forest land .Despite some villagers have left behind their domestic cattle , the evacuated area are being ecologically rehabilitated. Relocation of villages also resulted into reduction in cattle heads depending on the reserve. Extensive removal of weeds followed by regular mopping in several thick weed infested areas has taken place and is continuing. There are 130 well established anti-poaching camps with all infrastructural facilities and this ensures continuous protection of the area and the rich biodiversity. The TR clears fire-lines and fire fighting squads are deployed in vulnerable locations to extinguish fire and there has been no major incidence of fire in the recent years. Pressure of religious pilgrims to Pachmarhi continues but TR has initiated several measures to limit this pressure which includes strict adherence to the guidelines during the <i>Mela</i> . No permission is given to set-up permanent facilities inside core zone and regular cleaning of waste generated during the Mela period is done.
TR safeguards a few threatened biodiversity values.	Fair			
TR safeguards a large number of threatened biodiversity values.	Good	✓		
TR safeguards all threatened biodiversity values.	Very good			

***Remarks need to elaborate on the kind of safeguards and how they work or are intended to work**

2.3 Are stakeholders given an opportunity to participate in planning process?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little, if any opportunity for stakeholder participation in planning.	Poor		Document provided by the TR	The stakeholders of the TR including the communities residing in the villages, the NGOs, tourists, tourist resorts, travel operators and researchers have been consulted by the TR in planning the protection strategies, habitat amelioration works near the villages, employment rolls for the youths of the villages, regulation of tourism by the resorts, and consultation with the researchers (Grassland Management). Revenue department has been consulted for relocation and rehabilitation of villages.
Stakeholders participate in some planning.	Fair			
Stakeholders participate in most planning processes.	Good	✓		
Stakeholders routinely and systematically participate in all planning processes.	Very good			

***The result of participation must show in the field and not merely reported as a routine exercise.**

2.4 Are habitat management programmes systematically planned, relevant and monitored, and contribute effectively to Tiger and other endangered species conservation?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Habitat management programmes are entirely adhoc.	Poor		TCP (Core) Chapter 6 & 7	Habitat amelioration and management plan is for improvement of the wetlands and other important habitats. In the wetlands, the strategy is to treat the catchments for soil and moisture conservation and protect and manage the draw down areas as foraging meadows for wild animals, to prevent effluents from entering the water bodies, and monitoring and research. For grassland management the strategy comprises of removal of weeds, protection from fire, prevention of invasion of woodlands, soil and moisture conservation. Creation of dykes is to retain water to provide drinking water and palatable grass during summer and pinch period. Wherever, <i>Ipomea</i> and other aquatic weeds are noticed those areas are taken on priority basis and eradication activities are undertaken. The TR has taken special steps for rehabilitation and restoration of grasslands in the areas available after relocation of villages. The TR has a number of annual and perennial streams traversing through various habitats and wherever there is scarcity of water, water conservation measures are initiated. Artificial water holes are created based on the ecological requirements of the animals. Fire protection lines are regularly maintained and there has been no major fire in the last 2-3 years. The riparian zones are the important habitats for a large number of species, therefore special efforts are taken to prevent any manipulative activities close to the zone and strict protection is enforced against fire, grazing, fishing, fuelwood collection and human use of water resource.
Limited planning and monitoring programmes are in place for habitat management.	Fair			
Habitat management programmes are generally planned and monitored.	Good	✓		
Habitat management programmes are thoroughly planned and monitored.	Very good			

***This assessment should be primarily based on habitat management programmes in relation to habitats for species that are threatened (IUCN categories), are habitat specialists, subjected to seasonal movements, wide ranging with emphasis on the breeding and rearing habitat and may include factors such as food, water, shelter (all connotations). Habitat structure, composition, unique patches of vegetation and sensitive sites, sources of water and their distribution are integral. Corridors within buffer zone are critically important. For example, all riparian habitats. Have these been addressed? Is their a planning process in place? The management practices dealing with invasive species such as *Lantana*, *Michania* etc would be examined.**

2.5 Does the TR has an effective Protection Strategy (PS)* and Security Plan and Security Audit (SA) in place?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR has little or no PS and SA.	Poor		Chapter 7.2 of TCP (Core)	The TR has a comprehensive Protection Strategy. There are 130 anti-poaching camps strategically located in the vulnerable area with adequate manpower and infrastructural facilities and regular patrolling from these camps are conducted based on a systematic patrolling schedule. The camps are equipped with important gadgets, adequate firearms and ammunition and sufficient number of vehicles. Wherever necessary additional forces (Tiger Protection Force) are deployed to protect the area. The fire protection measures are meticulously planned by tracing fire lines, deployment of fire watchers. The WL offence trends in the last 3 years indicate that there has been gradual reduction in number of offences (offences recorded in last 3 yrs.: 16 no.). The TR has a good network of roads for easy accessibility of areas and network of wireless. WL crime surveillance is regularly carried out in fringe areas and large number of barriers have been established for regular checking of vehicles.
TR has an adhoc PS and SA.	Fair			
TR has a generally relevant PS and SA but is not very effective.	Good	✓		
TR has a comprehensive and very effective PS and SA.	Very good			

***Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

				Instances of Man-animal conflicts are very minimal. There is no separate Security Plan and all protection strategies have been describe in the TCP.
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**This assessment takes inter-alia into account the nature of threats, the number and location of patrolling camps and foot and mobile patrolling, needs that relate to available manpower, terrain difficulties, practicability of area coverage, readiness to contain specific threats with necessary support and facilities. The constitution and functioning of Special Tiger Protection Force (STPF), Number of offences reported, arrests made, prosecution initiated and conviction achieved will be taken into account.*

2.6 Has the TR been effective in the mitigation of human-wildlife conflicts?

Assessment criteria ⁺				
Condition	Category [*]	(Tick ✓)	Reference document(s)	Remarks
Human-wildlife conflicts are significant but poorly addressed.	Poor		Chapter 7 (Para 7.3.5.1.0) of TCP	The Man-Animal conflict mainly arises from the 29 villages located within the core of TR and also 26 villages in the buffer areas . The major conflict cases are instances of mainly injury caused to human (195 cases in last 3 years) and loss of cattle (199 cases in the last 3 years). Compensation for loss of human and cattle is promptly paid within 3 days as per state Govt. guidelines. However the compensation cases for crop losses are dealt by Revenue Department . The payment for crop losses are delayed and there is general resentment among the public for this . No straying of tiger. Rapid Response Unit to manage conflict situation.
TR has been able to mitigate few human-wildlife conflicts.	Fair			
TR has been able to mitigate many human-wildlife conflicts.	Good	✓		
TR has been effective in mitigating all human-wildlife conflicts.	Very good			

** The assessment will take into account the number of incidences reported and payment of compensation made and its timelines.*

2.7 Is the TR integrated into a wider ecological network/ landscape following the principles of the ecosystem approach?

Assessment criteria ⁺				
Condition	Category [*]	(Tick ✓)	Reference document(s)	Remarks
TR not integrated into a wider network/ landscape.	Poor		Indicative Tiger Conservation Plan	The Satpura landscape comprise of large contiguous forest area (~15000 sq km). South-west of Satpuralies the Melghat TR of Maharashtra and in South-east Pench TR of MP. There are territorial forest divisions contiguous to the Satpura TR: Hoshangabad FD in the North, West Chhindwara FD in the east, and North Betul FD in the south. Two corridors: Satpura-Pench Corridor and Satpura-Melghat corridors have been identified. There are railway lines and roads cutting through these corridors. And, special steps are required to maintaining the viability of these corridors. In order to protect these corridors, buffer has been constituted in 2011. The TR need to prepare the Corridor Plan as a part of TCP to plan strategies for maintain and strengthening the corridor connectivity. Prescription of Working Plans and Forest Development Working plans need to be laid to rationalize land use in the corridors.
Some limited attempts to integrate the TR into a network/ landscape.	Fair	✓		
TR is generally quite well integrated into a network/ landscape.	Good			
TR is fully integrated into a wider network/ landscape.	Very good			

**Assessment needs to consider the scope of opportunities on the landscape scale that exist. Consider whether any attempts have been made and what are these? Have all the important corridors been identified? What actions are planned / implemented for their security? Have the Forest Working Plans and Forest Development Corporation Plans within the identified landscapes taken cognizance of such new requirement? These should have been reflected in TCPs. Is there any effort to rationalize landuse around TR? Is any effort being made to plan and use 'Smart Green Infrastructure'?*

3. Inputs

3.1 Are personnel adequate, well organized and deployed with access to adequate resources in the Tiger Reserve (TR)*?

Assessment criteria ⁺				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Few, personnel explicitly allocated but poorly supported for TR management.	Poor		Records of the TR	The TR has a sanctioned strength of 376 personnel and there is a vacancy of 67 posts, mainly of Forest Guards (40), Foresters (14), Range Officer (2) and Ministerial positions (10). There are casual workers / Samiti Workers in large numbers (500) to attend the various protection activities, which fulfils the gap caused by the vacancies in Guards and Foresters. The manpower is adequate, and vacancies need to be filled up. Average age of staff is 48 years.
Some personnel explicitly allocated for TR management but not adequately supported and systematically linked to management objectives.	Fair			
Some personnel with fair support explicitly allocated towards achievement of specific TR management objectives.	Good	✓		
Adequate personnel appropriately supported and explicitly allocated towards achievement of specific TR management objectives.	Very good			

***This assessment should inter-alia be based on number of personnel allocated for attainment of TR objectives at the Range , Round, Beat and Patrolling camps levels or as relevant to the needs (sanctioned posts vis- a- vis existing personnel and needs beyond the sanctioned strengths. It is possible that posts have last been sanctioned several years back that do not now account for the current needs)**

3.2 Are resources (vehicle, equipment, building etc.) adequate, well organized and managed with desired access?

Assessment criteria ⁺				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Few, if any, resources explicitly allocated for TR management.	Poor		Records of the TR	The TR has 35 vehicles and 12 patrolling boats. There are adequate office and residential buildings. 10 line quarters needed. These assets are required to ensure round the clock protection in the tiger reserve. The patrolling camps in the interior of the TR are provided with essential facilities for the manpower deployed in these camps. There are 130 patrolling camps equipped with solar lights (130), water filters (130), mosquito nets (33+260 medicated), torch (576), hand-pump (55), medical-kits (180), 79 mobile wireless sets, 115 binoculars, haversack (588), water bottle (588), mat (588), blanket (300), gloves (571), monkey caps (588), bicycle (600), cameras (72), raincoat (646). These facilities help the frontline staff discharging their duties.
Some resources explicitly allocated for TR management but not systematically linked to management objectives.	Fair			
Some resources explicitly allocated towards achievement of specific TR management objectives.	Good	✓		
Adequate resources explicitly allocated towards achievement of specific TR management objectives.	Very good			

***Assessment: These form a variety of resources. These may be segregated into immovable (structures) and movable categories and each further may be considered under the essential and desirable categories. It is best to start with what are the minimum needs to attain each objective, what is available and manner of use/deployment. The proportions of the 'essentials' and 'desirables' along the importance gradient of objectives would serve as pointers for score categories. Specific remarks would be vitally important.**

3.3 Are financial resources other than those of the State linked to priority actions and are funds adequate, released timely and utilized?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Resource allocation is adhoc, funds are inadequate and seldom released in time and not utilized.	Poor		Records produced by Field Directorate	The funds allotted by NTCA in last 3 years are: 2011-12 (689.284 lakhs), 2012-13 (646.270 lakhs) and 2013-14 (656.345 lakhs), The expenditure incurred in the years was Rs. 604.857 lakh, 599.142, and 457.89 lakh (upto January 2014) respectively. The funds are routed through the state government and released to the TR from Sept-Oct onwards. The funds are released based on the APO to meet the management objectives. The funds are generally released on time. In the intervening period of release of funds, the tiger reserve makes alternate arrangements by loaning funds from Park Development Fund (Gate Money).
Some specific allocation for management of priority action. Funds are inadequate and there is some delay in release, partially utilized.	Fair			
Comprehensive planning and allocation that meets the most important objectives. Generally funds released with not much delay and mostly utilized.	Good	✓		
Comprehensive planning and allocation of resources for attainment of most objectives. Funds generally released on-time and are fully utilized.	Very good			

***Obtain details of funds released by NTCA and their utilization by TR in the last 3 years and indicate them under 'Remarks'. Also comment on the problems associated with funds allocations and their utilization.**

3.4 Are financial resources from the State linked to priority action and funds adequate, timely released and utilized for the management of Tiger Reserve?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Resource allocation is adhoc, funds are inadequate and seldom released in time and not utilized.	Poor		Records produced by Field Directorate	The state government has provided significant grants to the tiger reserve. Grant received by the TR is; 2011-12 (14.84 Crore), 2012-13 (70.55 Crore) and 2013-14 (31.79 Crore). Against this expenditure incurred in different years is; 2011-12 (13.72 Crore), 2012-13 (70.36 Crore) and 2013-14 (26.30 Crores). The state govt. has allotted a sum of Rs. 68 Crore in the last two years for relocation of villages from the STR, and has shown great urgency and priority for rehabilitation of people. A large part of the fund is also to compensate communities for man-animal conflict. The state funds are earmarked for implementation of management plan. The funds released are adequate. Release is timely and utilized for meeting the objectives. The TR also receives funds for Pachmarhi Biosphere Reserve and for improvement of eco-sanitation facilities.
Some specific allocation for management of priority action. Funds are inadequate and there is some delay in release, partially utilized.	Fair			
Comprehensive planning and allocation that meets the most important objectives. Generally funds released with not much delay and mostly utilized.	Good			
Comprehensive planning and allocation of resources for attainment of most objectives. Funds generally released on-time and are fully utilized.	Very good	✓		

***Obtain details of funds released by NTCA and their utilization by TR in the last 3 years and indicate them under 'Remarks'. Also comment on the problems associated with funds allocations and their utilization.**

3.5 What level of resources are provided by NGOs?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
NGOs contribute nothing for the management of the TR.	Poor		Records produced by Field Directorate	The NGOs contribute substantially for wildlife management in the TR. The main NGOs are WWF-India and Wildlife Conservation Trust (WCT).
NGOs make some contribution to management of the TR but opportunities for collaboration are not systematically explored.	Fair			The tourist resorts and individual tourists have also provided monetary and other supports to the TR. WWF has provided Vehicles (2 nos.) and supported capacity building programs for frontline staff (6 trainings).
NGOs contributions are systematically sought and negotiated for the management of some TR level activities.	Good			WCT has provided: equipments viz. 1. Rescue vehicle (1), Thar Jeep (1), solar lights (130), water filters (130), mosquito nets (33+260 medicated), torch (576), hand-pump (55), medical-kits (180), 79 mobile wireless sets, 115 binoculars, haversack (588), water bottle (588), mat (588), blanket (300), gloves (571), monkey caps (588), bicycle (600), cameras (72), raincoat (646).
NGOs contributions are systematically sought and negotiated for the management of many TR level activities.	Very good	✓		These NGOS have also provided assistance in population estimation and wildlife crime control. The TR maintain liaison with NGOs and conduct regular meeting to fulfill the gaps.

4. Process

4.1 Does the TR have manpower resources trained in wildlife conservation for effective TR management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No trained officers and frontline staff in the TR.	Poor		Records provided by the TR management	The Field Director and Dy. Director have undertaken the PG Diploma Course in WL Management from WII and three of the Dy. Rangers have attended the Game Guards training. Besides, the TR conducts in-house training programs on Grassland Management, afforestation in fringe areas and wildlife crime prevention. The TR has drawn plans for further conduct of training in order to prepare the frontline staff in performing their duties in a professional manner.
Some trained officers and few trained frontline staff, posted in the TR.	Fair			
All trained officers and fair number of trained frontline staff posted in the TR.	Good	✓		
All trained officers and most of the trained frontline staff is posted in the TR.	Very good			

*Indicate % of trained staff in various categories. The number and thematic areas of the 'Internal Training' programmes organized in the TR in the last 3 years may be taken into account. Has the TR prepared a 'Staff Development Plan'? It is being implemented?

4.2 Is TR staff management performance linked to achievement of management objectives?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No linkage between staff management performance and management objectives.	Poor		Documents provided by TR management and interaction with staff	The TR staff have been assigned tasks and duties to meet the overall management objective and to implement strategies for improvement of WL management. The frontline staff are conscious about works to be carried out for habitat management and protection. They regularly perform their duties and there is a system of monitoring by the superiors.
Some linkage between staff management performance and management objectives, but not consistently or systematically assessed.	Fair			
Management performance for most staff is directly linked to achievement of relevant management objectives.	Good	✓		
Management performance of all staff is directly linked to achievement of relevant management objectives.	Very good			

*Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

4.3 Is there effective public participation in TR management and does it show in making a difference?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no public participation in TR management.	Poor		Documents provided by the FD	The TR has enlisted support of public and research organization, corporate bodies, NGOs in working out strategies and to address issues of WL management. There are regular interactions with various stakeholders on ecological and biological issues of the TR. Assistance has been mainly sought for ecological monitoring, eco-tourism, pilgrim tourism management, grassland management, wildlife crime control and man-animal conflict. The TR should continue to record and document the information in future.
Opportunistic public participation in some of the relevant aspects of TR management.	Fair			
Systematic public participation in most of the relevant aspects of TR management.	Good	✓		
Comprehensive and systematic public participation in all important and relevant aspects of TR management.	Very good			

* The involvement of NGOs / NGLs in population estimation may be taken into account.

4.4 Is there a responsive system for handling complaints and comments about TR management?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Adhoc approach to handling complaints.	Poor		Documents provided by the TR management	The TR maintains a complaints register, where all complaints received from the govt., CWLW and field director are recorded. The complaints are enquired in a time bound manner and prompt actions are taken to address the complaint. Complaint registers are also kept in the 3 tourist centres (Madhai, Churna and Pachmarhi), where opportunities are given to individuals to lodge the complaints or provide suggestions. During 2011-14, 24 complaints were received by the TR of which 21 cases have been disposed.
Complaints handling system operational but not responsive to individual issues and with limited follow up.	Fair			
Coordinated system logs and responds effectively to most complaints.	Good	✓		
All complaints systematically logged in coordinated system and timely response provided with minimal repeat complaints.	Very good			

* Does the TR maintain 'Suggestion Register'? What actions are taken to deal with suggestions?

4.5 Does TR management address the livelihood issues of resource dependent communities, especially of women?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No livelihood issues are addressed by TR management.	Poor		Chapter 9 of TCP (Core) and Chapter 20 of TCP (Buffer) and interaction with the TR managers	Livelihood issues of resource dependent communities are addressed through the 110 committees formed in the villages (EDC: 79, FPC: 18, VFC: 13). The communities are engaged for habitat development and management works and employment are given to the people through the committees only. Apart from the employment provided to the communities, the TR has to address issues relating to poverty alleviation through alternate income generation. Training of unemployed village youths for skill up-gradation (Kaushal Unnayan Yojna) of State Govt.) is being regularly undertaken by the TR. Involvement of women for augmenting of their income and empowerment have been very limited in the TR.
Few livelihood issues are addressed by TR management.	Fair			
Substantial livelihood issues are addressed by TR management.	Good	✓		
Livelihood issues of resource dependent communities especially of women are addressed effectively by TR managers.	Very good			

* The number of mandays generated in the last three years may be taken into account. Are funds received from District Agencies and other sources? Provide details of funds received in last 3 years.

4.6 Has the TR planned and implemented the voluntary 'Village Relocation' from the Core/ Critical Tiger Habitat (CTH)?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No planning and no implementation	Poor		Chapter 7.12 of TCP (Core). Individual village relocation plan of villages	The TR has formulated relocation plans for 14 villages and has implemented these plans and successfully relocated the villages in the peripheral forest areas of Hoshangabad Territorial Division. The TR has initiated an administrative mechanism for the relocation and formed inter-departmental committees including Zila Panchayat committees. The NGOs and NGLs have also assisted monetarily in the relocation process. To complete the relocation process and address their future development needs, the TR has relocated 14 villages and has retrieved 2309 ha in the villages which lie prime foraging and critical wildlife habitat of the TR. There are now plans for shifting another 10 villages this year subject to availability of funds. Five plans are immediately ready and another 5 are in the under preparation. There is delay in undertaking the relocation because of lengthy procedures of the FC Act.
Plans have been made but no implementation	Fair			
Plans have been made and some implementation is in progress	Good			
Plans have been made and are being actively implemented / no human habitation in the CTH	Very good	✓		

***Assessment will look into the village relocation planning process including availability of manpower, financial resources and NGO support, if any. Is there a mechanism to address the complaints received in respect to relocation process? Effort must be made to assess post relocation success or otherwise.**

5. Output

5.1 Is adequate information on TR management publicly available?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no information on TR management publicly available.	Poor		Chapter 8 of TCP (Core)	The TR management provides information on tourism and Forest & WL management through the website maintained by PCCF (MP): www.mpforest.org . Pamphlets and brochures are also provided to the visitors and tourist information office Bison Lodge, Pachmarhi.
Publicly available information is general and has limited relevance to management accountability and the condition of public assets.	Fair			
Publicly available information provides detailed insight into major management issues and condition of public assets.	Good	✓		
Comprehensive reports are routinely available in public domain on management and condition of public assets.	Very good			

5.2 Are visitor services and facilities appropriate and adequate?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Visitor services and facilities do not exist.	Poor		Chapter 8.1 of TCP (Core)	The TR provides several facilities to the visitors which includes tourism information centre at Pachmarhi. The TR has tourist stay facilities at Madhai, Churna and Pachmarhi. There are 25 rooms available to the visitors and facilities exist for wildlife viewing in vehicles, elephant rides, boating and tracking facilities. A visitor interpretation centre exists in Pachmarhi.
Visitor services and facilities are very basic.	Fair			
Visitor services and facilities are monitored from time to time and are fairly effective.	Good			

***Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

Visitor services and facilities are conscientiously maintained, regularly upgraded and monitored for visitor satisfaction	Very good	✓		which provides information to the visitors. The visitors can reserve accommodation by online deposit of money. The tourist lodges have facilities including vehicle ride, elephant ride, stay in watch towers, provision of foods and beverages, and providing guides.
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***Include the existence and quality of visitor and interpretation centers, including skills and capabilities of personnel manning these, TR related publications, films, videos; arrangements of stay (including places serving refreshments and food owned and managed by TR), watch towers and hides including safety factors, vehicles assigned for visitors including riding elephants, if any and their deployment, drinking water, rest rooms, garbage disposal, attended and self guided services in the field, visitor feedback on the quality of wilderness experience.**

5.3 Are research/ monitoring related trends systematically evaluated and routinely reported and used to improve management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no systematic evaluation or routine reporting of trends.	Poor		Chapter 10 of TCP (Core)	The TR has set the research priorities and permitted research by several research organizations including WII, WWF, IIFM, Ujjain University etc. In the last 3 years 18 research projects have been lodged in the tiger reserve, including studies on butterfly, man-animal conflict, scat analysis of carnivores etc. The TR regularly conducts population estimation exercises based on NTCA guidelines. Population estimation exercises have been conducted in 2010 in Four Phases, and the next cycle of monitoring in 2014 has commenced with Phase 1. Tropical Forest Research Institute and SFRI, Jabalpur have also laid sample plots for vegetation monitoring. The TR is not implementing M-Stripes now. Grassland monitoring is being regularly conducted in village relocated sites with the help of outside experts. Distribution of tiger is monitored by camera traps and PIP which are systematically laid and monitored regularly. The TR regularly monitors visitation trends, offences.
Some evaluation and reporting undertaken but neither systematic nor routine.	Fair			
Systematic evaluation and routine reporting of trends undertaken.	Good	✓		
Systematic evaluation and comprehensive reporting of trends undertaken and attempts made at course corrections as relevant.	Very good			

***Not all TRs attract projects and researchers and with exceptions, little research takes place on the TRs own steam because of systemic limitations. However, monitoring of some critical issues is expected e.g. population of tiger, co-predators and prey with insights into their demography and distribution (some opportunistic sampling by sightings, signs and spatial distribution during assessment would be extremely useful in terms of expert impression and as a pulse), monitoring incidence of livestock grazing, fires, weeds, sources of water, a variety of illegal activities typically associated with the reserve, wildlife health (e.g. epidemics, immunization of livestock) regeneration and change in vegetation, visitors and their activities, offence cases, ex-gratia payments etc. Efforts must be made to assess the planning and implementation of Phase-IV monitoring protocols and the success of implementation of M-Stripes (wherever applicable). Are the 'Sykes and Horill' monitoring plots maintained and data analyzed.**

5.4 Is there a systematic maintenance schedule and funds in place for management of infrastructure/assets?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No systematic inventory or maintenance schedule.	Poor		Records of TR	The TR maintains building registers, patrolling camp registers, equipment registers, equipment store registers and has drawn a maintenance schedule so that regular maintenance are carried out. The funds sought under non-plan are based on requirement as per maintenance schedule and adequate funds have been provided in the last two years for maintenance and the amount provided has been utilized.
Inventory maintenance is adhoc and so is the maintenance schedule.	Fair			
Systematic inventory provides the basis for maintenance schedule but funds are inadequate.	Good			
Systematic inventory provides the basis for maintenance schedule and adequate funds are made available.	Very good	✓		

6. Outcomes

6.1 Are populations of threatened species declining, stable or increasing?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Populations of key threatened / endangered species are declining	Poor		WL Census records and interaction with TR management	The TR has shown a increase in carnivores and herbivores as shown in the trends of the population in the last two years. This has been mainly on account of an addition of 620 sq. km. in the TR. The trend show overall population stable and increasing and this is on account of the decrease in disturbance due to relocation of 14 villages and addition of new prime foraging sites in the relocated village lands.
Some threatened/ endangered species populations declining, some are increasing, most others are stable.	Fair			
Several threatened/ endangered species populations increasing, most others are stable.	Good	✓		
All threatened/ endangered species populations either increasing or stable.	Very good			

*This needs to practically relate to the natural ecosystem potential rather than being driven merely by numbers and visibility. The assessment score may be elaborated under remarks.

6.2. Is the population of tigers showing a declining, stable or increasing trend?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Populations of tiger is showing a declining trend	Poor		Tigers in Satpura (WWF Report), WII Report (All India Monitoring)	The estimated tiger population in 2006 was 39 and in 2010-11, the number is 43. So, there has been an increase in the population the last 2 years. The tiger population trends data maintained by STR shows that the tiger population is increasing.
Population of tiger is stable	Fair			
Population of tiger is showing an increasing trend	Good	✓		
Population of tiger has significantly increased	Very good			

* This assessment should be based in the context of available population estimate (2010-11) and the outcomes if the currently ongoing Phase-IV analyses

6.3 Have the threats* to the TR being reduced / minimized? Or is there an increase?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Threats to the TR have not abated but have enhanced.	Poor		Documents provided by the FD	The threats to the TR were mainly on account of presence of human and habitation inside the TR (29 villages). In the last few years 14 villages have been relocated and therefore the disturbance on account of human and cattle in these 14 villages have been totally eliminated. However, the presence of humans and cattle and dependency of people on forest resources in the remaining 29 villages continue to impact on the TR. The TR has systematically planned to relocate the other villages in future subject to availability of funds. The incidence and extent of fire in the tiger reserve have very minimal and number of poaching cases in the last few years has shown a declining trend in spite of addition of additional buffer area (614 sq. km.). There has been no incidence of disease reported in the TR. The TR has no separate Disaster management plan, but in the theme plans strategies to avert disasters and respond to emergencies have been provided.
Some threats to the TR have abated, others continue their presence	Fair			
Most threats to the TR have abated. The few remaining are vigorously being addressed	Good	✓		
All threats to the TR have been effectively contained and an efficient system is in place to deal with any emerging situation	Very good			

* Does the TR have a Disaster Risk Management Plan to deal with existing as well as emerging threats?

6.4 Are the expectations of visitors' generally met or exceeded?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Expectations of visitors generally not met.	Poor		Feedback / suggestion registers and visitors book. Chapter 8.3 of TCP (Core)	Ecotourism in the TR is being regulated as per the NTCA guideline and 60.74 sq. km. of the core zone (4.03%). The tourism zone has been demarcated and tourism regulated based on the carrying capacity computed in the TCP. Visitors are encouraged to participate in nature oriented tourism without causing any disturbance to animals and generating any garbage. The visitors have given feedback that they have had an enriching experience and their expectation have been substantially met as they were able to view a large number of animals.
Expectations of many visitors are met.	Fair			
Expectations of most visitors are met.	Good			
Expectations of all most all visitors are met.	Very good	✓		

* What is the compliance status on Supreme Court / NTCA Guidelines in Ecotourism in TRs.

6.5 Are local communities supportive of TR management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Local communities are hostile.	Poor		Chapter 9 TCP (Core) and interaction with TR managers	Support of the local communities can be assessed based on the support the villagers provide to the TR management in implementation of village relocation program. The TR have been able to convince a large number of communities residing in the villages located in the core area for voluntary relocation to sites in the fringes of the TR in territorial forest divisions and their response has been very positive as they have realized the benefits accruing to them in the newly rehabilitated sites, access to road and rail head, medical and education facilities and gainful
Some are supportive.	Fair			
Most locals are supportive of TR management.	Good			
All local communities supportive of TR management.	Very good	✓		

*Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

				<p>employment. The remaining 29 villages are now voluntarily giving their consent for relocation which will be done in a phased manner.</p> <p>The private tourist lodges outside the TR and the tourist guides and others who are employed here realised the economic benefits to them on account of eco-tourism in the TR and are generally supportive of TR management. These stakeholders have supported monetarily and providing equipment for conduct of eco-tourism and other WL management initiative.</p> <p>Several NGOS have also joined in the endeavor of using the TR for education and awareness. These factors help in good co-ordination among the communities and the TR management.</p>
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**There could be many reasons for disenchantment. It could be real because of managerial neglect or the managerial efforts could be appropriate but there could be local elements/organizations who would like to keep the disaffection simmering for their own ulterior motives. Likewise success could be entirely because of the efforts of managers or they might be fortunate in striking partnerships with credible NGOs. Assessment may take the prevailing causes into account.*

7. MEE Score Card*

Framework Element Number	Framework Element Name	Number of Criteria (a)	Maximum Mark per question (b)	Total (a x b)	Marks obtained for the Element	Overall MEE Score and % age
1	Context	4	10	40	27.5	78.23
2	Planning	7	10	70	47.5	
3	Inputs	5	10	50	42.5	
4	Process	6	10	60	47.5	
5	Outputs	4	10	40	35	
6	Outcomes	5	10	50	42.5	
Total		31		310	242.5	

**Efforts will be made by the NTCA-WII-MEE Team to address the issue of assigning 'differential' weightages to the 31 Assessment Criteria including 'normalization'.*

Management Effectiveness Evaluation (MEE) of Kanha Tiger Reserve

1. Context

1.1 Are the values of the TR well documented, assessed and monitored?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Values not systematically documented, assessed and monitored.	Poor		Chapter 1 and 2 of the TCP of Core and Buffer, Chapter 20 of TCP Core (Monitoring Framework)	Kanha TR represents the Central Indian Highlands with the typical geo-physiographical significance and a unique occurrence and distribution of flora and fauna. The Central Indian highland Sal, miscellaneous woodland and grasslands comprise habitat for a range of wildlife. The northern slopes of the main Maikal ridge is encompassed by the spurs of varying elevations extending from the main hill ranges. The core zone supports a large population of endemic hard-ground Barasingha. This species has resurged in the grassland habitat due to sustained efforts of the TR management over several decades. The TR supports 43 species of mammals and 26 species of reptiles. The floral diversity is also very rich. It includes 850 species of Angiosperms, 22 species of Pteridophytes and 2 species of Gymnosperms. The PA holds 50 species of aquatic plants and 18 species of rare plants. The TR also harbours rich avifauna (300 species of birds). The values of the park include a spectrum of flora and fauna and its habitat which forms a repository of large gene pool providing ecosystem services to a large number of villages mainly in the buffer zone, the hydrological function represented by a large catchment area and several species specific habitat. The TR has identified and enlisted threatened fauna.
Values generally identified but not systematically assessed and monitored.	Fair			
Most values systematically identified, assessed and monitored.	Good			
All values systematically identified, assessed and monitored.	Very good	✓		

1.2 Are the threats to TR values well documented and assessed*?

Assessment criteria ⁺				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Threats not systematically documented or assessed.	Poor		TCP Core & Buffer and Security Plan	The threats to the TR have been identified as a. Forest village settlement, b. Weed infestation in grasslands, c. Village cultivation land, d. Human wildlife conflict, e. Fire, f. Infestation of Lantana, g. Wildlife disease outbreaks, h. Mukki-Garhi and Garhi-Chilpi Road passing through the TR, h. Mushrooming of tourist resorts. The threats have been described in different chapters and generally assessed for framing strategies to counter.
Threats generally identified but not systematically assessed.	Fair			
Most threats systematically identified and assessed.	Good	✓		
All threats systematically identified and assessed.	Very good			

⁺This assessment should be based on number, nature and extent of threats

1.3 Is the 'Core Area' of TR free from human and biotic interference?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
The 'Core Area' has extensive human and biotic interference.	Poor		TCP and document submitted by the TR	There are 3 villages still in the Core area of TR (Human population: 1460, Cattle Population: 1658), 10 villages in national park and 161 villages in the buffer. The human and cattle population from these villages exert moderate pressure on the core, though strict protection of the core prevents any significant harm to the core (fencing along the probable impact areas). Unified control of field director on Core and Buffer Zone.
The 'Core Area' has some human and biotic interference.	Fair			
The 'Core Area' has little human and biotic interference.	Good	✓		
The 'Core Area' has no human and biotic interference.	Very good			

*This assessment should be based on existence of human settlements/ villages inside the core area; livestock grazing, cultivation, encroachments etc, resource extraction/ livelihood dependence of local communities and should reflect the overall interference due to all the above factors. The issue of 'Unified Control' of the 'Core' and 'Buffer' zones under the Field Director would also be taken into account.

1.4 Has the TR complied with the four statutory* requirements?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
None of the four SR, no compliance of Tripartite MoU and three SOPs met	Poor		TCP of Core and Buffer and government notifications	The core and buffer zones have been notified by the government. The tripartite MoU has been signed and most of the conditions are being followed. The MP Government has established a MP Tiger Foundation Society which covers all the tiger reserve of the state (Registered on 15.01.1997 under Societies Registration Act). However, there is no Park level foundation. State level steering committee has been constituted, but its meeting has not taken place. Records pertaining to death of a tiger on 22.4.2013 and disposal of its carcass was examined and found that the SoP has been followed.
Two of the four SR, 50% conditions of the Tripartite MoU and SOP complied.	Fair			
Three of the four SR, 75% conditions of the Tripartite MoU and SOPs complied.	Good			
All four SR, 100% conditions of the Tripartite MoU and SOPs complied.	Very good	✓		

*Statutory requirements are (1) Legal delineation and notification of Core and Buffer Areas; (2) Establishment of Tiger Conservation Foundation; (3) Development of a Tiger Conservation Plan; and (4) Constitution of a State-level Steering Committee under the Chairmanship of the Chief Minister. TA refers agreement between Field Director, State Government and NTCA. The 3 SOPs are on (i) Straying of Tiger in human dominated landscape, (ii) Tiger Mortality and (iii) Disposal of Carcasses.

2. Planning

2.1 Status of Tiger Conservation Plan (TCP)?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No TCP in place.	Poor		Tiger Conservation Plans	The TCP has been drafted and after due process approved by NTCA. The plan has been prepared on scientific lines and after deliberations with a large number of stakeholders.
TCP is under preparation	Fair			
TR has a relevant TCP	Good			
TR has a comprehensive and relevant TCP, duly approved by the NTCA.	Very good	✓		

* The scientific content and the participatory processes used in preparation of the TCP will be taken into account in assessing the quality of TCP

2.2 Does the TR safeguards the threatened biodiversity values?

Assessment criteria [*]				
Condition	Category [*]	(Tick ✓)	Reference document(s)	Remarks
TR does not safeguard the threatened biodiversity values.	Poor		TCP of Core	The threatened biodiversity values are maintenance of species in the grassland ecosystem, swamp and marsh creation for propagation of species, conserving a large population of Barasingha and development of species specific plan, controlling invasion of lantana, maintaining the population of black buck, maintaining rare medicinal plants etc. Endangered flora and fauna have been identified and categorized and strategies have been formulated for their conservation and management. The TR has followed a proactive methods for safeguarding the biodiversity values by in-situ conservation breeding and reintroduction of Barasingha and Black buck, developing expertise in tiger husbandry practices and re-wilding two female tigers for eventual release in Panna TR. The TR has developed specific strategies focussed on safeguarding the biodiversity of the area and has begun to execute the development plans. Resort owners consuming firewood illicitly brought from forests is a matter of concern . Management must take effective steps .
TR safeguards a few threatened biodiversity values.	Fair			
TR safeguards a large number of threatened biodiversity values.	Good			
TR safeguards all threatened biodiversity values.	Very good	✓		

^{*}Remarks need to elaborate on the kind of safeguards and how they work or are intended to work

2.3 Are stakeholders given an opportunity to participate in planning process?

Assessment criteria [*]				
Condition	Category [*]	(Tick ✓)	Reference document(s)	Remarks
Little, if any opportunity for stakeholder participation in planning.	Poor		Chapter 19 of TCP Core and Chapter 17 of TCP Buffer and Submissions by the TR	The stakeholders identified by the park management comprises of elected public representative, members of district coordination committees, lodge owners, members of the hotel association, tourist guides, travel operators, drivers, researchers and NGOs . The minutes of the meetings have been drawn. The park management invited suggestions and incorporated the accepted suggestions in the TCP. The coordination committee is a permanent committee and will continue to meet regularly to address emerging issues. The APO is also submitted to the coordination committee before finalization and submission to NTCA. There is large number of EDCs established and regular meetings are held for obtaining their feedback on the action plan proposed for implementation. There is enough opportunity given to stakeholders to participate in planning process.
Stakeholders participate in some planning.	Fair			
Stakeholders participate in most planning processes.	Good			
Stakeholders routinely and systematically participate in all planning processes.	Very good	✓		

^{*}The result of participation must show in the field and not merely reported as a routine exercise.

2.4 Are habitat management programmes systematically planned, relevant and monitored, and contribute effectively to Tiger and other endangered species conservation?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Habitat management programmes are entirely adhoc.	Poor		Chapter 12, 13 of TCP Core and Chapter 12 of TCP Buffer	Habitat management programs identified and prescription made in the TCP are general habitat improvement programs including grassland management, weed eradication, water development, and improvement of bamboo bearing areas. Special habitat improvement practices done for barasingha is grassland management, weed eradication, maintenance of tall grasses, periodic closure of area for rejuvenation of grasses, ensuring connectivity between different grasslands for movement of barasingha, creation of wallows and reclamation of habitat made available due to relocation of forest villages. The management has meticulously developed plans for habitat management and through APOs implementing these plans and their efforts are visible in the field. For effective management in the buffer zone, 3 main working circles and two overlapping working circles have been identified. Besides this, in the management zone created for the communities residing in the buffer zone 3 Management zones have been identified. The area to be included in each working circle and the activities to be implemented has been described in the TCP. The APO 2013-14 and 2014-15 shows that the management is carrying out the prescriptions in the TCP.
Limited planning and monitoring programmes are in place for habitat management.	Fair			
Habitat management programmes are generally planned and monitored.	Good			
Habitat management programmes are thoroughly planned and monitored.	Very good	✓		

***This assessment should be primarily based on habitat management programmes in relation to habitats for species that are threatened (IUCN categories), are habitat specialists, subjected to seasonal movements, wide ranging with emphasis on the breeding and rearing habitat and may include factors such as food, water, shelter (all connotations).Habitat structure, composition, unique patches of vegetation and sensitive sites, sources of water and their distribution are integral. Corridors within buffer zone are critically important. For example, all riparian habitats. Have these been addressed? Is their a planning process in place? The management practices dealing with invasive species such as Lantana, Michaniaetc would be examined.**

2.5 Does the TR has an effective Protection Strategy (PS)* and Security Plan and Security Audit (SA) in place?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR has little or no PS and SA.	Poor		Security Plan, Chapter 18 of TCP Core	The TR has drawn a Security Plan and assessed the threats arising from large number of villages in the core, national park and buffer (Core: 3 villages, National Park: 10 villages, Buffer: 161 villages). The threats identified are 1. Poaching, 2. Illicit grazing, 3. Illicit felling, 4. Illicit collection of NTFP, 5. Encroachment, 6. Fire, 7. Wildlife diseases, 8. Violation of tourism regulations. In the Security Plan, the management has analyzed the modus operandi of the offenders. The vulnerability mapping and risk assessment, categorization, occurrences of offences in different areas have been properly mapped. The TR has created Tiger Cell for coordination with other departments for preventing WL crime and has also taken special measures for law enforcement by conducting regular workshop for capacity building and conducting special drives for expeditious disposal of cases. Flying squad has been created for gathering intelligence, conducted night patrols, raids and
TR has an adhoc PS and SA.	Fair			
TR has a generally relevant PS and SA but is not very effective.	Good			
TR has a comprehensive and very effective PS and SA.	Very good	✓		

				<p>seizures, periodic checking at different places. For strengthening protection, special actions have been taken by allocation of duties and fixing responsibilities providing patrolling camps (permanent 180, Temp.:56), personnel (Permanent staff Sanctioned: 127; vacancy: 62, TPF (69 personnel), 750 contractual protection staff), Fire protection (additional and seasonal: 96) vehicles (32 four- wheelers, and 44 two wheelers) special squad (TPF: 69), GPS (155), camera trap (99), camera (180), range finders (86), binoculars (31). Conducting special surveillance, coordination and networking with other departments and preparation of dossiers of criminals are the measures adopted to ensure foolproof protection. During monsoon special strategies are deployed to prevent crime. Elephant patrol and surveillance of sensitive areas is also conducted. Court cases during 2003-2013;</p> <p>Total Cases: 220 Case decided: 45 Conviction or fine: 22 No conviction: 23 Firewood brought by villagers from forests are also consumed by resort owners , which has to be checked</p>
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***This assessment takes inter-alia into account the nature of threats, the number and location of patrolling camps and foot and mobile patrolling, needs that relate to available manpower, terrain difficulties, practicability of area coverage, readiness to contain specific threats with necessary support and facilities. The constitution and functioning of Special Tiger Protection Force (STPF), Number of offences reported, arrests made, prosecution initiated and conviction achieved will be taken into account.**

2.6 Has the TR been effective in the mitigation of human-wildlife conflicts?

Assessment criteria ⁺				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Human-wildlife conflicts are significant but poorly addressed.	Poor		Documents provided by TR management	<p>The HW conflict is an account of injury and damage caused to the villagers by tiger, bear, monkey, leopard and wild boar. During the year 2008, 6 cases of injury and death in core zone were reported and compensation paid. During 2010-14, 10 cases of human injuries have been reported. In the buffer zone, in 2011-14, 56 cases of human injury and deaths were reported. All conflict cases have been compensated. The compensations have been paid promptly as per the guidelines (MP LokSeva Guarantee Adhiniyam, 2010)</p> <p>The instances of crop raiding are not included as the compensation is paid by revenue department. The delay in compensating crop losses has resulted in resentment among the people .It is high time that management moves state Government for redressal</p> <p>The TR has erected fences in strategic stretches to reduce the crop-raiding instances.</p>
TR has been able to mitigate few human-wildlife conflicts.	Fair			
TR has been able to mitigate many human-wildlife conflicts.	Good	✓		
TR has been effective in mitigating all human-wildlife conflicts.	Very good			

*** The assessment will take into account the number of incidences reported and payment of compensation made and its timelines.**

2.7 Is the TR integrated into a wider ecological network/ landscape following the principles of the ecosystem approach?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR not integrated into a wider network/ landscape.	Poor			<p>Kanha supports, though fragmented, natural linkages/ connectivity with several other wildlife protected areas in the region, viz. Phen WLS (MP), Bandhavgarh and Pench TRs (Madhya Pradesh), Boramdeo WLS and Achanakmar TR (Chhattisgarh), Nagzira WLS and Pench TR (Maharashtra). The connectivity between Kanha Tiger Reserve and these protected areas may be fragile; there is still some scope for ensuring gene flow from the Kanha core conservation unit by resorting to appropriate site-specific restorative management. Thus, Kanha Tiger Reserve is considerably significant as a conservation nucleus. Besides, it affords ample scope for fostering eco-regional development to complement the conservation initiatives.</p> <p>Presently, the Kanha-Pench corridor on the western side is probably the most promising connectivity. Though fragmented in between, this is reported to be used by tigers frequently. Corridor passes through 4 territorial and 3 corporation divisions encompassing 3162 sq. km. interspersed with 248 villages. Management Plan for the corridor has already been prepared by the MP Forest Department. The Forest Working Plans and Forest Development Corporation Plans have also taken cognizance of this Corridor Management Plan. The Kanha Management also roped in a few respected NGOs/ NGLs to take up eco-development/ livelihoods programmes in 43 identified critical villages in the corridor.</p> <p>The TR has an inviolate core with 20% of the area earmarked for tourism and this is surrounded by a buffer except towards Chhattisgarh side (ecological contiguous forest towards Chhattisgarh). Beyond the buffers Kanha TR has corridors and connectivity with several forests tracts as mentioned above. The Corridor Plan is under preparation and issues regarding connectivity, gene flow, and ecological contiguity feasibility have to be determined. There are contiguous territorial forests of the state and in the working plans of these forest divisions the need for landscape contiguity has to be reflected and prescriptions to secure them must be chalked out.</p>
Some limited attempts to integrate the TR into a network/ landscape.	Fair			
TR is generally quite well integrated into a network/ landscape.	Good	✓		
TR is fully integrated into a wider network/ landscape.	Very good			

***Assessment needs to consider the scope of opportunities on the landscape scale that exist. Consider whether any attempts have been made and what are these? Have all the important corridors been identified? What actions are planned / implemented for their security? Have the Forest Working Plans and Forest Development Corporation Plans within the identified landscapes taken cognizance of such new requirement? These should have been reflected in TCPs. Is there any effort to rationalize land use around TR? Is any effort being made to plan and use 'Smart Green Infrastructure'?**

3. Inputs

3.1 Are personnel adequate, well organized and deployed with access to adequate resources in the Tiger Reserve (TR)*?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Few, personnel explicitly allocated but poorly supported for TR management.	Poor		TCP and submission by the TR management	There are 317 sanctioned post of staff (RoF, Dy. Ranger, Forester and forest guard) and currently there is a vacancy of 62 staff. Tiger Protection Force is comprised of 69 personnel. There are 750 contractual protection staff, in addition to seasonal deployment of 96 fire protection workers. The permanent staff deployed in the TR are adequate and based on threat assessment additional staff on contractual basis has been deployed, thus there is no shortage of staff except for promotion and regulation of tourism, for which the TR has requested for additional workforce. The staffs are well aware of their duties and responsibilities and are deployed based on strategic planning considering the requirement to meet the emerging threats. The staff has been provided with adequate equipment to effectively carry out their duties. List of equipment includes; Bicycle: 225, water filter: 228, solar light system: 270. There are 168 well equipped patrolling camps in core and buffer zones. Binoculars, solar lights, GPS, cameras etc are provided in all the camps. All vehicles and camps are provided with first-aid box.
Some personnel explicitly allocated for TR management but not adequately supported and systematically linked to management objectives.	Fair			
Some personnel with fair support explicitly allocated towards achievement of specific TR management objectives.	Good			
Adequate personnel appropriately supported and explicitly allocated towards achievement of specific TR management objectives.	Very good	✓		

**This assessment should inter-alia be based on number of personnel allocated for attainment of TR objectives at the Range , Round, Beat and Patrolling camps levels or as relevant to the needs (sanctioned posts vis- a- vis existing personnel and needs beyond the sanctioned strengths. It is possible that posts have last been sanctioned several years back that do not now account for the current needs)*

3.2 Are resources (vehicle, equipment, building etc.) adequate, well organized and managed with desired access?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Few, if any, resources explicitly allocated for TR management.	Poor		Document provided by TR.	Important resources available with the TR for effective implementation of actions are; Vehicles (32 four-wheelers, and 44 two wheelers) special squad (TPF: 69) Fire arms (89), wireless sets (54 fixed sets, 29 vehicle set and 269 hand sets), GPS (155), camera trap (99), camera (180), range finders (86), binoculars (31). There are 297 buildings, additionally 14 buildings are under construction. The buildings are well maintained and have been put to desired use. The buildings are adequate and serve the purpose of achieving the management objectives.
Some resources explicitly allocated for TR management but not systematically linked to management objectives.	Fair			
Some resources explicitly allocated towards achievement of specific TR management objectives.	Good			
Adequate resources explicitly allocated towards achievement of specific TR management objectives.	Very good	✓		

**Assessment: These form a variety of resources. These may be segregated into immovable (structures) and movable categories and each further may be considered under the essential and desirable categories. It is best to start with what are the minimum needs to attain each objective, what is available and manner of use/deployment. The proportions of the 'essentials' and 'desirables' along the importance gradient of objectives would serve as pointers for score categories. Specific remarks would be vitally important.*

3.3 Are financial resources other than those of the State linked to priority actions and are funds adequate, released timely and utilized?

Released timely and utilized.

Assessment criteria*																			
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks															
Resource allocation is adhoc, funds are inadequate and seldom released in time and not utilized.	Poor		Records maintained and produced by FD office	Year wise allotment and utilization of funds by NTCA in the last three years is as below; <table><tr><th>Year</th><th>Allotment</th><th>Expenditure</th></tr><tr><td>2011-12</td><td>11778.04</td><td>2330.56</td></tr><tr><td>2012-13</td><td>5033.13</td><td>4861.85</td></tr><tr><td>2013-14</td><td>4268.11</td><td>3890.80</td></tr><tr><td colspan="3">Amounts are in Rs. Lakh</td></tr></table>	Year	Allotment	Expenditure	2011-12	11778.04	2330.56	2012-13	5033.13	4861.85	2013-14	4268.11	3890.80	Amounts are in Rs. Lakh		
Year	Allotment	Expenditure																	
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2012-13	5033.13	4861.85																	
2013-14	4268.11	3890.80																	
Amounts are in Rs. Lakh																			
Some specific allocation for management of priority action. Funds are inadequate and there is some delay in release, partially utilized.	Fair		The funds are routed through the state government and released to the TR from May-June onwards. The funds are released based on the APO to meet the management objectives. The funds are generally released on time.																
Comprehensive planning and allocation that meets the most important objectives. Generally funds released with not much delay and mostly utilized.	Good	✓	In the intervening period of release of funds, the tiger reserve makes alternate arrangements by loaning funds from the Development Fund (Gate Money). The funds are allocated for various components identified in TCP and included in the APOs. These funds are utilized for the priority actions and during the last three years the funds have been found to be adequate and generally released in time. The utilization is observed to be lagging because of non-utilization of funds earmarked for Relocation of Villages.																
Comprehensive planning and allocation of resources for attainment of most objectives. Funds generally released on-time and are fully utilized.	Very good																		

***Obtain details of funds released by NTCA and their utilization by TR in the last 3 years and indicate them under 'Remarks'. Also comment on the problems associated with funds allocations and their utilization.**

3.4 Are financial resources from the State linked to priority action and funds adequate, timely released and utilized for the management of Tiger Reserve?

utilized for the management of Tiger Reserve.

Assessment criteria*																
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks												
Resource allocation is adhoc, funds are inadequate and seldom released in time and not utilized.	Poor			Fund allocated by the state government in the last three years and expenditure incurred against these allotments is given below; The funds released are adequate. Release is timely and utilized for meeting the												
Some specific allocation for management of priority action. Funds are inadequate and there is some delay in release, partially utilized.	Fair															
Comprehensive planning and allocation that meets the most important objectives. Generally funds released with not much delay and mostly utilized.	Good															
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				<table><tr><th>Year</th><th>Allotment</th><th>Expenditure</th></tr><tr><td>2011-12</td><td>1141.38</td><td>1117.03</td></tr><tr><td>2012-13</td><td>443.29</td><td>1206.24</td></tr><tr><td>2013-14</td><td>537.06</td><td>1130.75</td></tr></table> Amounts are in Rs. Lakh	Year	Allotment	Expenditure	2011-12	1141.38	1117.03	2012-13	443.29	1206.24	2013-14	537.06	1130.75
Year	Allotment	Expenditure														
2011-12	1141.38	1117.03														
2012-13	443.29	1206.24														
2013-14	537.06	1130.75														
				objectives.												

***Obtain details of funds released by NTCA and their utilization by TR in the last 3 years and indicate them under 'Remarks'. Also comment on the problems associated with funds allocations and their utilization.**

3.5 What level of resources are provided by NGOs?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
NGOs contribute nothing for the management of the TR.	Poor		Tiger Reserve records	The TR receives support from several NGOs routed through MP Tiger Foundation Society. In FY 2011-12, 2012-13 and 2013-14, the TR received Rs. 33.8 lakh, Rs. 7.94 lakh and Rs. 68.26 lakh respectively from NGOs. The major donors are WCT, WWF, WTI, Hindustan Copper Ltd., State Bank of India. Besides this several individuals and organization have given support in kind for providing vehicles. Grocery provisions, bicycles etc have also been provided by NGOs. The TR liaisons with several organizations that have the moral obligation to support conservation efforts under CSR. The resources received from the NGOs are utilized judiciously for meaningful activities necessary for the management of the TR.
NGOs make some contribution to management of the TR but opportunities for collaboration are not systematically explored.	Fair			
NGOs contributions are systematically sought and negotiated for the management of some TR level activities.	Good			
NGOs contributions are systematically sought and negotiated for the management of many TR level activities.	Very good	✓		

4. Process

4.1 Does the TR have manpower resources trained in wildlife conservation for effective TR management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No trained officers and frontline staff in the TR.	Poor			Out of 10, 7 officials have received PG Diploma in WL from the Wildlife Institute of India. Out of 37 rangers and dy. rangers, 2 rangers have done Certificate Course of WII, rest of them have done short term in-house courses on wildlife crime, rescue operation, wildlife habitat management and fire protection. Out of 221 Forester and forest guard, only 17 are untrained.
Some trained officers and few trained frontline staff, posted in the TR.	Fair			
All trained officers and fair number of trained frontline staff posted in the TR.	Good	✓		
All trained officers and most of the trained frontline staff is posted in the TR.	Very good			

**Indicate % of trained staff in various categories. The number and thematic areas of the 'Internal Training' programmes organized in the TR in the last 3 years may be taken into account. Has the TR prepared a 'Staff Development Plan'? It is being implemented?*

4.2 Is TR staff management performance linked to achievement of management objectives?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No linkage between staff management performance and management objectives.	Poor		Chapter 20 of TCP Core, Security Plan	The TR staff role and responsibility are documented generally in the Forest Manual and Security Plan. The annual work plans for Dy. Ranger and above have been drawn and communicated to them and their annual performance is determined based on the achievements of the work plans. The annual work plans are in consonance of the management objectives.
Some linkage between staff management performance and management objectives, but not consistently or systematically assessed.	Fair			
Management performance for most staff is directly linked to achievement of relevant management objectives.	Good	✓		
Management performance of all staff is directly linked to achievement of relevant management objectives.	Very good			

4.3 Is there effective public participation in TR management and does it show in making a difference?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no public participation in TR management.	Poor		TCP and document submitted by the TR	The Kanha TR provides opportunity for public participation for WL conservation and management, eco-development activities and habitat improvement works. Public participation is ensured through an organizational mechanism and also informally. There is district level co-ordination committee with official and non-official members for eco-development activities in the reserve. Local Advisory Committee has also been constituted with representative from various departments and public representative for the purpose of regulating tourism. At the grassroots level there are 165 EDCs, majority of the members from local village communities which draw microplan for natural resource management of the villages. There are individual and organizational donors, who also debate and participate in the management process and provide funds to the TR. The Reserve has a Nature Education and Interpretation centre which cater to the all sections of society including students for nature awareness and education. Other groups involved in the management of the TR include; Hotel and Resort Association, Gypsy Owners' Association, Gypsy Drivers Association, and Guides Association
Opportunistic public participation in some of the relevant aspects of TR management.	Fair			
Systematic public participation in most of the relevant aspects of TR management.	Good	✓		
Comprehensive and systematic public participation in all important and relevant aspects of TR management.	Very good			

* The involvement of NGOs / NGIs in population estimation may be taken into account.

4.4 Is there a responsive system for handling complaints and comments about TR management?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Ad-hoc approach to handling complaints.	Poor		Documents provided by the TR management	The TR has a responsive system for handling complaints and comments about the TR Management. Applications are received under the Right to Information Act, 2006 and are disposed off within time limits as per the existing rules. Besides, complaints/ comments are also received from the Government, forest department and district administrations. These complaints are also dealt with appropriately and authorities are informed accordingly. Suitable actions are also initiated against defaulting staff .
Complaints handling system operational but not responsive to individual issues and with limited follow up.	Fair			
Coordinated system logs and responds effectively to most complaints.	Good	✓		
All complaints systematically logged in coordinated system and timely response provided with minimal repeat complaints.	Very good			

*** Does the TR maintain 'Suggestion Register'? What actions are taken to deal with suggestions?**

4.5 Does TR management addresses the livelihood issues of resource dependent communities, especially of women?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No livelihood issues are addressed by TR management.	Poor		Records provided by the TR management	Out of 161 villages, EDCs have been constituted in 142 villages. During 2012-13, 2.80 lakh mandays were generated by the TR. In the peripheral resorts, employment is given to local communities. The local economy is dependent on the TR. The Gypsy owners, drivers and guides are also recruited locally. In 2012-13, Rs.1.08 crore was given to the EDCs from the VikashNidhi (Development Fund). Mahua and Tendu leaves can be collected free from the forest and utilized for augmenting the income of the families. This work is mainly done by the women. Women representations are ensured in the EDCs (some of them are holding post of President and Vice President) and they also participate in decision making and have been empowered. Alternate income generation activities have been identified for villages and the department provides funds for these activities.
Few livelihood issues are addressed by TR management.	Fair			
Substantial livelihood issues are addressed by TR management.	Good	✓		
Livelihood issues of resource dependent communities especially of women are addressed effectively by TR managers.	Very good			

*** The number of man days generated in the last three years may be taken into account. Are funds received from District Agencies and other sources? Provide details of funds received in last 3 years.**

4.6 Has the TR planned and implemented the voluntary 'Village Relocation' from the Core/ Critical Tiger Habitat (CTH)?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No planning and no implementation	Poor		Documents provided by the TR management	The Kanha TR has been in the forefront for relocation and rehabilitation of the communities residing in the TR. The park has relocated 32 villages outside the National Park during 1969-2013 and has reclaimed about 6700 ha of land and these village sites alongwith the cultivable land have become one of the prime foraging habitat for large number of deer species and also helped in revival of Barasingha population, which had declined to a low level (66 in 1970 to 550 in 2014). The park has proposal for relocation of three more villages from the core area for which comprehensive plan has been prepared and funds for two villages have been granted by the NTCA under Option-1. The process has started in 2 villages (Jholar: 220, Sukhri: 133) out of which substantial number of villagers from Sukhri have been relocated and the rest of the villagers have received the 1 st instalment and are likely to move out shortly. By June 2014, 352 families have been expected to be relocated. The villages have been voluntarily agreed to such relocation and all procedure and guidelines have been followed for the relocations. The funds for relocation of two villages have been deposited with the District Collector for release to the beneficiaries. In Linga village 240 villagers need to be relocated. There is a mechanism of handling complaints of people who have opted for relocation and genuinely feel aggrieved.
Plans have been made but no implementation	Fair			
Plans have been made and some implementation is in progress	Good	✓		
Plans have been made and are being actively implemented / no human habitation in the CTH	Very good			

***Assessment will look into the village relocation planning process including availability of manpower, financial resources and NGO support, if any. Is there a mechanism to address the complaints received in respect to relocation process? Effort must be made to assess post relocation success or otherwise.**

5. Output

5.1 Is adequate information on TR management publicly available?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no information on TR management publicly available.	Poor		Website of the TR, Chapter 14 of TCP Core	The TR has exclusive website <kanhatigerreserve.com> which provides information on issues relating to conservation practices. The websites are regularly updated. The TR possesses several books and literature on Kanha (Flora of Kanha, Kanha-Glimpses of a Tiger Reserve by KhageshwarNayak and Rakesh Shukla; Handbook on Kanha by H S Panwar), animal cards, flyers, pamphlets, CDs, Flora of Kanha TR. Also, the TR has several video CDs and DVDs on Kanha such as Land of the Tiger, Tigers of Kanha, Saving the Tiger, BBC Kanha, SwargKePrahari, ISRO film Kanha: A haven for Wildlife produced by ISRO etc., which is shown to the visitors at Khatia and Mukki Interpretation Centre. Issues of the TR are also shared with the print and electronic media on regular basis.
Publicly available information is general and has limited relevance to management accountability and the condition of public assets.	Fair			
Publicly available information provides detailed insight into major management issues and condition of public assets.	Good	✓		
Comprehensive reports are routinely available in public domain on management and condition of public assets.	Very good			

***Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

5.2 Are visitor services and facilities appropriate and adequate?

Assessment criteria ⁺				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Visitor services and facilities do not exist.	Poor		Chapter 14 of TCP Core and Chapter 18 of TCP Buffer.	The TR has Forest Rest Houses at Kisli, Mukki and Khatia, which can provide accommodation to 89 persons. In addition there are about 75 resorts at Khatia end, at Mukki end there are about 25 resorts, which provides accommodation to 1300 people at a time. In addition, Orientation Centre, Kanha Museum Complex, Light and sound show, signage, amphitheatre, guided excursion, nature trail, the Kanha literature, touch screen, forest canteen, medical dispensary, public conveniences, cyber cafe, potable drinking water, electricity and other basic facilities are adequately provided. Facilities for online booking for park visit exists (mponline.org/forest). The guides and in-charge / facilitators at interpretation centres are trained on regular interval.
Visitor services and facilities are very basic.	Fair			
Visitor services and facilities are monitored from time to time and are fairly effective.	Good			
Visitor services and facilities are conscientiously maintained, regularly upgraded and monitored for visitor satisfaction	Very good	✓		

***Include the existence and quality of visitor and interpretation centers, including skills and capabilities of personnel manning these, TR related publications, films, videos; arrangements of stay (including places serving refreshments and food owned and managed by TR), watch towers and hides including safety factors, vehicles assigned for visitors including riding elephants, if any and their deployment, drinking water, rest rooms, garbage disposal, attended and self guided services in the field, visitor feedback on the quality of wilderness experience.**

5.3 Are research/ monitoring related trends systematically evaluated and routinely reported and used to improve management?

Assessment criteria ⁺				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no systematic evaluation or routine reporting of trends.	Poor		Chapter 3 and 9 of TCP Core, Document submitted by the TR	Researches on changes in habitat (grass composition helped in conducting grassland interventions and change in grassland community composition helped improved management and meadows. Researches on dispersal and movement pattern of Barasingha have helped the management in designing and implementing shallow water holes in appropriate meadows. Habitat suitability studies on Barasingha in collaboration with Space Application Centre (ISRO, Ahmedabad) helped in identification of suitable sites of management interventions. Rate of ingression of woody species in grasslands in Kanha TR has helped in planning and
Some evaluation and reporting undertaken but neither systematic nor routine.	Fair			
Systematic evaluation and routine reporting of trends undertaken.	Good			
Systematic evaluation and comprehensive reporting of trends undertaken and attempts made at course corrections as relevant.	Very good	✓		

				<p>interventions such as de-weeding, ploughing and removal of unwanted roots, early burning etc are being undertaken.</p> <p>Epidemiology of domestic livestock are well documented which helps in taking preventive measures. In the last three years cattle immunization cases are as follows - 2012: Core- 2914, Buffer-15961; 2013: Core-1993, Buffer-27156; 2014: Core-1878, Buffer-39985).</p> <p>A project on niche modelling of Giant squirrel is being formulated. It shall help in identifying new areas within the national park to focus on conservation of the species.</p> <p>Research is being done in collaboration of WII, CWFH (Jabalpur) Corbett Foundation, SFRI, Jabalpur, IIFM (economic evaluation of TR) and ISRO. Currently, permissions to conduct researches have been given to about 15 projects.</p> <p>In the last 3 years projects on studies on tiger density, tiger home ranges of tiger, tiger breeding ecology, food ecology of carnivores, ecology of ungulates, ecology of wild boar, inventory of fauna, grassland management, man-animal conflict, scat analysis of carnivores, scorpion etc. have been in different phases of implementation.</p> <p>The TR regularly conducts population estimation exercises based on NTCA guidelines. The tiger reserve is doing the Phase IV exercise on their own with supports from WII. Prey species assessment is done twice a year (seasonal).</p> <p>The TR has enumerated the saltrees infested with Sal borer. All such trees are monitored and to see that the disease does not take academic proportion.</p> <p>The TR is implementing M-Stripes.</p> <p>Total Ph.D. on Kanha TR: 10; Total D. Sc: 1 on Kanha TR.</p> <p>In the last three years 13 in-house research papers and technical articles have been published.</p>
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****Not all TRs attract projects and researchers and with exceptions, little research takes place on the TRs own steam because of systemic limitations. However, monitoring of some critical issues is expected e.g. population of tiger, co-predators and prey with insights into their demography and distribution (some opportunistic sampling by sightings, signs and spatial distribution during assessment would be extremely useful in terms of expert impression and as a pulse), monitoring incidence of livestock grazing, fires, weeds, sources of water, a variety of illegal activities typically associated with the reserve, wildlife health (e.g. epidemics, immunization of livestock) regeneration and change in vegetation, visitors and their activities, offence cases, ex-gratia payments etc. Efforts must be made to assess the planning and implementation of Phase-IV monitoring protocols and the success of implementation of M-Stripes (wherever applicable). Are the 'Sykes and Horill' monitoring plots maintained and data analyzed.***

5.4 Is there a systematic maintenance schedule and funds in place for management of infrastructure/assets?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No systematic inventory or maintenance schedule.	Poor		Records of TR, Chapter 3 and 24 of TCP Core	There are adequate funds for maintenance of vehicle, equipment, buildings and other assets and infrastructure. In addition, the park also raises Rs. 5 Crore (<i>VikashNidhi</i>) annually through tourism. The amount can meet emergency expenditure, even when the release under other heads is not made timely. Finally, when the money is released the amount is re-paid to <i>VikashNidhi</i> . The TR maintains building registers, patrolling camp registers, equipment registers, equipment store registers and has drawn a maintenance schedule so that regular maintenance are carried out.
Inventory maintenance is adhoc and so is the maintenance schedule.	Fair			
Systematic inventory provides the basis for maintenance schedule but funds are inadequate.	Good			
Systematic inventory provides the basis for maintenance schedule and adequate funds are made available.	Very good	✓		

6. Outcomes

6.1 Are populations of threatened species declining, stable or increasing?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Populations of key threatened / endangered species are declining	Poor		TR Census Record, TR monitoring report	Population trend of some key threatened species in the TR is as below; Barasingha: Increasing Leopard: Stable Gaur: Increasing Population of Barasingha has increased due to sincere habitat management interventions. New areas are also being developed to expand occupancy of the species in the TR.
Some threatened/ endangered species populations declining, some are increasing, most others are stable.	Fair			
Several threatened/ endangered species populations increasing, most others are stable.	Good	✓		
All threatened/ endangered species populations either increasing or stable.	Very good			

*This needs to practically relate to the natural ecosystem potential rather than being driven merely by numbers and visibility. The assessment score may be elaborated under remarks.

6.2 Is the population of tigers showing a declining, stable or increasing trend?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Populations of tiger is showing a declining trend	Poor		Phase IV monitoring report, Chapter 6 of TCP Core	The TR has witnessed an increasing trend in the tiger population. The estimated tiger population in 2009-10 was 46, while in increased to 78 and 91 in 2011-12 and 2012-13 respectively. As per the carrying capacity estimated in the TCP, the tiger reserve can support about 100 tigers (12 tigers / 100 sq. km.). Thus, the current tiger population in the reserve is approaching the number of tigers the reserve can accommodate.
Population of tiger is stable	Fair			
Population of tiger is showing an increasing trend	Good			
Population of tiger has significantly increased	Very good	✓		

* This assessment should be based in the context of available population estimate (2010-11) and the outcomes if the currently ongoing Phase-IV analyses

6.3 Have the threats* to the TR being reduced / minimized? Or is there an increase?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Threats to the TR have not abated but have enhanced.	Poor		Documents provided by the TR.	Threats related to habitat (illicit felling, grazing, fire) are being addressed on regular basis. It is also reported that many resort owners on Kisli and Mukki gates are using fuelwood illicitly brought by villagers from forests. Management has to take corrective steps. The TR management is using controlled fire as a tool to contain expansion of <i>Desmostachya</i> and <i>Imperata</i> . Experiments are being done to work out the most appropriate management intervention. The TR has a Disaster Risk Management Plan included in the Security Plan and TCP for Core (Chapter 10) and TCP for Buffer (Chapter 11) includes components of Disaster Risk Management. There has been no incidence of disease reported in the TR.
Some threats to the TR have abated, others continue their presence	Fair			
Most threats to the TR have abated. The few remaining are vigorously being addressed	Good	✓		
All threats to the TR have been effectively contained and an efficient system is in place to deal with any emerging situation	Very good			

* Does the TR have a Disaster Risk Management Plan to deal with existing as well as emerging threats?

6.4 Are the expectations of visitors' generally met or exceeded?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Expectations of visitors generally not met.	Poor		Feedback / suggestion registers and visitors book	On perusal of comments of visitors on the Visitors Book, it is found that expectations of visitors are met and they are found to be quite satisfied. The TR management also interacts with Lodge Associations, Drivers' Association etc and iron out expectations of the tourists. Ecotourism in the TR is being regulated as per the NTCA guideline and 184 sq. km. of the core zone (<20%) constitutes the tourism zone. Vehicle carrying capacity has also been worked out as per the guidelines as computed in the TCP (Chapter 14 TCP Core). As per the calculation, 140 vehicles (78 in morning and 62 in evening) are allowed inside the tourism zone every day. Private resorts using firewood brought from forests should be checked.
Expectations of many visitors are met.	Fair			
Expectations of most visitors are met.	Good			
Expectations of all most all visitors are met.	Very good	✓		

* What is the compliance status on Supreme Court / NTCA Guidelines in Ecotourism in TRs.

6.5 Are local communities supportive of TR management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Local communities are hostile.	Poor		Chapter 19 TCP (Core), Chapter 17 TCP (Buffer)	The local community is supportive to the TR management due to various reasons such as; a. Capacity building of local people. b. 100% solar electrification of a village through NGO support. c. In the last three years 1500 Biogas plants have been constructed of which 463 is being repaired, LPG connections, pressure cooker etc. have been provided to the villagers as confidence building measures. d. Timely compensation of cattle depredation losses as per the MP Public Service Guarantee Act, 2010.
Some are supportive.	Fair			
Most locals are supportive of TR management.	Good	✓		
All local communities supportive of TR management.	Very good			

*There could be many reasons for disenchantment. It could be real because of managerial neglect or the managerial efforts could be appropriate but there could be local elements/organizations who would like to keep the disaffection simmering for their own ulterior motives. Likewise success could be entirely because of the efforts of managers or they might be fortunate in striking partnerships with credible NGOs. Assessment may take the prevailing causes into account.

7. MEE Score Card⁺

Framework Element Number	Framework Element Name	Number of Criteria (a)	Maximum Mark per question (b)	Total (a x b)	Marks obtained for the Element	Overall MEE Score and % age
1	Context	4	10	40	35	87.9
2	Planning	7	10	70	65	
3	Inputs	5	10	50	47.5	
4	Process	6	10	60	45	
5	Outputs	4	10	40	37.5	
6	Outcomes	5	10	50	42.5	
Total		31		310	272.5	

**Efforts will be made by the NTCA-WII-MEE Team to address the issue of assigning 'differential' weightages to the 31 Assessment Criteria including 'normalization'.*

Management Effectiveness Evaluation (MEE) of Panna Tiger Reserve

1. Context

1.1 Are the values of the TR well documented, assessed and monitored?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Values not systematically documented, assessed and monitored.	Poor		Management Plan (by P K Choudhary), Page 7	Management plan by Choudhury has enlisted values of PTR. Its biological, ecological and physical attributes, recreational, scientific, cultural, religious and historical values are listed. Pannaholds a major tiger population in dry teak miscellaneous forest in north central India. It is also signified that the TR is necessary for the safe passage of wild animals in the landscape. National Park provides catchments of Ken, one of the 12 perennial rivers of MP, which is a tributary to Yamuna contributing to richness and fertility to Gangetic plains. Rare medicinal plants such as <i>Strychnos potatorum</i> and <i>Nurvolare</i> are found in the TR. Typical bench topography provide unique habitats with combination of rock shelters, cliffs, overhangs, caves etc making the place ideal for sloth bear, hog, civets, reptiles, vultures and other birds. The area is also dotted with ancient rock paintings. The TR is half an hour drive from world heritage site Khajuraho. Majhgawan village diamond mine is in the neighbourhood of the park. Park provides opportunities to biologist and scientific researchers on various aspects of wild animals and plants. Also, aquatic life in Ken river and socio-economic aspect in and around TR provide scope for research. The history of Panna and Chhatarpur forest is traced back to ancient Gond rulers in this central highland. Significance of geological formations is due to the fact that most important temples of Khajuraho are built of Panna Sandstone. Local people are great believer and worship Amla, Peepal and Saja trees, rocks, mountains and animals including tigers, water bodies including Ken. Area has a long history of wildlife conservation, which was earlier shooting reserves of erstwhile rulers. Important trees, shrubs, herbs, grasses and bamboos are enlisted in Annexure 25 of the Management Plan. Among the tree species, teak is the most valuable found in the reserve. Both <i>Anogeissus latifolia</i> and <i>Anogeissus pendula</i> are found here. The values are documented and monitored
Values generally identified but not systematically assessed and monitored.	Fair			
Most values systematically identified, assessed and monitored.	Good	✓		
All values systematically identified, assessed and monitored.	Very good			

1.2 Are the threats to TR values well documented and assessed*?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Threats not systematically documented or assessed.	Poor		Chapter 6 of Indicative TCP (Core)	In SWOT analysis done by the TR major threats to the TR are identified as: Dacoits, Thug culture, religious ceremonies, commercial poaching, fishing, insensitiveness of the villagers for forest and its conservation, tiger politics, illegal commercial uses of forest products by outsiders, instigation of previously rehabilitated villagers due to new package, Ken-Betwa link project, two roads- Panna-Chhatarpur (NH 75) and Panna-Amanganj (SH 47). Jalaria and Narayan Temples in the park attract crowd on specific day in a year and the management take specific measures to regulate the crowd.
Threats generally identified but not systematically assessed.	Fair			
Most threats systematically identified and assessed.	Good			
All threats systematically identified and assessed.	Very good	✓		

*This assessment should be based on number, nature and extent of threats

1.3 Is the 'Core Area' of TR free from human and biotic interference?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
The 'Core Area' has extensive human and biotic interference.	Poor		Village Relocation Plan of PTR.	The TR had 16 villages in the Core area, 13 of which have been relocated successfully. The relocated villagers have left behind cattle population. The three villages which have been identified for relocation are Dhodan, Khariyani, Pulkoha in Chandranagar Range of Chhatarpur dist, inhabited by 1800 family units and around 1000 cattle heads. During the visit in Dhodan, the villagers were found to be curious in getting the package and leaving the village. The relocation plans have been submitted to State and Central Govt. And once the money is received, these villages would be vacated. Villagers have shown strong keenness in relocation.
The 'Core Area' has some human and biotic interference.	Fair			
The 'Core Area' has little human and biotic interference.	Good	✓		
The 'Core Area' has no human and biotic interference.	Very good			

*This assessment should be based on existence of human settlements/ villages inside the core area; livestock grazing, cultivation, encroachments etc, resource extraction/ livelihood dependence of local communities and should reflect the overall interference due to all the above factors. The issue of 'Unified Control' of the 'Core' and 'Buffer' zones under the Field Director would also be taken into account.

1.4 Has the TR complied with the four statutory* requirements?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
None of the four SR, no compliance of Tripartite MoU and three SOPs met	Poor		Documents (Government notifications provided by the TR)	Core and buffer areas have been notified. Tripartite MoU has been signed and SOP is being followed. Like other TRs of MP, PTR has also a centralized foundation. The management gets its action plan approved. However, in absence of local Foundation, participation of local stakeholders is lacking. The TR has constituted a foundation "Friend of Panna" at local level. The foundation includes people from cross section of the society, government functionaries and local communities.
Two of the four SR, 50% conditions of the Tripartite MoU and SOP complied.	Fair	✓		
Three of the four SR, 75% conditions of the Tripartite MoU and SOPs complied.	Good			
All four SR, 100% conditions of the Tripartite MoU and SOPs complied.	Very good			

*Statutory requirements are (1) Legal delineation and notification of Core and Buffer Areas; (2) Establishment of Tiger Conservation Foundation; (3) Development of a Tiger Conservation Plan; and (4) Constitution of a State-level Steering Committee under the Chairmanship of the Chief Minister. TA refers agreement between Field Director, State Government and NTCA. The 3 SOPs are on (i) Straying of Tiger in human dominated landscape, (ii) Tiger Mortality and (iii) Disposal of Carcasses.

2. Planning

2.1 Status of Tiger Conservation Plan (TCP)?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No TCP in place.	Poor	✓	Documents provided by the TR	The Indicative TCP had been submitted to NTCA, on which NTCA has given comments. Based on this Draft TCP would be prepared by December, 2015.
TCP is under preparation	Fair			
TR has a relevant TCP	Good			
TR has a comprehensive and relevant TCP, duly approved by the NTCA.	Very good			

* The scientific content and the participatory processes used in preparation of the TCP will be taken into account in assessing the quality of TCP

2.2 Does the TR safeguards the threatened biodiversity values?

Assessment criteria ⁺				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR does not safeguard the threatened biodiversity values.	Poor		Documents provided by TR	<p>It was found in the monitoring by different agencies that tiger went missing by 2008. Later on a tiger reintroduction program was initiated. A tiger Reintroduction and recovery program for the Panna Landscape Complex was prepared in collaboration with the Wildlife Institute of India. MP forest dept. Collaborated with NTCA and WII and produced management oriented tiger reintroduction project in 2009. Under the program 6 individuals (5 female, 1 male) were relocated in Panna. From this population, total tiger population in Pannareached up to 30, of which 26 are within Panna TR. Rest 4 have dispersed to adjoining territorial forest divisions.</p> <p>Vulture is another threatened group found here. The Panna landscape with cliffs and ledges offers one of the best vulture habitats. The success story of the park management in removing the disturbance has resulted in vulture breeding population in the landscape. Seven out of nine species are found in Panna, other than that Eurasian Egyptian vulture has also been recorded in the region. Recent annual vulture estimation reveals a good breeding population of all resident vultures. When the vulture population was declining elsewhere in the country, the efforts in Panna has resulted into conserving the wild population.</p> <p>Besides, Black Capped Kingfisher was identified and photographed in the park which otherwise was not observed since 1935.</p> <p>Umbrella protection provided to tigers has also helped in protection of Four Horned Antelope. Leopard and sloth bear. Their population is found to be increasing.</p>
TR safeguards a few threatened biodiversity values.	Fair			
TR safeguards a large number of threatened biodiversity values.	Good	✓		
TR safeguards all threatened biodiversity values.	Very good			

⁺Remarks need to elaborate on the kind of safeguards and how they work or are intended to work

2.3 Are stakeholders given an opportunity to participate in planning process?

Assessment criteria ⁺				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little, if any opportunity for stakeholder participation in planning.	Poor		Minutes of the meeting with stakeholders	<p>Stakeholders have been involved in planning and implementation processes identified by the tiger reserve. They have arranged meetings with local guides, tour operators in a regular manner. However, the EDC are not functional and need to be revived.</p>
Stakeholders participate in some planning.	Fair			
Stakeholders participate in most planning processes.	Good	✓		
Stakeholders routinely and systematically participate in all planning processes.	Very good			

⁺The result of participation must show in the field and not merely reported as a routine exercise.

2.4 Are habitat management programmes systematically planned, relevant and monitored, and contribute effectively to Tiger and other endangered species conservation?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Habitat management programmes are entirely adhoc.	Poor		Submissions by the TR management	<p>The TR prepares annual plans for Fire Protection, Waterhole management and Weed eradication (<i>Cassia tora</i> and <i>Parthenium</i>). All these plans are planned on annual basis and implemented in a time bound manner. Forest fire used to be a major hazard in the TR, however, it has been found that the same has been controlled by systematically planned Fire Protection Plan and not more than 3% area has burnt in the last 5 years.</p> <p>There are 158 water holes in the core area of the TR, 80% of which become dry during summer months. During these months, some important water holes are supplemented with water transported in tankers. Four tankers are available in the TR. There has been no death of animals during last 4 years in the TR, says the Field Director.</p> <p>Grassland development on the relocated village site (one and half during last five year) has been done. And, weed eradication and grassland management programs are provided in the APOs of the Ranges. Six of these recently relocated villages where habitat management is implemented is occupied by reintroduced tiger. All the grasslands (13) attract a sizeable populated by herbivores like chital, nilgai and sambar. Watch tower to monitor offences, fire, prevention of grazing etc are built in several places but the one at Hathidole is of important significance. The valley close to this watch tower is occupied by tiger as it has lot of dense forest, perennial waterholes etc.</p> <p>The areas with habitat management interventions are monitored to assess changes in the habitat and impact of the interventions.</p> <p>SFRI, Jabalpur has laid permanent research plots in the TR. The die back in teak trees in water logged areas are investigated by Tropical Forest Research Institute, Jabalapur. They conducted monitoring at 11 plots in the TR and recommended to avoid water-logging conditions by making suitable drainage and also work the soil during winter which helps aeration in the root zone.</p>
Limited planning and monitoring programmes are in place for habitat management.	Fair			
Habitat management programmes are generally planned and monitored.	Good	✓		
Habitat management programmes are thoroughly planned and monitored.	Very good			

***This assessment should be primarily based on habitat management programmes in relation to habitats for species that are threatened (IUCN categories), are habitat specialists, subjected to seasonal movements, wide ranging with emphasis on the breeding and rearing habitat and may include factors such as food, water, shelter (all connotations). Habitat structure, composition, unique patches of vegetation and sensitive sites, sources of water and their distribution are integral. Corridors within buffer zone are critically important. For example, all riparian habitats. Have these been addressed? Is there a planning process in place? The management practices dealing with invasive species such as Lantana, Michania etc would be examined.**

2.5 Does the TR has an effective Protection Strategy (PS)* and Security Plan and Security Audit (SA) in place?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR has little or no PS and SA.	Poor		Documents provided by TR	<p>The TR does not have a security plan in the format provided by NTCA. However, there is a specific strategy for taking up regular patrolling on foot, in vehicle and in boat in the Ken River. Special patrolling is organized in monsoon. Dossier of criminals involved in wildlife offences has been prepared.</p> <p>For protection purposes, Panna TR has 127 well equipped Patrolling Camps and for communication there are 19 fixed wireless stations. Also, there are 33 watch towers and 18 Check-posts in the TR to ensure protection in the area. At the field level protection the TR has sanctioned strength of 132 Forest Guards, 39 Foresters and 14 Range Officers. Currently, there are vacancies of 15 Forest Guards, 11 Range Assistants and 2 Range Officers besides 9 Mahavat and Chara cutter. In addition to the permanent staff there are 14 ex-army personnel and about 550 daily wage workers which help the regular staff in protection of the area. Additional seasonal manpower (120 persons) is deployed for fire protection. Vehicles (17 four- wheelers, and 32 two wheelers apart from 10 hired vehicles) are deployed for effective patrolling and protection of the TR. There are two flying squads for gathering intelligence, conducting night patrols, raids and seizures and periodic checking at sensitive locations. Some important equipment and arms available with the TR are; Fire arms (56), GPS (102), camera trap (270), camera (169), range finders (99), binoculars (184), night vision binocular (1) and Security Camera (1). Testing of Unmanned Aerial Vehicle (UAV), Drones has also been done successfully. Once it get operational, it will help in keeping vigil on illegal activities in the TR.</p> <p>The tiger reserve has constituted an in-house Intelligence Cell, and patrolling is conducted based on inputs of the cell. The effectiveness of protection is confirmed by the fact that there is no poaching of tiger and co-predators. There are 676 to poaching of herbivores and illicit fishing in the river in the last three years. These cases are pending at various stages in respective courts. In the last three years convictions have been made by the court in 5 cases, all related to carnivore poaching happened earlier.</p>
TR has an adhoc PS and SA.	Fair			
TR has a generally relevant PS and SA but is not very effective.	Good	✓		
TR has a comprehensive and very effective PS and SA.	Very good			

**This assessment takes inter-alia into account the nature of threats, the number and location of patrolling camps and foot and mobile patrolling, needs that relate to available manpower, terrain difficulties, practicability of area coverage, readiness to contain specific threats with necessary support and facilities. The constitution and functioning of Special Tiger Protection Force (STPF), Number of offences reported, arrests made, prosecution initiated and conviction achieved will be taken into account.*

2.6 Has the TR been effective in the mitigation of human-wildlife conflicts?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Human-wildlife conflicts are significant but poorly addressed.	Poor		Documents provided by TR management	<p>The HW conflict is an account of injury and damage caused to the villagers by sloth bear, jackal, hyena and wild boar. During the year 2011-12, 14 cases of human injury were reported for which compensation was paid. The HW conflict cases during 2012-13 and 2013-14 were 7 and 16 respectively. All conflict cases have been compensated on time. The compensations have been paid promptly as per the guidelines (MP LokSevaGuarantee Adhiniyam, 2010)</p> <p>Cattle compensation cases during 2011-12, 2012-13 and 2013-14 were 61, 98 and 165 respectively. In 2011-12 Rs. 904830 and in 2012-13 Rs. 167691 was paid as compensation in 203 and 35 crop damage cases respectively. Now, the crop damage compensation is addressed by revenue department. Wildlife Proof Walls are have been erected in strategic stretches (especially near villages) to reduce the crop-raiding instances. 1422 m long wall was created in 2011-12.</p> <p>A Wildlife Rescue Squad for the region is stationed at Panna TR and cases of human-wildlife conflict cases are handled effectively (especially strayed out animals: Sloth Bear and Hyena). 2011-12: 8 rescues; 2012-13: 9 cases; 2013-14: 6 rescues.</p> <p>Villagers are distressed due to delay in payment for crop loss . They strongly put fourth that these cases be dealt by Forest department .</p>
TR has been able to mitigate few human-wildlife conflicts.	Fair			
TR has been able to mitigate many human-wildlife conflicts.	Good	✓		
TR has been effective in mitigating all human-wildlife conflicts.	Very good			

* The assessment will take into account the number of incidences reported and payment of compensation made and its timelines.

2.7 Is the TR integrated into a wider ecological network/ landscape following the principles of the ecosystem approach?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR not integrated into a wider network/ landscape.	Poor		Documents provided by TR.	<p>Panna Tiger Reserve is bound by four forest divisions (North Panna, South Panna, Chhatarpur and Damoh). The tiger reserve does have good corridor connection in all the directions. It has connectivities with Chitrakut (North), Sanjay TR and Bandhavgarh TR (east), Rani Durgawati and Nauradehi Sanctuary (South), Sagar and Ranthambhore (West). All the corridors have been established and confirmed by dispersing tigers of re-introduced Panna progeny. Thus, PTR is fully integrated into a wider network of tiger network.</p> <p>In South Panna Division Working Plan security and corridor plan has been incorporated, however it is not integrated in the North Panna, Damoh and Chhatarpur Divisions.</p> <p>A state level task force has been constituted to take care of the dispersing tigers in the landscape. The task force is attending to the issues of landscape level integration of tiger conservation in the entire landscape.</p>
Some limited attempts to integrate the TR into a network/ landscape.	Fair	✓		
TR is generally quite well integrated into a network/ landscape.	Good			
TR is fully integrated into a wider network/ landscape.	Very good			

*Assessment needs to consider the scope of opportunities on the landscape scale that exist. Consider whether any attempts have been made and what are these? Have all the important corridors been identified? What actions are planned / implemented for their security? Have the Forest Working Plans and Forest Development Corporation Plans within the identified landscapes taken cognizance of such new requirement? These should have been reflected in TCPs. Is there any effort to rationalize landuse around TR? Is any effort being made to plan and use 'Smart Green Infrastructure'?

3. Inputs

3.1 Are personnel adequate, well organized and deployed with access to adequate resources in the Tiger Reserve (TR)*?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Few personnel explicitly allocated but poorly supported for TR management.	Poor		Documents provided by the TR management	An account of sanctioned staff strength and vacant positions are given in Section 2.5. The sanctioned permanent staff strength in the TR are adequate and based on threat assessment additional staff on contractual basis are deployed. The vacancies are needed to be filled up. However, it was also observed that quality of some of the staff at cutting edge level is not satisfactory. The TR management is taking measures to get them replaced. The staff are well aware about their duties and responsibilities and are deployed based on strategic planning considering the requirement to meet the emerging threats. The staff has been provided with adequate equipment to effectively carry put their duties. (Uniform: 394; Shoes: 394 pairs; bags: 394; Bicycle: 394; camp cots: 394; chairs: 394; binoculars; camera: 136; torch: 394; blanket: 394; jackets: 394; trunk:126; Table: 126; water purifier: 126; smokeless chulha: 126; cap, socks and gloves: 394; solar integrated power system: 122). There are 127 patrolling camps in core and buffer zones, well equipped with, binoculars, solar lights, GPS, cameras etc. All vehicles and camps are provided with first-aid box.
Some personnel explicitly allocated for TR management but not adequately supported and systematically linked to management objectives.	Fair			
Some personnel with fair support explicitly allocated towards achievement of specific TR management objectives.	Good	✓		
Adequate personnel appropriately supported and explicitly allocated towards achievement of specific TR management objectives.	Very good			

**This assessment should inter-alia be based on number of personnel allocated for attainment of TR objectives at the Range , Round, Beat and Patrolling camps levels or as relevant to the needs (sanctioned posts vis- a- vis existing personnel and needs beyond the sanctioned strengths. It is possible that posts have last been sanctioned several years back that do not now account for the current needs)*

3.2 Are resources (vehicle, equipment, building etc.) adequate, well organized and managed with desired access?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Few, if any, resources explicitly allocated for TR management.	Poor		Document provided by TR.	Resources available in the tiger reserve are mentioned in the above paragraphs. The resources for wild animals rescue are in place, but require strengthening in order to handle the cases effectively. The list includes squeeze cages, multi para-monitor equipment, and restraining devices. There are 352 buildings, which are well maintained and have been put to desired use. The buildings are adequate and serve the purpose of achieving the management objectives.
Some resources explicitly allocated for TR management but not systematically linked to management objectives.	Fair			
Some resources explicitly allocated towards achievement of specific TR management objectives.	Good			
Adequate resources explicitly allocated towards achievement of specific TR management objectives.	Very good	✓		

**Assessment: These form a variety of resources. These may be segregated into immovable (structures) and movable categories and each further may be considered under the essential and desirable categories. It is best to start with what are the minimum needs to attain each objective, what is available and manner of use/deployment. The proportions of the 'essentials' and 'desirables' along the importance gradient of objectives would serve as pointers for score categories. Specific remarks would be vitally important.*

3.3 Are financial resources other than those of the State linked to priority actions and are funds adequate, released timely and utilized?

Released timely and utilized

Assessment criteria*																			
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks															
Resource allocation is adhoc, funds are inadequate and seldom released in time and not utilized.	Poor		Records maintained and produced by FD office	Details of funds received from NTCA and expenditure incurred are given below;															
Some specific allocation for management of priority action. Funds are inadequate and there is some delay in release, partially utilized.	Fair			<table><tr><th>Year</th><th>Allotment</th><th>Expenditure</th></tr><tr><td>2011-12</td><td>4.53</td><td>4.42</td></tr><tr><td>2012-13</td><td>4.13</td><td>4.13</td></tr><tr><td>2013-14</td><td>6.07</td><td>6.07</td></tr><tr><td colspan="3">Amount is in Rs. Crore</td></tr></table>	Year	Allotment	Expenditure	2011-12	4.53	4.42	2012-13	4.13	4.13	2013-14	6.07	6.07	Amount is in Rs. Crore		
Year	Allotment	Expenditure																	
2011-12	4.53	4.42																	
2012-13	4.13	4.13																	
2013-14	6.07	6.07																	
Amount is in Rs. Crore																			
Comprehensive planning and allocation that meets the most important objectives. Generally funds released with not much delay and mostly utilized.	Good	✓	The funds are routed through the state government and released to the TR on time. The funds are released based on the APO to meet the management objectives. The funds are allocated for various components are included in the APOs. These funds are utilized for the priority actions and during the last three years the funds have been found to be adequate and generally released in time and utilized efficiently.																
Comprehensive planning and allocation of resources for attainment of most objectives. Funds generally released on-time and are fully utilized.	Very good																		

***Obtain details of funds released by NTCA and their utilization by TR in the last 3 years and indicate them under 'Remarks'. Also comment on the problems associated with funds allocations and their utilization.**

3.4 Are financial resources from the State linked to priority action and funds adequate, timely released and utilized for the management of Tiger Reserve?

Utilized for the management of Tiger Reserve.

Assessment criteria*																
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks												
Resource allocation is adhoc, funds are inadequate and seldom released in time and not utilized.	Poor		Documents provided by the TR	Fund allocated by the state government (Non-Plan) in the last three years is given below; <table><tr><th>Year</th><th>Allotment</th><th>Expenditure</th></tr><tr><td>2011-12</td><td>5.44</td><td>4.71</td></tr><tr><td>2012-13</td><td>5.81</td><td>5.81</td></tr><tr><td>2013-14</td><td>7.84</td><td>7.84</td></tr></table> Amount is in Rs. Crore	Year	Allotment	Expenditure	2011-12	5.44	4.71	2012-13	5.81	5.81	2013-14	7.84	7.84
Year	Allotment	Expenditure														
2011-12	5.44	4.71														
2012-13	5.81	5.81														
2013-14	7.84	7.84														
Some specific allocation for management of priority action. Funds are inadequate and there is some delay in release, partially utilized.	Fair		Fund allocated by the state government under Plan head in the last 3 years is given below; <table><tr><th>Year</th><th>Allotment</th><th>Expenditure</th></tr><tr><td>2011-12</td><td>1.74</td><td>1.70</td></tr><tr><td>2012-13</td><td>2.09</td><td>2.09</td></tr><tr><td>2013-14</td><td>39.17</td><td>39.17</td></tr></table> Amount in Rs. Crore	Year	Allotment	Expenditure	2011-12	1.74	1.70	2012-13	2.09	2.09	2013-14	39.17	39.17	
Year	Allotment	Expenditure														
2011-12	1.74	1.70														
2012-13	2.09	2.09														
2013-14	39.17	39.17														
Comprehensive planning and allocation that meets the most important objectives. Generally funds released with not much delay and mostly utilized.	Good		The funds released are adequate. Release is timely and utilized for meeting the management objectives.													
Comprehensive planning and allocation of resources for attainment of most objectives. Funds generally released on-time and are fully utilized.	Very good	✓														

***Obtain details of funds released by NTCA and their utilization by TR in the last 3 years and indicate them under 'Remarks'. Also comment on the problems associated with funds allocations and their utilization.**

3.5 What level of resources are provided by NGOs?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
NGOs contribute nothing for the management of the TR.	Poor		Tiger Reserve records.	The TR receives support from NGOs like Wildlife Conservation Trust, WWF-India and Last Wilderness. The supports are provided in kind and systematically sought by the TR management. Cash contribution from WCT (mainly for awards) is routed through MP Tiger Foundation Society. The funds received from WCT in the year 2012 Rs. 4.50 lakh and in 2013 Rs. 1 lakh. The Last Wilderness in 2011 Rs. 5 lakh. The support is based on systematically sought and negotiated by the TR management. Panna Nature Camp program is being organized in collaboration with WWF-India for awareness raising among common mass. During October 2010-February 2014, 78 Nature Camps were organized and 2350 participants (students, journalists and Pardhi's children) attended the program.
NGOs make some contribution to management of the TR but opportunities for collaboration are not systematically explored.	Fair			
NGOs contributions are systematically sought and negotiated for the management of some TR level activities.	Good			
NGOs contributions are systematically sought and negotiated for the management of many TR level activities.	Very good	✓		

4. Process

4.1 Does the TR have manpower resources trained in wildlife conservation for effective TR management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No trained officers and frontline staff in the TR.	Poor		Documents provided by TR	Out of 6, 3 officials have received PG Diploma in WL of WII. Altogether 11 Forest Guards have been trained in wildlife management at Tala Training Centre at Bandhavgarh TR. The TR management has organized 13 training programs/workshop during 2010-2014 for capacity building of frontline staff in different disciplines.
Some trained officers and few trained frontline staff, posted in the TR.	Fair	✓		
All trained officers and fair number of trained frontline staff posted in the TR.	Good			
All trained officers and most of the trained frontline staff is posted in the TR.	Very good			

*Indicate % of trained staff in various categories. The number and thematic areas of the 'Internal Training' programmes organized in the TR in the last 3 years may be taken into account. Has the TR prepared a 'Staff Development Plan'? It is being implemented?

4.2 Is TR staff management performance linked to achievement of management objectives?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No linkage between staff management performance and management objectives.	Poor		Documents provided by TR	The TR management has brought out a system of award and reward based on performance of staff especially at cutting edge level. The Panna TR itself received NTCA's Award for Excellence in Active Management for 2010-11. Officials have also received awards on the basis of their performance. The Field Director of PTR received BaghMitra 2011 Award, while 14 officials of the TR received Wildlife Conservation Awards by Madhya Pradesh Government. Apart from these, more than 100 staff of the TR were awarded Certificate by the Hon'ble Minister, Environment & Forest, Govt. of India.
Some linkage between staff management performance and management objectives, but not consistently or systematically assessed.	Fair			
Management performance for most staff is directly linked to achievement of relevant management objectives.	Good	✓		
Management performance of all staff is directly linked to achievement of relevant management objectives.	Very good			

4.3 Is there effective public participation in TR management and does it show in making a difference?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no public participation in TR management.	Poor		Documents produced by TR and discussion with the management	<p>The TR has taken up reintroduction of tigers. Some of the tigers with or without collar have gone out of the Reserve and strayed in villages where corrective actions have been taken with the help and co-operation of the villagers. Without their co-operation there would have been conflict between tiger and human which would have given a setback to the reintroduction program. Public has also participated in day-to-day affairs of the park such as passing on relevant information and helping the management in apprehending the culprits etc. The public in and around the reserve are found to be quite disturbed due to Panna debacle and therefore they have made all our effort and provided assistance to the TR management to ensure a long term survival of tiger in tiger reserve. The monitoring of different aspects such as Vulture estimation and other interactive programs also ensures involvement of public.</p> <p>At the grassroot level there are 32 EDCs, but are in dormant stage. The TR management is taking measures for revival of the EDCs. Buffer areas are handed over to the TR recently and EDC program in these villages have yet to provide adequate livelihood options so that the dependency of these villagers on the TR is minimized. Other groups involved in the management of the TR include; Hotel and Resort Association, Gypsy Owners' Association, Gypsy Drivers Association, and Guides Association.</p>
Opportunistic public participation in some of the relevant aspects of TR management.	Fair			
Systematic public participation in most of the relevant aspects of TR management.	Good	✓		
Comprehensive and systematic public participation in all important and relevant aspects of TR management.	Very good			

* The involvement of NGOs / NGLs in population estimation may be taken into account.

4.4 Is there a responsive system for handling complaints and comments about TR management?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Ad-hoc approach to handling complaints.	Poor		Document provided by the TR and Complaint Register	<p>The TR management maintains a Complaint Register. Majority of complaints pertains to Village Relocation work. During 2010-14, 326 complaints were received of which 246 have been attended. However, there are no complaint received relating to works or corruption, as claimed by Field Director.</p>
Complaints handling system operational but not responsive to individual issues and with limited follow up.	Fair			
Coordinated system logs and responds effectively to most complaints.	Good	✓		
All complaints systematically logged in coordinated system and timely response provided with minimal repeat complaints.	Very good			

* Does the TR maintain 'Suggestion Register'? What actions are taken to deal with suggestions?

4.5 Does TR management addresses the livelihood issues of resource dependent communities, especially of women?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No livelihood issues are addressed by TR management.	Poor		Records provided by the TR management	There are about 100 villages, which are dependent on buffer the tiger reserve. Except the three villages, core is free from dependency of villagers. During 2011-14, more than 10 lakh man days worth 17.75 crore were generated. Apart from this, about 400 locals are continuously employed in protection and other duties in the park. The NMDC has provided Rs. 30 lakh to two EDCs as NPV as per the direction of the Supreme Court. The TR management, under KaushalUnnayanYojana, 100 villagers were trained in Security Guard during the year 2012. In TenduPatta collection activity about 150 mandays were generated.
Few livelihood issues are addressed by TR management.	Fair	✓		
Substantial livelihood issues are addressed by TR management.	Good			
Livelihood issues of resource dependent communities especially of women are addressed effectively by TR managers.	Very good			

* The number of man days generated in the last three years may be taken into account. Are funds received from District Agencies and other sources? Provide details of funds received in last 3 years.

4.6 Has the TR planned and implemented the voluntary 'Village Relocation' from the Core/ Critical Tiger Habitat (CTH)?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No planning and no implementation	Poor		Document provided by TR	Core area of the TR is located in Panna and Chhatarpur district. Eleven out of 16 villages of Panna are already relocated while 2 villages of Chhtarpur district are relocated while 3 villages in the district are still to be relocated. Villages in Buffer area, critical to tiger conservation, is planned to be relocated out of the State fund. Umarwan, Chenaini, Jardova and Bakchur are already planned for relocation, of which Bakchur is in advanced stage. Some relocated village sites have already been occupied by the relocated tigers.
Plans have been made but no implementation	Fair	✓		
Plans have been made and some implementation is in progress	Good			
Plans have been made and are being actively implemented / no human habitation in the CTH	Very good			

*Assessment will look into the village relocation planning process including availability of manpower, financial resources and NGO support, if any. Is there a mechanism to address the complaints received in respect to relocation process? Effort must be made to assess post relocation success or otherwise.

5. Output

5.1 Is adequate information on TR management publicly available?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no information on TR management publicly available.	Poor		Documents provided by the TR	The TR has exclusive website <pannatigerreserve.in> which provides detailed and updated information about the management issues and major happenings in the reserve. The website is regularly updated. The TR has published several thematic brochures on regular basis. These brochures are kept at the Nature Interpretation Centre are provided free of cost to those who are interested. A film has also been produced by ShekharDattatri. Press notes of every important happening in the TR are released to public through the TR's website.
Publicly available information is general and has limited relevance to management accountability and the condition of public assets.	Fair			
Publicly available information provides detailed insight into major management issues and condition of public assets.	Good			
Comprehensive reports are routinely available in public domain on management and condition of public assets.	Very good	✓		

5.2 Are visitor services and facilities appropriate and adequate?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Visitor services and facilities do not exist.	Poor		Documents provided by TR	The TR has Forest Rest Houses at Hinauta and Madlaand a total of 12 beds are available for visitors. Additionally there are 9 private resorts in Madla and Panna, which can accommodate 100 persons. Since, the TR is very close to Khajuraho, tourists visiting the TR are also accommodated in 35 hotels there. Nature Interpretation Centres are atKarnavati and Hinauta. Tourist facilities include literature, guides, forest canteen, public conveniences, potable drinking water, electricity and other basic facilities are adequately provided. The visitors can get down at several places during the Safari. Facilities for online booking for park visit exist. The guides are trained on regular interval. Complaints/Suggestion Boxes have been provided at the tiger reserve entry.
Visitor services and facilities are very basic.	Fair			
Visitor services and facilities are monitored from time to time and are fairly effective.	Good			
Visitor services and facilities are conscientiously maintained, regularly upgraded and monitored for visitor satisfaction	Very good	✓		

**Include the existence and quality of visitor and interpretation centers, including skills and capabilities of personnel manning these, TR related publications, films, videos; arrangements of stay (including places serving refreshments and food owned and managed by TR), watch towers and hides including safety factors, vehicles assigned for visitors including riding elephants, if any and their deployment, drinking water, rest rooms, garbage disposal, attended and self guided services in the field, visitor feedback on the quality of wilderness experience.*

5.3 Are research/ monitoring related trends systematically evaluated and routinely reported and used to improve management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no systematic evaluation or routine reporting of trends.	Poor		Documents provided by TR.	<p>During 2010-14, permits were issued to conduct 15 research projects on various topics related to tiger ecology. Research projects conducted/under implementation stage include Die back in teak, wildlife health monitoring, weed eradication program, vulture monitoring etc. The TR has developed Tiger Reintroduction and Recovery Programme for the Panna Tiger Reserve and Landscape Complex. The released tigers are rigorously monitored and habitat uses by individual tigers are worked out on monthly basis. This monitoring helps in taking protection and management interventions on timely basis.</p> <p>Epidemiology of domestic livestock are well documented which helps in taking preventive measures within 5 km of radius from the reserve boundary. In 2011, 2012 and 2013 vaccines for immunization of 3730, 4910 and 9536 cattle respectively were provided to the State veterinary department.</p> <p>Research is being done in collaboration of WII, CWFH (Jabalpur), SFRI, Jabalpur. The TR regularly conducts population estimation exercises according to NTCA guidelines. Population estimation exercises have been conducted in 2010 in Four Phases. The tiger reserve is doing the Phase IV exercise on their own. Based on routine evaluation, corrective measures are being undertaken.</p> <p>The dogs in the fringe villages suffer from Canine Distemper. Hence, the TR has developed proposal for control of Canine distemper.</p>
Some evaluation and reporting undertaken but neither systematic nor routine.	Fair			
Systematic evaluation and routine reporting of trends undertaken.	Good			
Systematic evaluation and comprehensive reporting of trends undertaken and attempts made at course corrections as relevant.	Very good	✓		

***Not all TRs attract projects and researchers and with exceptions, little research takes place on the TRs own steam because of systemic limitations. However, monitoring of some critical issues is expected e.g. population of tiger, co-predators and prey with insights into their demography and distribution (some opportunistic sampling by sightings, signs and spatial distribution during assessment would be extremely useful in terms of expert impression and as a pulse), monitoring incidence of livestock grazing, fires, weeds, sources of water, a variety of illegal activities typically associated with the reserve, wildlife health (e.g. epidemics, immunization of livestock) regeneration and change in vegetation, visitors and their activities, offence cases, ex-gratia payments etc. Efforts must be made to assess the planning and implementation of Phase-IV monitoring protocols and the success of implementation of M-Stripes (wherever applicable). Are the 'Sykes and Horill' monitoring plots maintained and data analyzed.**

5.4 Is there a systematic maintenance schedule and funds in place for management of infrastructure/assets?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No systematic inventory or maintenance schedule.	Poor		Records of TR	There are adequate funds for maintenance of vehicle, equipment, buildings and other assets and infrastructure. The Park management has a systematic schedule for maintenance of building. The TR maintains building registers, patrolling camp registers, equipment registers, equipment store registers and has drawn a maintenance schedule so that regular maintenance are carried out.
Inventory maintenance is adhoc and so is the maintenance schedule.	Fair			
Systematic inventory provides the basis for maintenance schedule but funds are inadequate.	Good			
Systematic inventory provides the basis for maintenance schedule and adequate funds are made available.	Very good	✓		

6. Outcomes

6.1 Are populations of threatened species declining, stable or increasing?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Populations of key threatened / endangered species are declining	Poor		Phase IV report	The Phase IV report reveals that occupancy of leopard and hyena has increased. It is also believed that encounter rate of Chinkara and Four-horned antelope has also increased in the recent years, as per the observations of the Field Directors. Population of vultures has increased significantly, as clear from the data below; 2011 (744 at 23 sites), 2012 (989 at 27 sites) and 2013 (1074 at 37 sites)
Some threatened/ endangered species populations declining, some are increasing, most others are stable.	Fair			
Several threatened/ endangered species populations increasing, most others are stable.	Good			
All threatened/ endangered species populations either increasing or stable.	Very good	✓		

**This needs to practically relate to the natural ecosystem potential rather than being driven merely by numbers and visibility. The assessment score may be elaborated under remarks.*

6.2. Is the population of tigers showing a declining, stable or increasing trend?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Populations of tiger is showing a declining trend	Poor		Document provided by TR	In view of the fact that reintroduction program has been taken up since 2009, and there is regular and intensive monitoring is in place, the tiger number, which once became zero in 2009 has grown up to 26, this shows an increasing trend with effective management interventions
Population of tiger is stable	Fair			
Population of tiger is showing an increasing trend	Good			
Population of tiger has significantly increased	Very good	✓		

** This assessment should be based in the context of available population estimate (2010-11) and the outcomes if the currently ongoing Phase-IV analyses*

6.3 Have the threats* to the TR being reduced / minimized? Or is there an increase?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Threats to the TR have not abated but have enhanced.	Poor		Documents provided by TR	The threats due to roads (two highways), presence of NMDC persists. The commercial fishing in the reserve has reduced to 30% with active intervention of TR management. The Ken-Betwa Project on river interlinking is a major threat and State Government and NTCA has taken cognizance of it.
Some threats to the TR have abated, others continue their presence	Fair			
Most threats to the TR have abated. The few remaining are vigorously being addressed	Good	✓		
All threats to the TR have been effectively contained and an efficient system is in place to deal with any emerging situation	Very good			

*** Does the TR have a Disaster Risk Management Plan to deal with existing as well as emerging threats?**

6.4 Are the expectations of visitors' generally met or exceeded?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Expectations of visitors generally not met.	Poor		Feedback / suggestion registers and visitors book	On perusal of comments of visitors on the Visitors Book, it is found that expectations of visitors are met and they are found to be quite satisfied.
Expectations of many visitors are met.	Fair			
Expectations of most visitors are met.	Good			
Expectations of all most all visitors are met.	Very good	✓		

*** What is the compliance status on Supreme Court / NTCA Guidelines in Ecotourism in TRs.**

6.5 Are local communities supportive of TR management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Local communities are hostile.	Poor		Documents provided by TR	Involvement of locals before the implementation of tiger reintroduction project helped winning the support of villagers. Due to the support of villagers no strayed out tigers / dispersing tigers were harmed in anyway. Misunderstanding related to tiger and the TR management among the villagers was clarified by the TR management through thorough communication strategy. Brochures were distributed among the villagers.
Some are supportive.	Fair			
Most locals are supportive of TR management.	Good	✓		
All local communities supportive of TR management.	Very good			

***There could be many reasons for disenchantment. It could be real because of managerial neglect or the managerial efforts could be appropriate but there could be local elements/organizations who would like to keep the disaffection simmering for their own ulterior motives. Likewise success could be entirely because of the efforts of managers or they might be fortunate in striking partnerships with credible NGOs. Assessment may take the prevailing causes into account.**

7. MEE Score Card⁺

Framework Element Number	Framework Element Name	Number of Criteria (a)	Maximum Mark per question (b)	Total (a x b)	Marks obtained for the Element	Overall MEE Score and % age
1	Context	4	10	40	30	78.23
2	Planning	7	10	70	45	
3	Inputs	5	10	50	45	
4	Process	6	10	60	37.5	
5	Outputs	4	10	40	40	
6	Outcomes	5	10	50	45	
Total		31		310	242.5	

**Efforts will be made by the NTCA-WII-MEE Team to address the issue of assigning 'differential' weightages to the 31 Assessment Criteria including 'normalization'.*

Management Effectiveness Evaluation (MEE) of Pench Tiger Reserve

1. Context

1.1 Are the values of the TR well documented, assessed and monitored?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Values not systematically documented, assessed and monitored.	Poor		TCP, Chapter No. 1.3 (Core)	<p>The PTR is representative of large tract of central Indian teak dominated tropical dry deciduous forest habitat of tiger and suitable for herbivore.</p> <p>Catchments of Bawanthari and Pench river falls in the TR and Totladoh (Meghdoot) reservoir run the Pench Hydroelectric project and drinking water to Nagpur city.</p> <p>Bawanthari reservoir is used for irrigation purposes. The TR provides connectivity to Melghat, Kanha, Satpura and Pench Maharashtra and it is a major tiger source population for the landscape.</p> <p>The park management of Pench takes care of monitoring of tiger, co-predators and prey animals as per the prescribed monitoring guideline. In addition, researchers are facilitated for monitoring of key flora and fauna (like grasslands, raptors, wild boar etc).</p>
Values generally identified but not systematically assessed and monitored.	Fair			
Most values systematically identified, assessed and monitored.	Good			
All values systematically identified, assessed and monitored.	Very good	✓		

1.2 Are the threats to TR values well documented and assessed*?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Threats not systematically documented or assessed.	Poor		<p>TCP Chapter No. 6 (Core) Para 6.5 (II & IV). Annexure No. 26 (B) of Core. Annexure 54 of TCP (Core), which is updated till July 2012.</p>	<p>TCP identifies mushrooming of hotels and resorts near Turiya gate, illicit fishing in the spread reservoir of Totladoh Dam, invasion of annual weed over the large draw down area of the reservoir, large human and cattle population in buffer zone, passage of NH 7 between core and buffer etc.</p> <p>Range wise and compartment wise weed infested area (5297 ha. out of 22749.3 ha) has been identified.</p> <p>There are 25 resorts within 6 km distance from Park boundary (At Turiya Gate). The management informed that one more resort has come up in Jamtara Gate in Chhindwara district.</p>
Threats generally identified but not systematically assessed.	Fair			
Most threats systematically identified and assessed.	Good			
All threats systematically identified and assessed.	Very good	✓		

*This assessment should be based on number, nature and extent of threats

1.3 Is the 'Core Area' of TR free from human and biotic interference?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
The 'Core Area' has extensive human and biotic interference.	Poor		Chapter 6.5. (I.1) of TCP (Core)	<p>There is no human habitations and any rights in Core area. Extensive movement in the core area did not reveal sign of major human disturbance. However some evidences of illicit felling, cattle grazing and illicit fishing are noticed</p>
The 'Core Area' has some human and biotic interference.	Fair			
The 'Core Area' has little human and biotic interference.	Good			
The 'Core Area' has no human and biotic interference.	Very good	✓		

*This assessment should be based on existence of human settlements/ villages inside the core area; livestock grazing, cultivation, encroachments etc, resource extraction/ livelihood dependence of local communities and should reflect the overall interference due to all the above factors. The issue of 'Unified Control' of the 'Core' and 'Biffer' zones under the Field Director would also be taken into account.

1.4 Has the TR complied with the four statutory* requirements?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
None of the four SR, no compliance of Tripartite MoU and three SOPs met	Poor		Government notifications and documents provided by the TR	<ul style="list-style-type: none"> The legal delineation and notification of core and buffer areas has been done. The MP Government has established a MP Tiger Foundation Society which covers all the tiger reserve of the state (Registered on 15.01.1997 under Societies Registration Act). However, there is no Park level foundation. State level steering committee has been constituted, but its meeting has not taken place. Tripartite MoU has been signed. The three SOPs have been followed. There has been no case of straying out of tiger. Records pertaining to death of a tiger on 22.4.2013 and disposal of its carcass was examined and found that the SoP has been followed.
Two of the four SR, 50% conditions of the Tripartite MoU and SOP complied.	Fair			
Three of the four SR, 75% conditions of the Tripartite MoU and SOPs complied.	Good	✓		
All four SR, 100% conditions of the Tripartite MoU and SOPs complied.	Very good			

*Statutory requirements are (1) Legal delineation and notification of Core and Buffer Areas; (2) Establishment of Tiger Conservation Foundation; (3) Development of a Tiger Conservation Plan; and (4) Constitution of a State-level Steering Committee under the Chairmanship of the Chief Minister. TA refers agreement between Field Director, State Government and NTCA. The 3 SOPs are on (i) Straying of Tiger in human dominated landscape, (ii) Tiger Mortality and (iii) Disposal of Carcasses.

2. Planning

2.1 Status of Tiger Conservation Plan (TCP)?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No TCP in place.	Poor		Tiger Conservation Plan	TCP (Core, Buffer and Corridor) has been submitted to NTCA through proper channel and certain observations have received on Core and buffer Plan. The park management is in the process of addressing the observations.
TCP is under preparation	Fair			
TR has a relevant TCP	Good	✓		
TR has a comprehensive and relevant TCP, duly approved by the NTCA.	Very good			

* The scientific content and the participatory processes used in preparation of the TCP will be taken into account in assessing the quality of TCP

2.2 Does the TR safeguards the threatened biodiversity values?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR does not safeguard the threatened biodiversity values.	Poor		Chapter 10 and 12.2 of TCP	<p>As identified in Chapter 10 of TCP, TR has taken suitable measures for safeguarding the biodiversity values. There are 7 camp exclusively located for checking the illicit fishing in Meghdoot (Totladoh) reservoir. These camps are Pyorthadi, Golpahadi, Mahadev, Korematta, Koylasur, Purbaba, Chhindimatta.</p> <p>Including these seven camps, there are 95 Anti-Poaching Camps in Core area and many such protection camps in buffer as well. All the camps are manned by forester / forest guard and assisted by Tiger Protection Force (30 TPF), Ex-army personnel (14 persons) and Chawkidars (more than 300) The camps are provided with the adequate infrastructure, like camera, wireless, GPS, arms etc. These persons perform foot as well as vehicular patrolling. Night patrolling is also performed.</p>
TR safeguards a few threatened biodiversity values.	Fair			
TR safeguards a large number of threatened biodiversity values.	Good			
TR safeguards all threatened biodiversity values.	Very good	✓		

*Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

				<p>Their observations including sighting of animals are recorded in Register and PDA., which are monitored and complied at Forest Range and Tiger Reserve level.</p> <p>The patrolling by camp personnel is regularly monitored and counter verified by senior officials like Range Officer, SDO, DD and FD.</p> <p>Sample plots are laid by TFRI for vegetation monitoring. There are several researchers who take up sample areas for monitoring flora and fauna.</p> <p>Adequate measures regarding disease surveillance and monitoring has been planned and monitored periodically for the safeguard of wild population. About 40000 cattle are immunized every year.</p> <p>Management interventions (especially habitat improvement measures) ensures safeguard of local diversity.</p> <p>Electric lines passing through the reserve is being insulated. About 2.5 km electric line has been insulated till date. About 4 years ago, a tiger was electrocuted using the power line.</p>
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***Remarks need to elaborate on the kind of safeguards and how they work or are intended to work**

2.3 Are stakeholders given an opportunity to participate in planning process?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little, if any opportunity for stakeholder participation in planning.	Poor		Chapter 11 of TCP (Core) Regarding Eco-tourism planning; Notification of Local Advisory Committee vide letter no. F.19-26/2010/10-2, dated 24 Sept., 2013	Stakeholders are consulted while planning eco-development works, eco-tourism and work force deployment. Participation of indigenous community, government agencies and tour operators in planning and development process in eco-tourism has been envisioned. The villages around the park provide adequate support to the management to prevent any illicit activity and without their support; it would not have been possible to create buffer zone.
Stakeholders participate in some planning.	Fair			
Stakeholders participate in most planning processes.	Good			
Stakeholders routinely and systematically participate in all planning processes.	Very good	✓		

***The result of participation must show in the field and not merely reported as a routine exercise.**

2.4 Are habitat management programmes systematically planned, relevant and monitored, and contribute effectively to Tiger and other endangered species conservation?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Habitat management programmes are entirely adhoc.	Poor		TCP (Core) Chapter 7.2.2.1 (Core), Chapter 7.2.2.2 (Core) and TCP (Buffer) Chapter 7.2.1.1 (Forestry Zone Plan, Restoration of ground cover, preference of plant species, identification of brows able species)	Pench TR has excellent tree cover all over the Pench National Park and Mowgli Sanctuary. The habitat management is systematically planned ,implemented and monitored. All the villages in the reserve have been relocated in 1992-93 and on the relocated village site , woody regeneration of species like Butea, Tendu, Lendia, Chloroxylon have been removed. Also, the unpalatable grasses and herbs like Ageratum, Sida, Cassipourea are periodically removed. These sites are provided with chain-link fencing during July-August, which results in development of very good palatable grasses like Apluda, Dichanthium, Themeda etc. Once the chain links are removed, large number of ungulates use assisted regenerated meadows. A large number of
Limited planning and monitoring programmes are in place for habitat management.	Fair			
Habitat management programmes are generally planned and monitored.	Good			

***Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

Habitat management programmes are thoroughly planned and monitored.	Very good	✓	<p>animals were seen using the area during our visit. Site specific management and monitoring documents have been developed.</p> <p>Invasive weeds like <i>Lantana</i>, Van Tulsi (<i>Hyptis</i>), <i>Cassia tora</i>, <i>Ageratum</i> etc are removed from view lines, grasslands and other strategic areas.</p> <p>Some patches which are covered by thick lantana are said to be the hiding and breeding place for tigers, co-predators and prey animals, and these patches are not worked intentionally.</p> <p>Water holes (257 no.) are created, maintained and monitored as per the plan.</p> <p>Rejuvenation of water sources: In few water tanks it was observed that, while de-silting a tank vertical cuts on the sides were made. The management is advised that there should not be vertical cuts on the edges, and it must be ensured that edges are gently sloping. While desilting, it is also observed that roots of few trees are exposed, this should be avoided.</p> <p>Along the draw down areas many dykes (17 dykes in core area) are constructed which trap the receding waters required by animals during lean water season. In addition, hand pump with saucer and solar water pump with saucer have also been planned and constructed in many locations. To deal with the emergencies, the park management has 3 big water tankers of 15000 ltr capacity, each for three core area ranges.</p> <p>The intensive protection provided in the TR includes, protection from fire (1074 km fire line), livestock grazing, trespassing and illicit felling. During the visit to Karaiya we found that villagers dependence on the buffer forest has been reduced to 30% as sufficient LPG connection, Gobar gas and Pressure Cooker provided under the program of the Park Management. The TR has prepared separate plans for Monsoon Patrolling, Fire Control, Eco-tourism, Beat Inspection, Eco-development, and Grassland Management.</p>
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***This assessment should be primarily based on habitat management programmes in relation to habitats for species that are threatened (IUCN categories), are habitat specialists, subjected to seasonal movements, wide ranging with emphasis on the breeding and rearing habitat and may include factors such as food, water, shelter (all connotations). Habitat structure, composition, unique patches of vegetation and sensitive sites, sources of water and their distribution are integral. Corridors within buffer zone are critically important. For example, all riparian habitats. Have these been addressed? Is there a planning process in place? The management practices dealing with invasive species such as *Lantana*, *Michania* etc would be examined.**

2.5 Does the TR has an effective Protection Strategy (PS)* and Security Plan and Security Audit (SA) in place?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR has little or no PS and SA.	Poor		Security Plan, TCP Chapter 10 (also includes TPF and Tiger Cell Meeting)	<p>Patrolling strategy of the tiger reserve includes important features like;</p> <p>Location of camps (95 in Core), 44 vehicles, route charts (637 road length),</p> <p>Motor boats (3) for reservoir surveillance.</p> <p>The protection teams are equipped with mobile wireless sets (17 Fixed stations, 163 handset, 20 mobile sets on vehicle) and firearms and 40 PDA. There is one patrolling camp at every 7.47 km length. For the protection purposes, the TR management has identified 121 tiger trails and 16 offender camp points. There are 3 electric line camps and the 22 identified markets for regular checking, 12 melas have been identified for checking. The TR keeps vigil during 9 local festivals and also keeps eyes on 42 identified hunting dog owners. There are 137 informers for intelligence gathering. Night patrol teams (7-8 members headed by a Dy. Ranger move in any area randomly selected by the DD). Insulation of electric transmission line (2.5 km in 2013-14). Patrolling teams systematically cover the area allotted to them. Specific instruction given to the squads. Anti-fishing patrolling in collaboration with Pench Maharashtra.</p>
TR has an adhoc PS and SA.	Fair			
TR has a generally relevant PS and SA but is not very effective.	Good			
TR has a comprehensive and very effective PS and SA.	Very good	✓		

***This assessment takes inter-alia into account the nature of threats, the number and location of patrolling camps and foot and mobile patrolling, needs that relate to available manpower, terrain difficulties, practicability of area coverage, readiness to contain specific threats with necessary support and facilities. The constitution and functioning of Special Tiger Protection Force (STPF), Number of offences reported, arrests made, prosecution initiated and conviction achieved will be taken into account.**

2.6 Has the TR been effective in the mitigation of human-wildlife conflicts?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Human-wildlife conflicts are significant but poorly addressed.	Poor		Chapter 7.3.5.1.0 of TCP	<p>During the tour it was observed that many strategic locations have been covered by Game Proof Wall / Crop Protection Wall which has successfully controlled the straying of wild animals into the agricultural field. The crop damage therefore is minimum but the compensation cases are dealt by Revenue Department.. There is resentment among the people against it. This is a bottleneck, which may partially affect the confidence of the people. No cases of human loss, but 18 cases of cattle kill by predators (tigers-13, leopard-5) were reported in the 2013-14.</p> <p>All cases were settled within a week (following the norms of MP LokSeva Guarantee Adhiniyam, 2010 which mandated the payment of compensation in case of human death within 7 working days, human injury-15 days and cattle kill-within 1 month)</p> <p>No retaliatory killing of wild animals has been registered in the past 4 years.</p> <p>Rapid Response Unit is in place to manage conflict situation.</p>
TR has been able to mitigate few human-wildlife conflicts.	Fair			
TR has been able to mitigate many human-wildlife conflicts.	Good	✓		
TR has been effective in mitigating all human-wildlife conflicts.	Very good			

*** The assessment will take into account the number of incidences reported and payment of compensation made and its timelines.**

2.7 Is the TR integrated into a wider ecological network/ landscape following the principles of the ecosystem approach?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR not integrated into a wider network/ landscape.	Poor		WWF Report (Lifeline For Tigers: Status and Conservation of the Kanha-Pench-Corridor	Indicative plan for Corridor Management is not available. Working plans for South Seoni, East Chhindwara and South Chhindwara provide greater emphasis on WL management. The portions of these divisions are carved out to constitute buffer zone. Park management has taken charge of the buffer zone recently, however, preparation of buffer management plan is already initiated and park management has received comments from NTCA. Pench TR has forest area continuous with Kanha TR via forest of north and south Balaghat, east Mandala and some Forest Development Corporation area. These tracts provide excellent wooded area. It is possible to provide for landscape level management for the values of biological diversity. Southern fringes of the park also have good forest areas of some divisions in Maharashtra as well as Pench TR of Maharashtra. It would be possible to manage the landscape with the relevant provisions in working plans of different forest divisions in Maharashtra and Pench TR of Maharashtra. The working plans of the adjoining Territorial Divisions include prescriptions for wildlife management in the division by carrying out strengthening of corridors, habitat improvement activities, protection of habitat and wildlife, dependency reduction of people, and awareness raising measures for the communities.
Some limited attempts to integrate the TR into a network/ landscape.	Fair			
TR is generally quite well integrated into a network/ landscape.	Good	✓		
TR is fully integrated into a wider network/ landscape.	Very good			

***Assessment needs to consider the scope of opportunities on the landscape scale that exist. Consider whether any attempts have been made and what are these? Have all the important corridors been identified? What actions are planned / implemented for their security? Have the Forest Working Plans and Forest Development Corporation Plans within the identified landscapes taken cognizance of such new requirement? These should have been reflected in TCPs. Is there any effort to rationalize landuse around TR? Is any effort being made to plan and use 'Smart Green Infrastructure'?**

3. Inputs

3.1 Are personnel adequate, well organized and deployed with access to adequate resources in the Tiger Reserve (TR)*?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Few, personnel explicitly allocated but poorly supported for TR management.	Poor		Records of the TR	The sanctioned strength of personnel at frontline level includes; Forest Guard (86), Forester (38), Dy Ranger (7), Ranger (14). Of this sanctioned strength following vacancies exists at various positions; Forest Guard (9), Forester (8), Range Officer (6). Although, the buffer area of the TR has come to the control of the TR management recently, all positions are filled. However, some more vacant positions are allotted to the level of RFO, Forester and Forest Guard. However, after South Seoni Production Division is discontinued its staff have been redeployed and in the process of redeployment the TR has received additional vacancy of 50 forest guards, 10 foresters and 2 RFO, which will
Some personnel explicitly allocated for TR management but not adequately supported and systematically linked to management objectives.	Fair			
Some personnel with fair support explicitly allocated towards achievement of specific TR management objectives.	Good			
Adequate personnel appropriately supported and explicitly allocated towards achievement of specific TR management objectives.	Very good	✓		

***Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

				add to the strength. Though the personnel are not posted on the newly redeployed post, TR in time to come will get more manpower which will enable them to reorganize their beats and section and use the additional strength for better protection. At present the deployment is well organized and they will meet the expectations of the TR management objectives.
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***This assessment should inter-alia be based on number of personnel allocated for attainment of TR objectives at the Range , Round, Beat and Patrolling camps levels or as relevant to the needs (sanctioned posts vis- a- vis existing personnel and needs beyond the sanctioned strengths. It is possible that posts have last been sanctioned several years back that do not now account for the current needs)**

3.2 Are resources (vehicle, equipment, building etc.) adequate, well organized and managed with desired access?

Assessment criteria ⁺				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Few, if any, resources explicitly allocated for TR management.	Poor		Document provided by TR	The TR has 44 vehicles and 3 patrolling boats. There are adequate office and residential buildings. List of the equipment available with the TR includes: Camera trap (185), Compass (72), Range finder (73), Binoculars (30), still camera (49), GPS (65), PDA (41), Mosquito net (469), Water heater (3), Guns (12 Bore: 16, 12 Bore Pump Action: 35, 315 Sporting rifle 56), Solar street light (29), tent (6), Carry mat (116), Cycle (116), Wireless set (Fixed: 17, Handset:163, Mobile vehicle:20), Computer with printer (20), laptop (6), torch (100), first aid box + Kalmegh (100), water filter (100), Tranquilizing gun (3), helmet / shield / Sticks/ body protection jacket (15 each).
Some resources explicitly allocated for TR management but not systematically linked to management objectives.	Fair			
Some resources explicitly allocated towards achievement of specific TR management objectives.	Good			
Adequate resources explicitly allocated towards achievement of specific TR management objectives.	Very good	✓		

***Assessment: These form a variety of resources. These may be segregated into immovable (structures) and movable categories and each further may be considered under the essential and desirable categories. It is best to start with what are the minimum needs to attain each objective, what is available and manner of use/deployment. The proportions of the 'essentials' and 'desirables' along the importance gradient of objectives would serve as pointers for score categories. Specific remarks would be vitally important.**

3.3 Are financial resources other than those of the State linked to priority actions and are funds adequate, released timely and utilized?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Resource allocation is adhoc, funds are inadequate and seldom released in time and not utilized.	Poor		Documents provided by the TR management	The funds allotted by NTCA in last 3 years are: 2011-12 (438 lakhs), 2012-13 (502 lakhs) and 2013-14 (562 lakhs), the released amount Rs. 232.62 lakh, 318.44 lakh, 349.55 lakh respectively. Expenditure incurred is Rs. 232.62 lakh (2011-12), 303 lakh (2012-13), and 210 lakh (up to October 2013) respectively. The funds are routed through the state government and released to the TR from July-August onwards. The funds are released based on the APO to meet the management objectives. The funds are generally released on time. In the intervening period of release of funds, the tiger reserve makes alternate arrangements by loaning funds from Park development Fund (Gate Money).
Some specific allocation for management of priority action. Funds are inadequate and there is some delay in release, partially utilized.	Fair			
Comprehensive planning and allocation that meets the most important objectives. Generally funds released with not much delay and mostly utilized.	Good	✓		
Comprehensive planning and allocation of resources for attainment of most objectives. Funds generally released on-time and are fully utilized.	Very good			

***Obtain details of funds released by NTCA and their utilization by TR in the last 3 years and indicate them under 'Remarks'. Also comment on the problems associated with funds allocations and their utilization.**

3.4 Are financial resources from the State linked to priority action and funds adequate, timely released and utilized for the management of Tiger Reserve?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Resource allocation is adhoc, funds are inadequate and seldom released in time and not utilized.	Poor		Documents provided by the TR management	Non-plan funds allocated by the state government to the tiger reserve are; 424 lakh (2011-12), 172 lakh (2012-13) and 184 lakh (2013-14). Against the allocations expenditures were 435 lakh (2011-12), 470 lakh (2012-13) and 428 lakh (2013-14, till January 2014). In the last three years, plan fund allotments were 33.22 lakh (2011-12), 11.21 lakh (2012-13) and 198 lakh (2013-14). Against the said allocations, the expenditure was; 33.18 lakh (2011-12), 11.20 lakh (2012-13), Rs 116 lakh (2013-14, till January 2104) Under the 13 th Finance Commission, funds allotment to the TR was; 7.5 lakh (2012-13) and 50 lakh (2013-14), against which the expenditure was 7.5 lakh (2012-13) and 36.17 lakh (till January 2014, 2013-14). The funds released are adequate. Release is timely and it is being utilized efficiently for meeting the objectives.
Some specific allocation for management of priority action. Funds are inadequate and there is some delay in release, partially utilized.	Fair			
Comprehensive planning and allocation that meets the most important objectives. Generally funds released with not much delay and mostly utilized.	Good			
Comprehensive planning and allocation of resources for attainment of most objectives. Funds generally released on-time and are fully utilized.	Very good	✓		

***Obtain details of funds released by NTCA and their utilization by TR in the last 3 years and indicate them under 'Remarks'. Also comment on the problems associated with funds allocations and their utilization.**

3.5 What level of resources are provided by NGOs?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
NGOs contribute nothing for the management of the TR.	Poor		Documents provided by the TR management	<p>The NGOs contribute substantially for wildlife management in the TR. The main NGOs supporting the TR are- WTI, WWF-India, WCT, Hemendra Kothari Foundation, Piramal Group, Satpura Foundation, BNHS, Reliance Foundation,</p> <p>WWF has provided Vehicle (1 no. Gypsy) and winter jacket (450), while yearwise details of the items provided by WCT is as below;</p> <p>2011-12: Motorcycle (3), Trap cage for tiger (2), Bolero camper (1), Jacket (450), Gumboots (200), water purifier (50), search light (4), Pressure cooker (50), rucksack (447), Gypsy (1), Rs. 1.50 lakh for healthcare of frontline staff.</p> <p>2012-13: Digital camera (29), Back packs (116), Drinking water bottle (116), Carry mat (111), cycle (116), Syntex tank (29), Table (29), Chair (116), Gypsy (1).</p> <p>Urvi Ashok Foundation has provided solar power generating system (63) and LED torch (100)</p> <p>AnantJalale provided LED Torches (40)</p> <p>WTI has covered the frontline staff under accidental insurance and provided patrolling kits (200). Legal assistance in wildlife crime cases is also provided by the organization.</p> <p>Satpura Foundation organizes Health and education awareness program in buffer villages round the year.</p> <p>e-Base has undertaken a project on Environmental education to students of schools around the reserve.</p> <p>BNHS is helping the TR in restoration of Bio-gas plants constructed by the department and also imparting Environmental Education</p> <p>Reliance Foundation has undertaken project on village development in the adjoining villages (for employment generation).</p>
NGOs make some contribution to management of the TR but opportunities for collaboration are not systematically explored.	Fair			
NGOs contributions are systematically sought and negotiated for the management of some TR level activities.	Good			
NGOs contributions are systematically sought and negotiated for the management of many TR level activities.	Very good	✓		

4. Process

4.1 Does the TR have manpower resources trained in wildlife conservation for effective TR management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No trained officers and frontline staff in the TR.	Poor		TCP Research, Monitoring and Training Chapter No. 8.4 & 8.5 (Core) and Records provided by the TR management	<p>Dy. Director and Vet. Officer of the TR have been awarded PG Diploma in WL from WII, while a ACF has attended the Certificate Course offered by WII. The TR management wants to enroll more staff in the WII's Certificate Course, but they are unable to find the seats.</p> <p>One week and above duration courses are organized in the training school Lakhna done (Seoni).</p> <p>The TR has systematic plan for upgrading the knowledge and skill of all categories of staff.</p> <p>The TR has drawn plans for further conduct of training in order to prepare the frontline staff in performing their duties in a professional manner.</p>
Some trained officers and few trained frontline staff, posted in the TR.	Fair			
All trained officers and fair number of trained frontline staff posted in the TR.	Good	✓		
All trained officers and most of the trained frontline staff is posted in the TR.	Very good			

*Indicate % of trained staff in various categories. The number and thematic areas of the 'Internal Training' programmes organized in the TR in the last 3 years may be taken into account. Has the TR prepared a 'Staff Development Plan'? It is being implemented?

4.2 Is TR staff management performance linked to achievement of management objectives?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No linkage between staff management performance and management objectives.	Poor		Interaction with TR management and Documents provided by FD	The TR staff have been assigned tasks and duties to meet the overall management objective and to implement strategies for improvement of WL management. The frontline staffs are conscious about works to be carried out for habitat management and protection. They regularly perform their duties and there is a system of monitoring by the superiors.
Some linkage between staff management performance and management objectives, but not consistently or systematically assessed.	Fair			
Management performance for most staff is directly linked to achievement of relevant management objectives.	Good	✓		
Management performance of all staff is directly linked to achievement of relevant management objectives.	Very good			

4.3 Is there effective public participation in TR management and does it show in making a difference?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no public participation in TR management.	Poor		Documents provided by the FD	TR has the capability of taking up the Phase IV monitoring and the team is also appreciative of this capability. Tiger reserves being inviolate, unnecessary invitation to public inside the reserve is to be discouraged. However, the reserve has involved public to some extent in systematizing the management in all important and relevant aspects.
Opportunistic public participation in some of the relevant aspects of TR management.	Fair			
Systematic public participation in most of the relevant aspects of TR management.	Good	✓		
Comprehensive and systematic public participation in all important and relevant aspects of TR management.	Very good			

* The involvement of NGOs / NGIs in population estimation may be taken into account.

4.4 Is there a responsive system for handling complaints and comments about TR management?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Ad-hoc approach to handling complaints.	Poor		Documents provided by the TR management	The TR maintains a suggestion registers / complaint register / suggestion box at Turiya Gate, Jamtara Gate and Karmajhiri gate. Such complaints and suggestions are compiled on a daily basis and necessary actions deemed fit are taken. Suggestion box are opened once a 15 days and proper action is followed immediately. Complaints and suggestions regarding the staying facility of visitors are immediately attended. FD takes personal interest and ensures that the defects are set right. Sometimes suggestions and complaints are contrary to the spirit of WL management. Such complainants are politely informed about the Reserve's stand which helps the public in educating themselves and creating greater
Complaints handling system operational but not responsive to individual issues and with limited follow up.	Fair			
Coordinated system logs and responds effectively to most complaints.	Good	✓		
All complaints systematically logged in coordinated system and timely response provided with minimal repeat complaints.	Very good			

*Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

				<p>awareness.</p> <p>Personal complains against the staff are immediately enquired and actions are taken.</p> <p>Total complaints received during 2011-14 are 29, of which the TR has addressed 24 cases and 5 pending cases are of FY 2013-14 are pending for appropriate action.</p>
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*** Does the TR maintain 'Suggestion Register'? What actions are taken to deal with suggestions?**

4.5 Does TR management addresses the livelihood issues of resource dependent communities, especially of women?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No livelihood issues are addressed by TR management.	Poor		Records provided by the TR management	Livelihood issues of resource dependent communities are addressed through the 99 committees formed in the villages. The communities are engaged for habitat development and management works and employment are given to the people through the committees only. More than 500 watchers are employed in various management works in the TR from the adjoining villages. Their payments are deposited into their account directly. TR has planned skill development of communities in fringes. Skill development programs like beautician, tailoring, Tally, Computer Application, Embroidery are organized for skill up-gradation (under <i>KaushalUnnayanYojna</i> of the State Govt.) of unemployed village youths. In the last two years 278 women of the adjoining villages have participated in different skill enhancement training program (Beautician: 15, embroidery: 99, Computer education: 28, tailoring: 136). Thus, apart from the employment provided to the communities, the TR has planned to address issues relating to poverty alleviation through alternate income generation activities.
Few livelihood issues are addressed by TR management.	Fair			
Substantial livelihood issues are addressed by TR management.	Good			
Livelihood issues of resource dependent communities especially of women are addressed effectively by TR managers.	Very good	✓		

*** The number of mandays generated in the last three years may be taken into account. Are funds received from District Agencies and other sources? Provide details of funds received in last 3 years.**

4.6 Has the TR planned and implemented the voluntary 'Village Relocation' from the Core/ Critical Tiger Habitat (CTH)?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No planning and no implementation	Poor		Chapter 7.12 of TCP (Core)	All villages of the Core TH were relocated in 1992-93. Thus, the TR is free from human and cattle population. The evacuated village sites have been developed, maintained and monitored as meadows.
Plans have been made but no implementation	Fair			
Plans have been made and some implementation is in progress	Good			
Plans have been made and are being actively implemented / no human habitation in the CTH	Very good	✓		

***Assessment will look into the village relocation planning process including availability of manpower, financial resources and NGO support, if any. Is there a mechanism to address the complaints received in respect to relocation process? Effort must be made to assess post relocation success or otherwise.**

5. Output

5.1 Is adequate information on TR management publicly available?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no information on TR management publicly available.	Poor		Chapter 8 of TCP (Core)	<p>The TR has its own website and the publicity materials are regularly and routinely uploaded. www.penchtiger.co.in</p> <p>The TR provides brochures and pamphlets to the visitors at tourist information office at Turiya Gate and Field Directorate at Seoni.</p> <p>Based on NTCA's directives regarding Canine Distemper (CD), the TR has started awareness programs in the buffer villages by distributing pamphlets regarding prevention of CD.</p> <p>The awareness and education to prevent forest fire is also imparted in the villages through regular meetings and distribution of pamphlets.</p> <p>Regarding buffer zone notification, many interest groups were spreading rumour against the park management that it will lead to hardships in the life of the villagers. The park management organized meetings with EDCs, published pamphlets and posters and nullified the antagonism being taking place in the minds of communities. This led to notification and transfer of buffer zone under the unified control of the Field Director.</p> <p>Posters depicting Goddess Durga riding on tiger were circulated in the villages which drew a very encouraging response. Several messages were received alerting the TR against illegal activities.</p>
Publicly available information is general and has limited relevance to management accountability and the condition of public assets.	Fair			
Publicly available information provides detailed insight into major management issues and condition of public assets.	Good	✓		
Comprehensive reports are routinely available in public domain on management and condition of public assets.	Very good			

5.2 Are visitor services and facilities appropriate and adequate?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Visitor services and facilities do not exist.	Poor		Chapter 11 of TCP (Core)	<p>In addition to 25 private resorts, the park management also provides tourism facilities at Turiya, Jamtara, Karmajhiri, Ghatkoka, Rukhad and Sakata. Necessary facilities, such as accommodation (60 beds), food, potable drinking water, electricity, hygienic toilets, garbage disposal containers, sitting place have been provided at all the centers.</p> <p>There is Online booking facility for park visits.</p> <p>Nature Interpretation Centre and Day shelter is at Turiya gate for the tourists visiting the Reserve. There are 3 watch towers in the tourism zone.</p>
Visitor services and facilities are very basic.	Fair			
Visitor services and facilities are monitored from time to time and are fairly effective.	Good			
Visitor services and facilities are conscientiously maintained, regularly upgraded and monitored for visitor satisfaction	Very good	✓		

**Include the existence and quality of visitor and interpretation centers, including skills and capabilities of personnel manning these, TR related publications, films, videos; arrangements of stay (including places serving refreshments and food owned and managed by TR), watch towers and hides including safety factors, vehicles assigned for visitors including riding elephants, if any and their deployment, drinking water, rest rooms, garbage disposal, attended and self guided services in the field, visitor feedback on the quality of wilderness experience.*

5.3 Are research/ monitoring related trends systematically evaluated and routinely reported and used to improve management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no systematic evaluation or routine reporting of trends.	Poor		Chapter 08 of TCP (Core) and documents provided by the TR	<p>The state has constituted Research Advisory Committee under the Chairmanship of the CWLW. The committee identifies relevant research based studies, reviews the progress of research activities carried out for the PTR and provides suggestions / recommendations for improvement and smooth implementation of research activities.</p> <p>TR has set the research priorities and permitted research in the TR by several research organizations including WII, NCBS, AMU, TFRI, IIFM, Snake Research Centre, Ujjain, Society for Env and Dev, Jodhpur, SFRI, Jabalpur. Currently, permissions to conduct researches have been given to 11 projects.</p> <p>Certain findings of research such as distribution and home ranges of tigers have helped the TR in deploying the patrolling staff and planning the patrolling. Researches on grassland have helped the reserve in managing the grass of palatable species.</p> <p>The TR also undertakes researches on assessment of effectiveness of management interventions.</p> <p>In the last 3 years projects have been lodged in the tiger reserve, including studies on tiger density, tiger home ranges of tiger, tiger breeding ecology, food ecology of carnivores, ecology of ungulates, ecology of wild boars, inventory of fauna, grassland management, man-animal conflict, scat analysis of carnivores, scorpion etc.</p> <p>The TR regularly conducts population estimation exercises based on NTCA guidelines. Population estimation exercises have been conducted in 2010 in Four Phases, and the next cycle of monitoring in 2014 has commenced with Phase 1. The tiger reserve is doing the Phase IV exercise on their own with supports from WII. Prey species assessment is done twice a year (seasonal).</p> <p>The TR is not implementing M-Stripes now.</p>
Some evaluation and reporting undertaken but neither systematic nor routine.	Fair			
Systematic evaluation and routine reporting of trends undertaken.	Good			
Systematic evaluation and comprehensive reporting of trends undertaken and attempts made at course corrections as relevant.	Very good	✓		

***Not all TRs attract projects and researchers and with exceptions, little research takes place on the TRs own steam because of systemic limitations. However, monitoring of some critical issues is expected e.g. population of tiger, co-predators and prey with insights into their demography and distribution (some opportunistic sampling by sightings, signs and spatial distribution during assessment would be extremely useful in terms of expert impression and as a pulse), monitoring incidence of livestock grazing, fires, weeds, sources of water, a variety of illegal activities typically associated with the reserve, wildlife health (e.g. epidemics, immunization of livestock) regeneration and change in vegetation, visitors and their activities, offence cases, ex-gratia payments etc. Efforts must be made to assess the planning and implementation of Phase-IV monitoring protocols and the success of implementation of M-Stripes (wherever applicable). Are the 'Sykes and Horill' monitoring plots maintained and data analyzed.**

5.4 Is there a systematic maintenance schedule and funds in place for management of infrastructure/assets?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No systematic inventory or maintenance schedule.	Poor		Records of TR	<p>The Park management has a systematic schedule for maintenance of buildings and other assets.</p> <p>The TR maintains building registers, patrolling camp registers, equipment registers, equipment store registers and has drawn a maintenance schedule so that regular maintenance are carried out.</p> <p>The funds sought under non-plan are based on requirement as per maintenance schedule and adequate funds have been provided in the last two years for maintenance and the amount provided has been utilized.</p>
Inventory maintenance is adhoc and so is the maintenance schedule.	Fair			
Systematic inventory provides the basis for maintenance schedule but funds are inadequate.	Good			
Systematic inventory provides the basis for maintenance schedule and adequate funds are made available.	Very good	✓		

6. Outcomes

6.1 Are populations of threatened species declining, stable or increasing?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Populations of key threatened / endangered species are declining	Poor		TR Wildlife Monitoring Record,	<p>Owing to improved habitat and diligent protection measures, the TR has witnessed significant increase in carnivores and herbivores as shown in the trends of the population in the last two years.</p>
Some threatened/ endangered species populations declining, some are increasing, most others are stable.	Fair			
Several threatened/ endangered species populations increasing, most others are stable.	Good	✓		
All threatened/ endangered species populations either increasing or stable.	Very good			

**This needs to practically relate to the natural ecosystem potential rather than being driven merely by numbers and visibility. The assessment score may be elaborated under remarks.*

6.2. Is the population of tigers showing a declining, stable or increasing trend?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Populations of tiger is showing a declining trend	Poor		All India Tiger Monitoring Report 2006 & 2010, Phase IV monitoring Report	<p>The estimated tiger population in 2006 was 22 and in 2010-11, the number was 24. In phase IV, 36 unique individuals (minimum number) were photographed. So, there has been an increase in the population the last 2 years. The tiger population trends data maintained by PTR shows that the tiger population is increasing.</p> <p>The tiger management has taken over the buffer which provides connectivity to Pench, Maharashtra, Kanha TR and Satpura TR. Thus, this sources has several corridors all around and the increasing number of tigers move through these to find their home ranges</p>
Population of tiger is stable	Fair			
Population of tiger is showing an increasing trend	Good			
Population of tiger has significantly increased	Very good	✓		

** This assessment should be based in the context of available population estimate (2010-11) and the outcomes if the currently ongoing Phase-IV analyses*

6.3 Have the threats* to the TR being reduced / minimized? Or is there an increase?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Threats to the TR have not abated but have enhanced.	Poor		Documents provided by the TR management	<p>The habitat related threats are being monitored and mid-course correction being taken by the TR. To a significant level threats pertaining to expansion of unwanted unpalatable species have been arrested.</p> <p>Threats related to illicit fishing in the reservoir and widening of NH7, can be very serious and can threaten long term survival of tigers.</p> <p>There has been no incidence of disease in wild animals in the TR.</p> <p>The TR has no separate Disaster management plan, but in the theme plans strategies, provisions are made to avert disasters and respond to emergencies. Tiger Reserve Management has taken all possible and proactive action to see that good practices are continued as planned in the TCP and implemented in the reserve, in the interest of conservation and development . The efforts put in by the FD and team has to be appreciated and the MEE team takes pleasure in complimenting and congratulating them.</p>
Some threats to the TR have abated, others continue their presence	Fair			
Most threats to the TR have abated. The few remaining are vigorously being addressed	Good	✓		
All threats to the TR have been effectively contained and an efficient system is in place to deal with any emerging situation	Very good			

*** Does the TR have a Disaster Risk Management Plan to deal with existing as well as emerging threats?**

6.4 Are the expectations of visitors' generally met or exceeded?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Expectations of visitors generally not met.	Poor		Feedback / suggestion registers and visitors book	<p>Ecotourism in the TR is being regulated as per the NTCA guideline and 82 sq. km. of the core zone (20%) is under the use for tourism. The tourism zone has been demarcated and tourism activities are regulated based on the carrying capacity computed in the TCP (Chapter 11.7.2. of TCP Core).</p> <p>The tourism zone is maintained as a zero garbage area. The visitors have given feedback that they have had an enriching experience and their expectation have been substantially met as they were able to view a large number of animals. It has been suggested to management that tourism be moved out of core and taken to buffer in a phased manner</p>
Expectations of many visitors are met.	Fair			
Expectations of most visitors are met.	Good			
Expectations of all most all visitors are met.	Very good	✓		

*** What is the compliance status on Supreme Court / NTCA Guidelines in Ecotourism in TRs.**

6.5 Are local communities supportive of TR management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Local communities are hostile.	Poor		Chapter 9 TCP (Core) and interaction with villagers	<p>The local communities is supportive to the TR management due to various reasons such as;</p> <p>a. Rapport building measures through provision of livelihood and support for their health through NGOs.</p> <p>b. Rs. 55 lakh has been spent for providing LPG connection (on 75:25 contribution) to 1215 families.</p> <p>c. Timely compensation of cattle depredation losses.</p> <p>d. 300 biogas units made operational</p> <p>e. 30 NADEP composting units constructed.</p> <p>f. 14 hand pumps commissioned for provision of safe drinking water</p> <p>e. To reduce firewood consumption 650 pressure cookers have been provided. The management has taken special step to conduct tour of villagers in the TR and to make them aware of the conservation program undertaken in the TR.</p> <p>Under E-base program and with the assistance BNHS environment education is being imparted to the school students of surrounding villages. And, in addition to it every year Park management with co-operation of Gypsy owners and resorts is organizing field trips for the children of surrounding villages.</p> <p>Several NGOS have also joined in the endeavor of using the TR for education and awareness.</p>
Some are supportive.	Fair			
Most locals are supportive of TR management.	Good	✓		
All local communities supportive of TR management.	Very good			

**There could be many reasons for disenchantment. It could be real because of managerial neglect or the managerial efforts could be appropriate but there could be local elements/organizations who would like to keep the disaffection simmering for their own ulterior motives. Likewise success could be entirely because of the efforts of managers or they might be fortunate in striking partnerships with credible NGOs. Assessment may take the prevailing causes into account.*

7. MEE Score Card*

Framework Element Number	Framework Element Name	Number of Criteria (a)	Maximum Mark per question (b)	Total (a x b)	Marks obtained for the Element	Overall MEE Score and % age
1	Context	4	10	40	37.5	89.52
2	Planning	7	10	70	62.5	
3	Inputs	5	10	50	47.5	
4	Process	6	10	60	50	
5	Outputs	4	10	40	37.5	
6	Outcomes	5	10	50	42.5	
Total		31		310	277.5	

**Efforts will be made by the NTCA-WII-MEE Team to address the issue of assigning 'differential' weightages to the 31 Assessment Criteria including 'normalization'.*

Management Effectiveness Evaluation (MEE) of Sanjay Dubari Tiger Reserve

1. Context

1.1 Are the values of the TR well documented, assessed and monitored?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Values not systematically documented, assessed and monitored.	Poor		Indicative TCP Chapter 1	Sanjay Tiger Reserve is of special importance as it is the birth place of white tiger Mohan, which was caught by Gulab Singh, Maharaja of Rewa and presented to PM of India in 1951. This was then kept in Delhi Zoo. Different values of the tiger reserve are listed in the draft TCP. These are categorized as Biodiversity values, ecological processes, educational, recreational and religious functions, watershed functions etc. The eco-system of the TR provide good habitat to variety of wild animals such as tiger, leopard, wild boar, bear, fox etc. Also, the area has rich floral biodiversity with nearly 500 plant species. The TR constitutes the protective area significant for conservation of biodiversity of Central highlands. The TR provides good habitat in different compartments for variety of faunal and floral biodiversity. There are many important natural sites located in the park such as RamdahaKund, located in Maachmahua beat, Kanhaidah in Bhadaura beat, Domarpat in Podi Range. There are religious sites at Sidhbaba in Mohan Range where many people visit periodically. There are many rivers and nallahs and other perennial sources of water and the reserve has ample water over its sandy and rocky beds which are useful to wild animals and birds in summer season. The Banas River provides the western boundary to the TR and while the Gopad River provides the eastern boundary to the tiger reserve including the buffer zone. These two important rivers have several tributaries flowing through the reserve and large catchment to River Sone, these three systems also comprise Sone Gharial Sanctuary. Thus, the TR is an important catchment for river system. The details of some of these values are yet to be assessed. The draft indicative plan does not deal with it elaborately.
Values generally identified but not systematically assessed and monitored.	Fair	✓		
Most values systematically identified, assessed and monitored.	Good			
All values systematically identified, assessed and monitored.	Very good			

1.2 Are the threats to TR values well documented and assessed*?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Threats not systematically documented or assessed.	Poor		Indicative TCP Chapter 3 and documents submitted by the FD.	In the SWOT analyses following threats are identified in the Indicative TCP. Several electric line and a railway line provide biotic pressure, which is the main threat to the TR. Singrauli district is adjoining the TR, which is growing as one of the main Industrial Hub of MP. It will have indirect consequence over the long term survival of habitat and wild animals. Large population and cattle and human population in core as well as buffer zone of the reserve poses threat to the reserve. Invasion of invasive weeds has also been identified as one of the threats. The TR nestles 39 revenue villages and 86 villages in the buffer and fringes of the reserve. The presence of such human population makes the TR very sensitive in terms of wildlife poaching. The TR has the history of poaching of wild animals using jeep and searchlights in the past but it has been checked however, villagers do trap, snare, hunt with dog and using crop protection guns to kill wild animals mainly on the fringes of the reserve.
Threats generally identified but not systematically assessed.	Fair			
Most threats systematically identified and assessed.	Good	✓		
All threats systematically identified and assessed.	Very good			

*This assessment should be based on number, nature and extent of threats

*Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

1.3 Is the 'Core Area' of TR free from human and biotic interference?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
The 'Core Area' has extensive human and biotic interference.	Poor	✓	Documents submitted by the TR. List of villages in notification of Core and Buffer Zone.	There are 39 villages in the core area of the Tiger Reserve. Villages are spread throughout the sanctuary, but concentration of villages is high in Dubari Range. The human and cattle pressure from these villages are threat to the reserve. Recently, Kanjara village in Dubari Range has been relocated and relocation of three more villages namely, Baharvar, Goindvar and Tingi is in progress. The TR has already received the funds for the purpose. Although, the buffer area has been notified and govt. order has been made directing concerned territorial DCFs to hand over the buffer to the TR management, the same has yet not been complied. TR has not taken over the buffer areas.
The 'Core Area' has some human and biotic interference.	Fair			
The 'Core Area' has little human and biotic interference.	Good			
The 'Core Area' has no human and biotic interference.	Very good			

*This assessment should be based on existence of human settlements/ villages inside the core area; livestock grazing, cultivation, encroachments etc, resource extraction/ livelihood dependence of local communities and should reflect the overall interference due to all the above factors. The issue of 'Unified Control' of the 'Core' and 'Buffer' zones under the Field Director would also be taken into account.

1.4 Has the TR complied with the four statutory* requirements?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
None of the four SR, no compliance of Tripartite MoU and three SOPs met	Poor		Documents provided by the TR	Core and buffer has been notified. Tripartite MoU has been signed and SOP is being followed. Like other TRs of MP, PTR has also a centralized foundation. The management gets its action plan approved. However, in absence of local Foundation, participation of local stakeholders is lacking.
Two of the four SR, 50% conditions of the Tripartite MoU and SOP complied.	Fair			
Three of the four SR, 75% conditions of the Tripartite MoU and SOPs complied.	Good	✓		
All four SR, 100% conditions of the Tripartite MoU and SOPs complied.	Very good			

*Statutory requirements are (1) Legal delineation and notification of Core and Buffer Areas; (2) Establishment of Tiger Conservation Foundation; (3) Development of a Tiger Conservation Plan; and (4) Constitution of a State-level Steering Committee under the Chairmanship of the Chief Minister. TA refers agreement between Field Director, State Government and NTCA. The 3 SOPs are on (i) Straying of Tiger in human dominated landscape, (ii) Tiger Mortality and (iii) Disposal of Carcasses.

2. Planning

2.1 Status of Tiger Conservation Plan (TCP)?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No TCP in place.	Poor		Indicative TCP. Minutes of the meeting held on 11.02.2014 at Parsili Rest House.	The Indicative TCP was submitted to NTCA, and which has been examined and suggestions were communicated to the FD and state forest department on 22 nd October 2013. The TR is in the process of compiling data. Meetings have been organized with the concerned divisions to develop TCP for Corridor and Buffer.
TCP is under preparation	Fair	✓		
TR has a relevant TCP	Good			
TR has a comprehensive and relevant TCP, duly approved by the NTCA.	Very good			

* The scientific content and the participatory processes used in preparation of the TCP will be taken into account in assessing the quality of TCP

*Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

2.2 Does the TR safeguards the threatened biodiversity values?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR does not safeguard the threatened biodiversity values.	Poor		Documents provided by TR	The TR has established 63 patrolling camps in the core area, also 358 km patrolling roads have been provided to take up aggressive patrolling in all corners of the Reserve. Some of the old thatched accommodation for the camp is now being replaced by permanent structures. The staff is also motivated to take up patrolling in their areas. The passage of goods and passenger train on the railway tract through the reserve is a threat to biodiversity. The proposal of the railways to expand the railway track for providing shunting etc. has been turned down by the government. The TR management has also initiated process for relocation of villages from the core areas on voluntary basis. Attempts are being made to relocate villages from the core area, where all families have volunteered to move out. It is found during MEE that 23 villages have volunteered to be moved out. However, the remaining 16 villages, who have not volunteered fully, will continue to remain in the TR and pose threat. The TR management has made efforts to take up grassland management and maintenance of water holes to facilitate wild animals. The stringent fire protection measures have been taken up to contain fire, and it is reported that there was no major fire in the reserve in the last two years.
TR safeguards a few threatened biodiversity values.	Fair			
TR safeguards a large number of threatened biodiversity values.	Good	✓		
TR safeguards all threatened biodiversity values.	Very good			

*Remarks need to elaborate on the kind of safeguards and how they work or are intended to work

2.3 Are stakeholders given an opportunity to participate in planning process?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little, if any opportunity for stakeholder participation in planning.	Poor		Document submitted by the TR	Villagers and local as well as national NGOs are the key stakeholders of the TR. At the range level the management has consulted EDC for conservation planning in Core areas. Gram Sabha was also consulted in relocation, buffer notification and eco-sensitive zone notification. The cooperation of villagers is seen in Fire Protection work.
Stakeholders participate in some planning.	Fair			
Stakeholders participate in most planning processes.	Good	✓		
Stakeholders routinely and systematically participate in all planning processes.	Very good			

*The result of participation must show in the field and not merely reported as a routine exercise.

2.4 Are habitat management programmes systematically planned, relevant and monitored, and contribute effectively to Tiger and other endangered species conservation?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Habitat management programmes are entirely adhoc.	Poor		Documents submitted by TR	The experts are consulted for the management of grasses in different compartment. The patches are fenced with brushwood fencing and unwanted species are removed. The sample plots are laid in the grassland management areas to assess the status of regeneration of palatable grasses. Periodic herbarium of grasses and weeds are also prepared. The Reserve annually prepares Fire Control Plan and strictly observes same on the ground. Fire watchers are employed during fire season and about 2050 km
Limited planning and monitoring programmes are in place for habitat management.	Fair			
Habitat management programmes are generally planned and monitored.	Good	✓		

*Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

Habitat management programmes are thoroughly planned and monitored.	Very good			fire lines are cleared on annual basis. In addition to natural rivers and perennial nallah, the TR has constructed several water holes in the reserve to enable wild animals to drink water. The TR is blessed with perennial water bodies, but the patches where there are no water holes; the management has constructed 95 water holes in the core area.
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***This assessment should be primarily based on habitat management programmes in relation to habitats for species that are threatened (IUCN categories), are habitat specialists, subjected to seasonal movements, wide ranging with emphasis on the breeding and rearing habitat and may include factors such as food, water, shelter (all connotations).Habitat structure, composition, unique patches of vegetation and sensitive sites, sources of water and their distribution are integral. Corridors within buffer zone are critically important. For example, all riparian habitats. Have these been addressed? Is there a planning process in place? The management practices dealing with invasive species such as Lantana, Michaniaetc would be examined.**

2.5 Does the TR has an effective Protection Strategy (PS)* and Security Plan and Security Audit (SA) in place?

Assessment criteria ⁺				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR has little or no PS and SA.	Poor		Documents provided by the TR. Chapter 10 of Indicative TCP	There is no specific Security Plan prepared by the reserve. However, most of the activities required for active protection, are being implemented.For protection purpose, the TR has created a network of Patrolling Camps, barriers and wireless stations. Foot patrolling is done by field staff. Process of boat purchase for river patrolling has started. Apart from regular patrolling, special patrolling is done in monsoon season. Local markets and station are checked on regular basis. Criminal dossier is not maintained. For protection purposes, Sanjay TR has 24 permanent and 40 temporary thatched Patrolling Camps and for communication there are 18 fixed wireless stations. Also, there are 14 watch towers and 12 Check-posts in the TR to ensure protection in the area. At the field level protection the TR has sanctioned strength of 65 Forest Guards, 13 Foresters, 3 Deputy Rangers and 9 Range Officers for the Core Area of the TR. Currently, there are vacancies of 18 Forest Guards, 5 Foresters, 1 Deputy Ranger, and 5 Range Officers. In addition to the permanent staff there are 24 ex-army personnel and 358 daily wage workers which help the regular staff in protection of the area as well as seasonal works like fire protection.For effective patrolling and protection of the TR there are 12 four-wheelers, 11 two-wheelers, 1 motor boat and 19 bicycles apart from5 hired four wheelervehicles are deployed. There are two flying squads for gathering intelligence, conducting night patrols, raids and seizures, periodic checking. The TR has firearms (40) for protection purposes, but these firearms are deposited in the police custody in respective police stations. All camps are not fully equipped, but a significant number of these camps posses necessary equipment. During 2010-14, 10 cases of Wildlife offences were reported; of which 7 cases have been presented in the court while 3 cases have been closed by the department (cases of rail hit).
TR has an adhoc PS and SA.	Fair	✓		
TR has a generally relevant PS and SA but is not very effective.	Good			
TR has a comprehensive and very effective PS and SA.	Very good			

***This assessment takes inter-alia into account the nature of threats, the number and location of patrolling camps and foot and mobile patrolling, needs that relate to available manpower, terrain difficulties, practicability of area coverage, readiness to contain specific threats with necessary support and facilities. The constitution and functioning of Special Tiger Protection Force (STPF), Number of offences reported, arrests made, prosecution initiated and conviction achieved will be taken into account.**

2.6 Has the TR been effective in the mitigation of human-wildlife conflicts?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Human-wildlife conflicts are significant but poorly addressed.	Poor		Documents provided by TR management	During 2011-14, 58 cases wildlife conflict by wild boar, sloth bear, and jackal have been reported. During the period 87 cattle lifting cases by tiger and 284 cases by leopard have been reported. The compensations have been paid promptly as per the guidelines (MP Lok Seva Guarantee Adhiniyam, 2010) In 2013, Rs. 150555 was paid for 64 crop damage cases in 2012-13 the villages around the TR. Now, cases of crop compensation are handled by revenue department of the state.
TR has been able to mitigate few human-wildlife conflicts.	Fair			
TR has been able to mitigate many human-wildlife conflicts.	Good	✓		
TR has been effective in mitigating all human-wildlife conflicts.	Very good			

*** The assessment will take into account the number of incidences reported and payment of compensation made and its timelines.**

2.7 Is the TR integrated into a wider ecological network/ landscape following the principles of the ecosystem approach?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR not integrated into a wider network/ landscape.	Poor		Documents provided by TR.	The TR has identified corridors at the landscape level. Information related to occupancy of tigers and other wild animals in the corridor has been collected. All corridors are identified. The prescription in Sidhi Forest Division with reference to tiger conservation is brought out by Sidhi Working Plan Officer, whereas in North Sahdol the Working Plan is being revised and the prescriptions relating to tiger will be brought in. However, FD has collected all required information and stated that all prescriptions will be brought into the TCP which is being prepared by the FD.
Some limited attempts to integrate the TR into a network/ landscape.	Fair	✓		
TR is generally quite well integrated into a network/ landscape.	Good			
TR is fully integrated into a wider network/ landscape.	Very good			

***Assessment needs to consider the scope of opportunities on the landscape scale that exist. Consider whether any attempts have been made and what are these? Have all the important corridors been identified? What actions are planned / implemented for their security? Have the Forest Working Plans and Forest Development Corporation Plans within the identified landscapes taken cognizance of such new requirement? These should have been reflected in TCPs. Is there any effort to rationalize landuse around TR? Is any effort being made to plan and use 'Smart Green Infrastructure'?**

3. Inputs

3.1 Are personnel adequate, well organized and deployed with access to adequate resources in the Tiger Reserve (TR)*?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Few personnel explicitly allocated but poorly supported for TR management.	Poor		Documents provided by the TR management	Staff strength in the TR has been mentioned in under 2.5. The sanctioned permanent staff strength in the TR is adequate. Vacancies in the frontline staff are approximately 30% and the vacancies are needed to be filled up. Average age of the staff at cutting edge level is satisfactory. The staff has been provided with adequate equipment to effectively carry put their duties. All vehicles and camps are provided with first-aid box.
Some personnel explicitly allocated for TR management but not adequately supported and systematically linked to management objectives.	Fair			
Some personnel with fair support explicitly allocated towards achievement of specific TR management objectives.	Good	✓		
Adequate personnel appropriately supported and explicitly allocated towards achievement of specific TR management objectives.	Very good			

**This assessment should inter-alia be based on number of personnel allocated for attainment of TR objectives at the Range , Round, Beat and Patrolling camps levels or as relevant to the needs (sanctioned posts vis- a- vis existing personnel and needs beyond the sanctioned strengths. It is possible that posts have last been sanctioned several years back that do not now account for the current needs)*

3.2 Are resources (vehicle, equipment, building etc.) adequate, well organized and managed with desired access?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Few, if any, resources explicitly allocated for TR management.	Poor		Document provided by TR.	The resources are generally adequate and the tiger reserve requires more vehicles and other infrastructure for efficient implementation of the activities. Rapid Response Unit is available to handle wildlife cases. With these constraints the TR is endeavouring to meet the objectives of the Tiger Reserve Management.
Some resources explicitly allocated for TR management but not systematically linked to management objectives.	Fair	✓		
Some resources explicitly allocated towards achievement of specific TR management objectives.	Good			
Adequate resources explicitly allocated towards achievement of specific TR management objectives.	Very good			

**Assessment: These form a variety of resources. These may be segregated into immovable (structures) and movable categories and each further may be considered under the essential and desirable categories. It is best to start with what are the minimum needs to attain each objective, what is available and manner of use/deployment. The proportions of the 'essentials' and 'desirables' along the importance gradient of objectives would serve as pointers for score categories. Specific remarks would be vitally important.*

3.3 Are financial resources other than those of the State linked to priority actions and are funds adequate, released timely and utilized?

Released timely and utilized

Assessment criteria*																
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks												
Resource allocation is adhoc, funds are inadequate and seldom released in time and not utilized.	Poor		Records maintained and produced by FD office.	Funds allocated by NTCA and expenditure made by the TR in the last three years is given below;												
Some specific allocation for management of priority action. Funds are inadequate and there is some delay in release, partially utilized.	Fair			<table><tr><th>Year</th><th>Allotment</th><th>Expenditure</th></tr><tr><td>2011-12</td><td>158.320</td><td>140.396</td></tr><tr><td>2012-13</td><td>223.888</td><td>281.533</td></tr><tr><td>2013-14</td><td>329.040</td><td>328.945</td></tr></table>	Year	Allotment	Expenditure	2011-12	158.320	140.396	2012-13	223.888	281.533	2013-14	329.040	328.945
Year	Allotment	Expenditure														
2011-12	158.320	140.396														
2012-13	223.888	281.533														
2013-14	329.040	328.945														
Comprehensive planning and allocation that meets the most important objectives. Generally funds released with not much delay and mostly utilized.	Good	✓	Amount in Rs. Lakh													
Comprehensive planning and allocation of resources for attainment of most objectives. Funds generally released on-time and are fully utilized.	Very good		The funds allocated for various components are included in the APOs. These funds are utilized for the priority actions and during the last three years the funds have been found to be adequate and generally released in time.													

***Obtain details of funds released by NTCA and their utilization by TR in the last 3 years and indicate them under 'Remarks'. Also comment on the problems associated with funds allocations and their utilization.**

3.4 Are financial resources from the State linked to priority action and funds adequate, timely released and utilized for the management of Tiger Reserve?

utilized for the management of River Resources.

Assessment criteria*																			
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks															
Resource allocation is adhoc, funds are inadequate and seldom released in time and not utilized.	Poor		Documents provided by the TR	Fund allocated by the state government (Plan, including 13 th Finance Commission) and utilized by the TR in the last three years in given below; <table><tr><th>Year</th><th>Allotment</th><th>Expenditure</th></tr><tr><td>2011-12</td><td>66.994</td><td>65.194</td></tr><tr><td>2012-13</td><td>137.797</td><td>137.794</td></tr><tr><td>2013-14</td><td>910.607</td><td>910.593</td></tr><tr><td colspan="3">Amount is in Rs. Lakh</td></tr></table> The funds released are adequate. Release is timely and utilized for meeting the management and protection objectives.	Year	Allotment	Expenditure	2011-12	66.994	65.194	2012-13	137.797	137.794	2013-14	910.607	910.593	Amount is in Rs. Lakh		
Year	Allotment	Expenditure																	
2011-12	66.994	65.194																	
2012-13	137.797	137.794																	
2013-14	910.607	910.593																	
Amount is in Rs. Lakh																			
Some specific allocation for management of priority action. Funds are inadequate and there is some delay in release, partially utilized.	Fair																		
Comprehensive planning and allocation that meets the most important objectives. Generally funds released with not much delay and mostly utilized.	Good																		
Comprehensive planning and allocation of resources for attainment of most objectives. Funds generally released on-time and are fully utilized.	Very good	✓																	

***Obtain details of funds released by NTCA and their utilization by TR in the last 3 years and indicate them under 'Remarks'. Also comment on the problems associated with funds allocations and their utilization.**

3.5 What level of resources are provided by NGOs?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
NGOs contribute nothing for the management of the TR.	Poor		Tiger Reserve records.	The TR receives support from NGOs like Wildlife Conservation Trust and WWF-India. The TR management expresses its need to the NGOs. The supports are provided in kind and systematically sought by the TR management. The resources provided by WCT include a well equipped Rapid Response Unit to address the cases of human-wildlife conflict. Also, the Trust has provided mosquito nets (213), sleeping bags (56), Water bottle (100), Torches (220), Rain suit (240), LPG cooking stove (40) and other such items for the frontline staffs and patrolling camps. Syntax water tanks (56) and metal beds (200) have also been provided in the camps. A patrolling vehicle (Mahindra Thar) has been provided by WCT. Also, donation of Rs. 1.60 lakh from WCT and Rs. 50000 from JP Power has been provided to the TR. WWF-India has donated one vehicle for patrolling.
NGOs make some contribution to management of the TR but opportunities for collaboration are not systematically explored.	Fair			
NGOs contributions are systematically sought and negotiated for the management of some TR level activities.	Good			
NGOs contributions are systematically sought and negotiated for the management of many TR level activities.	Very good	✓		

4. Process

4.1 Does the TR have manpower resources trained in wildlife conservation for effective TR management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No trained officers and frontline staff in the TR.	Poor		Documents provided by TR	Out of the 3 officials, 1 has received PG Diploma in WL from WII. In 2013, the TR has organized training program in collaboration with outside agencies on; Wildlife Habitat Management, Field Craft, Fire fighting, and Wildlife Crime Prevention. Altogether, 98 staff were trained in these programmes.
Some trained officers and few trained frontline staff, posted in the TR.	Fair	✓		
All trained officers and fair number of trained frontline staff posted in the TR.	Good			
All trained officers and most of the trained frontline staff is posted in the TR.	Very good			

*Indicate % of trained staff in various categories. The number and thematic areas of the 'Internal Training' programmes organized in the TR in the last 3 years may be taken into account. Has the TR prepared a 'Staff Development Plan'? It is being implemented?

4.2 Is TR staff management performance linked to achievement of management objectives?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No linkage between staff management performance and management objectives.	Poor		Discussion with TR officials and documents provided	Performance indicators of frontline staff of the TR is not defined, however among the main duties of the staff, protection is one where their relative performance is judged. During the visit it was found that performance of most staff is linked to the achievement of management objectives.
Some linkage between staff management performance and management objectives, but not consistently or systematically assessed.	Fair			
Management performance for most staff is directly linked to achievement of relevant management objectives.	Good	✓		
Management performance of all staff is directly linked to achievement of relevant management objectives.	Very good			

4.3 Is there effective public participation in TR management and does it show in making a difference?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no public participation in TR management.	Poor		Documents produced by TR	The NGOs have assisted the TR management in resolving human-animal conflict, identifying buffer zone, eco-sensitive zone etc. However, no NGOs have come forward to participate in population estimation in the tiger reserve.
Opportunistic public participation in some of the relevant aspects of TR management.	Fair			
Systematic public participation in most of the relevant aspects of TR management.	Good	✓		
Comprehensive and systematic public participation in all important and relevant aspects of TR management.	Very good			

* The involvement of NGOs / NGLs in population estimation may be taken into account.

4.4 Is there a responsive system for handling complaints and comments about TR management?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Ad-hoc approach to handling complaints.	Poor		Document provided by the TR and Complaint Register	Complaints relating to administration, management and corruption issues and efficiency of the staff are negligible. General complaints received in the TR were 6 during 2012-14, of which 3 have been disposed and decision on 3 (of year 2014) is still pending and with regard to complaints made to the Chief Minister, it was found that 9 such complaints were referred to the tiger reserve of which necessary actions have been taken in 8 cases, one recently received complaints is pending. Thus, most complaints are addressed.
Complaints handling system operational but not responsive to individual issues and with limited follow up.	Fair			
Coordinated system logs and responds effectively to most complaints.	Good	✓		
All complaints systematically logged in coordinated system and timely response provided with minimal repeat complaints.	Very good			

* Does the TR maintain 'Suggestion Register'? What actions are taken to deal with suggestions?

4.5 Does TR management addresses the livelihood issues of resource dependent communities, especially of women?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No livelihood issues are addressed by TR management.	Poor		Documents provided by TR	The tiger reserve has generated 21475 man-days worth Rs.39.514 lakhs during 2011-14. No specific measures have been taken for livelihood issues of women.
Few livelihood issues are addressed by TR management.	Fair	✓		
Substantial livelihood issues are addressed by TR management.	Good			
Livelihood issues of resource dependent communities especially of women are addressed effectively by TR managers.	Very good			

* The number of man days generated in the last three years may be taken into account. Are funds received from District Agencies and other sources? Provide details of funds received in last 3 years.

4.6 Has the TR planned and implemented the voluntary 'Village Relocation' from the Core/ Critical Tiger Habitat (CTH)?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No planning and no implementation	Poor		Document provided by TR	The TR has relocated one village (24 families) and relocation process of 3 more villages (293 families) are in the pipeline, for which state government has provided grants. And, 19 more villages have given their consent for relocation, which will be implemented in phased manner. Remaining 16 villages have not fully opted for relocation.
Plans have been made but no implementation	Fair			
Plans have been made and some implementation is in progress	Good	✓		
Plans have been made and are being actively implemented / no human habitation in the CTH	Very good			

*Assessment will look into the village relocation planning process including availability of manpower, financial resources and NGO support, if any. Is there a mechanism to address the complaints received in respect to relocation process? Effort must be made to assess post relocation success or otherwise.

5. Output

5.1 Is adequate information on TR management publicly available?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no information on TR management publicly available.	Poor		Documents provided by the TR and Website of the TR	The TR has exclusive website <www.sanjaytigerreserve.in> and a Facebook account and lots of suggestions are received by the tiger reserve. These provide interface with public. The website is regularly updated. The TR has published 3 brochures on the Tiger Reserve. Hoardings have been put at the major road junction for publicity of the TR.
Publicly available information is general and has limited relevance to management accountability and the condition of public assets.	Fair	✓		
Publicly available information provides detailed insight into major management issues and condition of public assets.	Good			
Comprehensive reports are routinely available in public domain on management and condition of public assets.	Very good			

5.2 Are visitor services and facilities appropriate and adequate?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Visitor services and facilities do not exist.	Poor		Documents provided by TR	The TR has Forest Rest Houses at Dubari, Bastua, Kusami and Pondi (Total Beds: 8), which is available for visitors. Additionally, 5 more rooms are available at Parsili. Presently tourist inflow in the Reserve is low. No other tourist facility exists.
Visitor services and facilities are very basic.	Fair			
Visitor services and facilities are monitored from time to time and are fairly effective.	Good			
Visitor services and facilities are conscientiously maintained, regularly upgraded and monitored for visitor satisfaction	Very good	✓		

**Include the existence and quality of visitor and interpretation centers, including skills and capabilities of personnel manning these, TR related publications, films, videos; arrangements of stay (including places serving refreshments and food owned and managed by TR), watch towers and hides including safety factors, vehicles assigned for visitors including riding elephants, if any and their deployment, drinking water, rest rooms, garbage disposal, attended and self guided services in the field, visitor feedback on the quality of wilderness experience.*

5.3 Are research/ monitoring related trends systematically evaluated and routinely reported and used to improve management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no systematic evaluation or routine reporting of trends.	Poor		Documents provided by TR.	Negligible research has been undertaken in the TR. However, a research project entitle "Evaluation of prey availability and habitat suitability for tiger and its ranging pattern in Sanjay Tiger Reserve, Madhya Pradesh" has been sanctioned recently to the Wildlife Institute of India. The TR has taken initiative to vaccinate the cattle population in the adjoining villages. Vaccination cases; 2011: 35689 cattle 2012: 48495 cattle 2013: 34368 cattle The TR is conducting Phase IV exercise on their own. Scat samples were sent to CCMB for identification of individual identification of tiger. A researcher of a local university is engaged in studying grass species composition and changes in managed grasslands.
Some evaluation and reporting undertaken but neither systematic nor routine.	Fair	✓		
Systematic evaluation and routine reporting of trends undertaken.	Good			
Systematic evaluation and comprehensive reporting of trends undertaken and attempts made at course corrections as relevant.	Very good			

**Not all TRs attract projects and researchers and with exceptions, little research takes place on the TRs own steam because of systemic limitations. However, monitoring of some critical issues is expected e.g. population of tiger, co-predators and prey with insights into their demography and distribution (some opportunistic sampling by sightings, signs and spatial distribution during assessment would be extremely useful in terms of expert impression and as a pulse), monitoring incidence of livestock grazing, fires, weeds, sources of water, a variety of illegal activities typically associated with the reserve, wildlife health (e.g. epidemics, immunization of livestock) regeneration and change in vegetation, visitors and their activities, offence cases, ex-gratia payments etc. Efforts must be made to assess the planning and implementation of Phase-IV monitoring protocols and the success of implementation of M-Stripes (wherever applicable). Are the 'Sykes and Horill' monitoring plots maintained and data analyzed.*

5.4 Is there a systematic maintenance schedule and funds in place for management of infrastructure/assets?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No systematic inventory or maintenance schedule.	Poor		Records of TR	Sufficient funds are received for maintenance of buildings and other infrastructure. All the buildings / infrastructure are maintained and are in good condition.
Inventory maintenance is adhoc and so is the maintenance schedule.	Fair			
Systematic inventory provides the basis for maintenance schedule but funds are inadequate.	Good			
Systematic inventory provides the basis for maintenance schedule and adequate funds are made available.	Very good	✓		

6. Outcomes

6.1 Are populations of threatened species declining, stable or increasing?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Populations of key threatened / endangered species are declining	Poor		Interaction with TR staff	The TR have conducted their own assessment and found that number of wolf and four-horned antelope are stable, while that of leopard, sloth bear, chinkara is increasing. However, no document on population trend assessment for these species was found.
Some threatened/ endangered species populations declining, some are increasing, most others are stable.	Fair			
Several threatened/ endangered species populations increasing, most others are stable.	Good	✓		
All threatened/ endangered species populations either increasing or stable.	Very good			

**This needs to practically relate to the natural ecosystem potential rather than being driven merely by numbers and visibility. The assessment score may be elaborated under remarks.*

6.2. Is the population of tigers showing a declining, stable or increasing trend?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Populations of tiger is showing a declining trend	Poor		Document provided by TR (Camera trap photos and Scat Analysis report)	In the recent year tiger density has gone up as observed in different points of time. Camera trap photos reveal a minimum number of 5-7 tigers in the Reserve. As per CCMB Scat analysis report, 11 tigers were present in the Reserve.
Population of tiger is stable	Fair			
Population of tiger is showing an increasing trend	Good			
Population of tiger has significantly increased	Very good	✓		

** This assessment should be based in the context of available population estimate (2010-11) and the outcomes if the currently ongoing Phase-IV analyses*

6.3 Have the threats* to the TR being reduced / minimized? Or is there an increase?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Threats to the TR have not abated but have enhanced.	Poor		Documents provided by TR	Threats like presence of villages, human, cattle, railway line persists and TR management cannot do much about this. TR has also declined to the proposal of railways for its expansion. Illicit felling, poaching and fire management has been done thoroughly. Village relocation has started, one village has been relocated and three more are in the pipeline.
Some threats to the TR have abated, others continue their presence	Fair	✓		
Most threats to the TR have abated. The few remaining are vigorously being addressed	Good			
All threats to the TR have been effectively contained and an efficient system is in place to deal with any emerging situation	Very good			

*** Does the TR have a Disaster Risk Management Plan to deal with existing as well as emerging threats?**

6.4 Are the expectations of visitors' generally met or exceeded?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Expectations of visitors generally not met.	Poor		Feedback / suggestion registers and visitors book	Number of visitors in the TR is very less and expectations of almost all visitors are met.
Expectations of many visitors are met.	Fair			
Expectations of most visitors are met.	Good			
Expectations of all most all visitors are met.	Very good	✓		

*** What is the compliance status on Supreme Court / NTCA Guidelines in Ecotourism in TRs.**

6.5 Are local communities supportive of TR management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Local communities are hostile.	Poor		Documents provided by TR	Twenty three out of 39 villages in the core are willing to fully relocate. While the remaining villages have not fully supported their relocation. Cattle kills are being compensated timely and adequately, hence most of the local are supportive of TR management. However, in the recent months there was some altercation between villagers and the TR management, when the released tiger P212 entered in a village and made cattle kill.
Some are supportive.	Fair			
Most locals are supportive of TR management.	Good	✓		
All local communities supportive of TR management.	Very good			

***There could be many reasons for disenchantment. It could be real because of managerial neglect or the managerial efforts could be appropriate but there could be local elements/organizations who would like to keep the disaffection simmering for their own ulterior motives. Likewise success could be entirely because of the efforts of managers or they might be fortunate in striking partnerships with credible NGOs. Assessment may take the prevailing causes into account.**

7. MEE Score Card⁺

Framework Element Number	Framework Element Name	Number of Criteria (a)	Maximum Mark per question (b)	Total (a x b)	Marks obtained for the Element	Overall MEE Score and % age
1	Context	4	10	40	22.5	70.16
2	Planning	7	10	70	45	
3	Inputs	5	10	50	40	
4	Process	6	10	60	40	
5	Outputs	4	10	40	30	
6	Outcomes	5	10	50	40	
Total		31		310	217.5	

**Efforts will be made by the NTCA-WII-MEE Team to address the issue of assigning 'differential' weightages to the 31 Assessment Criteria including 'normalization'.*

Cluster: III

S.No.	Name of Tiger Reserve	Page No.
16.	Valmiki Tiger Reserve, Bihar	257
17.	Indravati Tiger Reserve, Chhattishgarh	268
18.	Achanakmar Tiger Reserve, Chhattishgarh	279
19.	Udanti-Sitanadi Tiger Reserve, Chhattishgarh	291
20.	Similipal Tiger Reserve, Odisha	302
21.	Satkosia Tiger Reserve, Odisha	313
22.	Nagarjunsagar Srisailem Tiger Reserve, Andhra Pradesh	325
23.	Kawal Tiger Reserve, Andhra Pradesh	337
24.	Palamau Tiger Reserve, Jharkhand	348

Management Effectiveness Evaluation (MEE) of Valmiki Tiger Reserve

1. Context

1.1 Are the values of the TR well documented, assessed and monitored?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Values not systematically documented, assessed and monitored.	Poor		TCP, Notification of declaration of NP,	As per the notification
Values generally identified but not systematically assessed and monitored.	Fair	✓		
Most values systematically identified, assessed and monitored.	Good			
All values systematically identified, assessed and monitored.	Very good			

1.2 Are the threats to TR values well documented and assessed*?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Threats not systematically documented or assessed.	Poor		TCP, Notification of declaration of NP,	As per the notification
Threats generally identified but not systematically assessed.	Fair	✓		
Most threats systematically identified and assessed.	Good			
All threats systematically identified and assessed.	Very good			

***This assessment should be based on number, nature and extent of threats**

1.3 Is the 'Core Area' of TR free from human and biotic interference?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
The 'Core Area' has extensive human and biotic interference.	Poor			Chaitra Navratra pilgrimage (interference for 9 days), figure has come down from 90,000 to 30,000
The 'Core Area' has some human and biotic interference.	Fair			
The 'Core Area' has little human and biotic interference.	Good			
The 'Core Area' has no human and biotic interference.	Very good	✓		

***This assessment should be based on existence and the efforts made by TR management to address issues related to human settlements/ villages inside the core area; livestock grazing, cultivation, encroachments etc, resource extraction/ livelihood dependence of local communities and should reflect the overall interference due to all the above factors. The issue of 'Unified Control' of the 'Core' and 'Buffer' zones under the Field Director would also be taken into account.**

1.4 Has the TR complied with the four Statutory* Requirements (SR) along with Tripartite MoU and three Standard Operation Procedures (SOP)?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
None of the four SR, no compliance of Tripartite MoU and three SOPs met	Poor			75 % tripartite conditions complied with Steering committee meetings not held on regular basis
Two of the four SR, 50% conditions of the Tripartite MoU and SOPs complied	Fair			
Three of the four SR, 75% conditions of the Tri-partite MoU and SOPs complied	Good	✓		
All four SR, 100% conditions of the Tripartite MoU and SOPs complied	Very good			

***Statutory requirements are (1) Legal delineation and notification of Core and Buffer Areas; (2) Establishment of Tiger Conservation Foundation; (3) Development of a Tiger Conservation Plan; and (4) Constitution of a State-level Steering Committee under the Chairmanship of the Chief Minister. TA refers agreement between Field Director, State Government and NTCA. The 3 SOPs are on (i) Straying of Tiger in human dominated landscape, (ii) Tiger Mortality and (iii) Disposal of Carcasses**

2. Planning

2.1 Status of Tiger Conservation Plan (TCP)*?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No TCP in place.	Poor		Final draft TCP	NTCA approval not received although all the suggestions / comments incorporated in the TCP, but there is no suggestions of people participation in the preparation of the TCP
TCP is under preparation	Fair			
TR has a relevant TCP	Good	✓		
TR has a comprehensive and relevant TCP, duly approved by the NTCA	Very good			

***The scientific content and the participatory processes used in preparation of the TCP will be taken into account in assessing the quality of TCP.**

2.2 Does the TR safeguards the threatened biodiversity values?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR does not safeguard the threatened biodiversity values.	Poor		Final draft TCP	Most of the threats to the TR are safeguarded
TR safeguards a few threatened biodiversity values.	Fair			
TR safeguards a large number of threatened biodiversity values.	Good	✓		
TR safeguards all threatened biodiversity values.	Very good			

***Remarks need to elaborate on the kind of safeguards and how they work or are intended to work**

2.3 Are stakeholders given an opportunity to participate in planning process?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little, if any opportunity for stakeholder participation in planning.	Poor			Scores pending for docs
Stakeholders participate in some planning.	Fair			
Stakeholders participate in most planning processes.	Good	✓		
Stakeholders routinely and systematically participate in all planning processes.	Very good			

*The result of participation must show in the field and not merely reported as a routine exercise.

2.4 Are habitat management programmes systematically planned, relevant and monitored, and contribute effectively to Tiger and other endangered species conservation?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Habitat management programmes are entirely adhoc.	Poor		Final draft TCP	The habitat management included in TCP, are safeguarding the threatened species and species specific, (docs)
Limited planning and monitoring programmes are in place for habitat management.	Fair			
Habitat management programmes are generally planned and monitored.	Good	✓		
Habitat management programmes are thoroughly planned and monitored.	Very good			

*This assessment should be primarily based on habitat management programmes in relation to habitats for species that are threatened (IUCN categories), are habitat specialists, subjected to seasonal movements, wide ranging with emphasis on the breeding and rearing habitat and may include factors such as food, water, shelter (all connotations). Habitat structure, composition, unique patches of vegetation and sensitive sites, sources of water and their distribution are integral. Corridors within buffer zone are critically important. For example, all riparian habitats. Have these been addressed? Is there a planning process in place? The management practices dealing with invasive species such as Lantana, Michania etc. would be examined.

2.5 Does the TR has an effective Protection Strategy (PS)* and Security Plan and Security Audit (SA) in place?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR has little or no PS and SA.	Poor		Details on the "cases final"	
TR has an adhoc PS and SA.	Fair			
TR has a generally relevant PS and SA but is not very effective.	Good	✓		
TR has a comprehensive and very effective PS and SA.	Very good			

*This assessment takes inter-alia into account the nature of threats, the number and location of patrolling camps and foot and mobile patrolling, needs that relate to available manpower, terrain difficulties, practicability of area coverage, readiness to contain specific threats with necessary support and facilities. The constitution and functioning of Special Tiger Protection Force (STPF), Number of offences reported, arrests made, prosecution initiated and conviction achieved will be taken into account.

2.6 Has the TR been effective in the mitigation of human-wildlife conflicts?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Human-wildlife conflicts are significant but poorly addressed.	Poor			Support from Patna Zoo Compensations paid timely as per the registers
TR has been able to mitigate few human-wildlife conflicts.	Fair			
TR has been able to mitigate many human-wildlife conflicts.	Good			
TR has been effective in mitigating all human-wildlife conflicts.	Very good	✓		

***The assessment will take into account the number of incidences reported and payment of compensation made and its timeliness.**

2.7 Is the TR integrated into a wider ecological network/ landscape following the principles of the ecosystem approach?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR not integrated into a wider network/ landscape.	Poor		Final draft TCP	Suhagi Barwa WLS in UP to be included as a buffer to VTR
Some limited attempts to integrate the TR into a network/ landscape.	Fair			
TR is generally quite well integrated into a network/ landscape.	Good	✓		
TR is fully integrated into a wider network/ landscape.	Very good			

***Assessment needs to consider the scope of opportunities on the landscape scale that exist. Consider whether any attempts have been made and what are these? Have all the important corridors been identified? What actions are planned/implemented for their security? Have the Forest Working Plans and Forest Development Corporation Plans within the identified landscapes taken cognizance of such new requirement? These should have been reflected in TCPs. Is there is any effort to rationalize landuse around TR? Is any effort being made to plan and use 'Smart Green Infrastructure'?**

1. 3. Inputs

3.1 Are personnel adequate, well organized and deployed with access to adequate resources in the Tiger Reserve (TR)*?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Few, personnel explicitly allocated but poorly supported for TR management.	Poor		Document on the status of staff in tabular form provided	General shortage of frontline staff, however been filled by trackers from villages nearby (roughly 400 persons)
Some personnel explicitly allocated for TR management but not adequately supported and systematically linked to management objectives.	Fair			
Some personnel with fair support explicitly allocated towards achievement of specific TR management objectives.	Good	✓		
Adequate personnel appropriately supported and explicitly allocated towards achievement of specific TR management objectives.	Very good			

***This assessment should inter-alia be based on number of personnel allocated for attainment of TR objectives at the Range , Round, Beat and Patrolling camps levels or as relevant to the needs (sanctioned posts vis- a- vis existing personnel and needs beyond the sanctioned strengths. It is possible that posts have last been sanctioned several years back that do not now account for the current needs)**

3.2 Are resources (vehicle, equipment, building etc.) adequate, well organized and managed with desired access?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Few, if any, resources explicitly allocated for TR management.	Poor		Document on the status of resources in tabular form provided	
Some resources explicitly allocated for TR management but not systematically linked to management objectives.	Fair			
Some resources explicitly allocated towards achievement of specific TR management objectives.	Good	✓		
Adequate resources explicitly allocated towards achievement of specific TR management objectives.	Very good			

*** These form a variety of resources. These may be segregated into immovable (structures) and movable categories and each further may be considered under the essential and desirable categories. It is best to start with what are the minimum needs to attain each objective, what is available and manner of use/deployment. The proportions of the 'essentials' and 'desirables' along the importance gradient of objectives would serve as pointers for score categories. Specific remarks would be vitally important.**

1. Provide with registers of maintenance of the vehicles and buildings and equipments
2. Table on no of vehicles, buildings and equipments (available and required/ planned)

3.3 Are financial resources other than those of the State linked to priority actions and are funds adequate, released timely and utilized?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Resource allocation is adhoc, funds are inadequate and seldom released in time and not utilized.	Poor		details of funds released by NTCA	
Some specific allocation for management of priority action. Funds are inadequate and there is some delay in release, partially utilized.	Fair			
Comprehensive planning and allocation that meets the most important objectives. Generally funds released with not much delay and mostly utilized.	Good			
Comprehensive planning and allocation of resources for attainment of most objectives. Funds generally released on-time and are fully utilized.	Very good	✓		

***Obtain details of funds released by NTCA and their utilization by TR in the last 3 years and indicate them under 'Remarks'. Also comment on the problems associated with fund allocations and their utilization.**

3.4 Are financial resources from the State linked to priority action and funds adequate, timely released and utilized for the management of Tiger Reserve?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Resource allocation is adhoc, funds are inadequate and seldom released in time and not utilized.	Poor			To send utilization of funds document, as per the funds allocated
Some specific allocation for management of priority action. Funds are inadequate and there is some delay in release, partially utilized.	Fair			
Comprehensive planning and allocation that meets the most important objectives. Generally funds released with not much delay and mostly utilized.	Good			
Comprehensive planning and allocation of resources for attainment of most objectives. Funds generally released on-time and are fully utilized.	Very good	✓		

***Obtain details of funds released by State and their utilization by TR in the last 3 years and indicate them under 'Remarks'. Also comment on the problems associated with fund allocation and their utilization.**
details of funds released by state and their utilization by TR in the last 3 years

3.5 What level of resources are provided by NGOs?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
NGOs contribute nothing for the management of the TR.	Poor			To submit the check list
NGOs make some contribution to management of the TR but opportunities for collaboration are not systematically explored.	Fair			
NGOs contributions are systematically sought and negotiated for the management of some TR level activities.	Good	✓		
NGOs contributions are systematically sought and negotiated for the management of many TR level activities.	Very good			

4. Process

4.1 Does the TR have manpower resources trained in wildlife conservation for effective TR management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No trained officers and frontline staff in the TR.	Poor		Document on the trainings conducted at the VTR provided	
Some trained officers and few trained frontline staff, posted in the TR.	Fair	✓		
All trained officers and fair number of trained frontline staff posted in the TR.	Good			
All trained officers and most of the trained frontline staff is posted in the TR.	Very good			

**Indicate % of trained staff in various categories. The number and thematic areas of the 'Internal Training' programmes organized in the TR in the last 3 years may be taken into account. Has the TR prepared a 'Staff Development Plan'? Is it being implemented?*

4.2 Is TR staff management performance linked to achievement of management objectives?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No linkage between staff management performance and management objectives.	Poor			Tiger rescue reward
Some linkage between staff management performance and management objectives, but not consistently or systematically assessed.	Fair			
Management performance for most staff is directly linked to achievement of relevant management objectives.	Good	✓		
Management performance of all staff is directly linked to achievement of relevant management objectives.	Very good			

4.3 Is there effective public participation in TR management* and does it show in making a difference?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no public participation in TR management.	Poor			Some public participation in relevant aspects on the management
Opportunistic public participation in some of the relevant aspects of TR management.	Fair	✓		
Systematic public participation in most of the relevant aspects of TR management.	Good			
Comprehensive and systematic public participation in all important and relevant aspects of TR management.	Very good			

**The involvement of NGOs/ NGIs in population estimation may be taken into account)*

Presence of NGOs, Media, Villagers, Politicians, Administrators, Hotel / resorts – show documents on how and when they were involved by producing documents

4.4 Is there a responsive system for handling complaints and comments* about TR management?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Ad-hoc approach to handling complaints.	Poor		Link and a print copy submitted	website
Complaints handling system operational but not responsive to individual issues and with limited follow up.	Fair			
Coordinated system logs and responds effectively to most complaints.	Good			
All complaints systematically logged in coordinated system and timely response provided with minimal repeat complaints.	Very good	✓		

***Does the TR maintains 'Suggestions Register'? What actions are taken to deal with suggestions? Complaint registers for staff and visitors, along with actions taken on the complaints Sign boards, pamphlets, website, brochure, etc, may be produced**

4.5 Does TR management addresses the livelihood issues* of resource dependent communities, especially of women?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No livelihood issues are addressed by TR management.	Poor			
Few livelihood issues are addressed by TR management.	Fair	✓		
Substantial livelihood issues are addressed by TR management.	Good			
Livelihood issues of resource dependent communities especially of women are addressed effectively by TR managers.	Very good			

***The number of mandays generated in the last 3 years may be taken into account. Are funds received from District Agencies and other sources? Provide details of funds received in last 3 years.**

4.6 Has the TR planned and implemented the voluntary 'Village Relocation' from the Core/ Critical Tiger Habitat (CTH)?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No planning and no implementation	Poor			No villages in core
Plans have been made but no implementation	Fair			
Plans have been made and some implementation is in progress	Good			
Plans have been made and are being actively implemented/ no human habitation in the CTH	Very good	✓		

***Assessment will look into the village relocation planning process including availability of manpower, financial resources and NGO support, if any. Is there a mechanism to address the complaints received in respect of relocation process? Effort must be made to assess post-relocation success or otherwise.**

5. Output

5.1 Is adequate information on TR management publicly available?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no information on TR management publicly available.	Poor			website
Publicly available information is general and has limited relevance to management accountability and the condition of public assets.	Fair			
Publicly available information provides detailed insight into major management issues and condition of public assets.	Good	✓		
Comprehensive reports are routinely available in public domain on management and condition of public assets.	Very good			

Website, brochures, info on hotels, resorts, TR entry points, TR tickets booth and receptions, facebook and other online pages

5.2 Are visitor services and facilities appropriate and adequate?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Visitor services and facilities do not exist.	Poor			
Visitor services and facilities are very basic.	Fair	✓		
Visitor services and facilities are monitored from time to time and are fairly effective.	Good			
Visitor services and facilities are conscientiously maintained, regularly upgraded and monitored for visitor satisfaction	Very good			

***Include the existence and quality of visitor and interpretation centers, including skills and capabilities of personnel manning these, TR related publications, films, videos; arrangements of stay (including places serving refreshments and food owned and managed by TR), watch towers and hides including safety factors, vehicles assigned for visitors including riding elephants, if any and their deployment, drinking water, rest rooms, garbage disposal, attended and self guided services in the field, visitor feed back on the quality of wilderness experience.**

5.3 Are research/ monitoring related trends systematically evaluated and routinely reported and used to improve management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no systematic evaluation or routine reporting of trends.	Poor		Few Research reports submitted	
Some evaluation and reporting undertaken but neither systematic nor routine.	Fair			
Systematic evaluation and routine reporting of trends undertaken.	Good	✓		
Systematic evaluation and comprehensive reporting of trends undertaken and attempts made at course corrections as relevant.	Very good			

***Not all TRs attract projects and researchers and with exceptions, little research takes place on the TRs own steam because of systemic limitations. However, monitoring of some critical issues is expected e.g. population of tiger, co-predators and prey with insights into their demography and distribution (some opportunistic sampling by sightings, signs and spatial distribution during assessment would be extremely useful in terms of expert impression and as a pulse), monitoring incidence of livestock grazing, fires, weeds, sources of water, a variety of illegal activities typically associated with the reserve, wildlife health (e.g. epidemics, immunization of livestock) regeneration and change in vegetation, visitors and their activities, offence cases, ex-gratia payments etc. Efforts must be made to assess the planning and implementation of Phase-IV monitoring protocols and the success of implementation of M-Stripes (wherever applicable). Are the 'Sykes and Horill' monitoring plots maintained and data analyzed?**

5.4 Is there a systematic maintenance schedule and funds in place for management of infrastructure/assets?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No systematic inventory or maintenance schedule.	Poor		Document submitted	
Inventory maintenance is adhoc and so is the maintenance schedule.	Fair			
Systematic inventory provides the basis for maintenance schedule but funds are inadequate.	Good			
Systematic inventory provides the basis for maintenance schedule and adequate funds are made available.	Very good	✓		

6. Outcomes

6.1 Are populations of threatened species declining, stable or increasing?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Populations of key threatened/ endangered species are declining.	Poor		WWF report	
Some threatened/ endangered species populations declining, some are increasing, most others are stable.	Fair			
Several threatened/ endangered species populations increasing, most others are stable.	Good	✓		
All threatened/ endangered species populations either increasing or stable.	Very good			

***This needs to practically relate to the natural ecosystem potential rather than being driven merely by numbers and visibility. The assessment score may be elaborated under remarks.**

**Data on camera trapping, few pictures may be shown,
Systematic reporting documents may be shown
List of identified threatened species**

6.2 Is the population of tigers showing a declining, stable or increasing trend?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Population of tiger is showing a declining trend	Poor		WWF report	
Population of tiger is stable	Fair			
Population of tiger is showing an increasing trend	Good			
Population of tiger has significantly increased	Very good	✓		

***This assessment should be based in the context of available population estimate (2010-11) and the outcomes of the currently ongoing Phase-IV analyses.**

6.3 Have the threats* to the TR being reduced/ minimized? Or is there an increase?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Threats to the TR have not abated but have enhanced.	Poor			There is no Disaster Risk Management Plan
Some threats to the TR have abated, others continue their presence	Fair			
Most threats to the TR have abated. The few remaining are vigorously being addressed	Good	✓		
All threats to the TR have been effectively contained and an efficient system is in place to deal with any emerging situation	Very good			

***Does the TR has a Disaster Risk Management Plan to deal with existing as well as emerging threats?**

6.4 Are the expectations of visitors* generally met or exceeded?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Expectations of visitors generally not met.	Poor			
Expectations of many visitors are met.	Fair	✓		
Expectations of most visitors are met.	Good			
Expectations of all most all visitors are met.	Very good			

***What is the compliance status on Supreme Court/ NTCA Guidelines on Ecotourism in TRs?**

6.5 Are local communities supportive of TR management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Local communities are hostile.	Poor			
Some are supportive.	Fair			
Most locals are supportive of TR management.	Good	✓		
All local communities supportive of TR management.	Very good			

***There could be many reasons for disenchantment. It could be real because of managerial neglect or the managerial efforts could be appropriate but there could be local elements/organizations who would like to keep the disaffection simmering for their own ulterior motives. Likewise success could be entirely because of the efforts of managers or they might be fortunate in striking partnerships with credible NGOs. Assessment may take the prevailing causes into account.**

7. MEE Score Card*

Framework Element Number	Framework Element Name	Number of Criteria (a)	Maximum Mark per question (b)	Total (a x b)	Marks obtained for the Element	Overall MEE Score and % age
1	Context	4	10	40	27.5	75.80%
2	Planning	7	10	70	55	
3	Inputs	5	10	50	42.5	
4	Process	6	10	60	42.5	
5	Outputs	4	10	40	30	
6	Outcomes	5	10	50	37.5	
Total		31		310	235	

***Efforts will be made by the NTCA-WII-MEE Team to address the issue of assigning 'differential' weightages to the 30 Assessment Criteria including 'normalization'.**

Assessment Criteria for addressing issues relating to Climate Change & Carbon capture in the Tiger Reserves (TRs)

1. Additional Criteria on Climate Change: Is the TR being consciously managed to adapt to climate change?

Condition	Category*	(Tick ✓)	Comment/ Explanation	Next Steps
There have been no efforts to consider adaptation to climate change in management	Poor	✓		
Some initial thought has taken place about likely impacts of climate change, but this has yet to be translated into management plans	Fair			
Detailed plans have been drawn up about how to adapt management to predicted climate change, but these have yet to be translated into active management.	Good			
Detailed plans have been drawn up about how to adapt management to predicted climate change, and these are already being implemented	Very good			

2. Additional Criteria on Climate Change: Is the TR being consciously managed to prevent carbon loss and to encourage further carbon capture?

Condition	Category*	(Tick ✓)	Comment/ Explanation	Next Steps
Carbon storage and carbon dioxide capture have not been considered in management of the TR	Poor	✓		
Carbon storage and carbon dioxide capture have been considered in general terms, but has not yet been significantly reflected in management	Fair			
There are active measures in place to reduce carbon loss from the TR, but no conscious measures to increase carbon dioxide capture	Good			
There are active measures in place both to reduce carbon loss from the TR and to increase carbon dioxide capture	Very good			

Management Effectiveness Evaluation (MEE) of Indravati Tiger Reserves

1. Context

1.1 Are the values of the TR well documented, assessed and monitored?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Values not systematically documented, assessed and monitored.	Poor		TCP	Values identified and documented in the TCP (not approved)
Values generally identified but not systematically assessed and monitored.	Fair	✓		
Most values systematically identified, assessed and monitored.	Good			
All values systematically identified, assessed and monitored.	Very good			

1.2 Are the threats to TR values well documented and assessed*?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Threats not systematically documented or assessed.	Poor			
Threats generally identified but not systematically assessed.	Fair	✓		
Most threats systematically identified and assessed.	Good			
All threats systematically identified and assessed.	Very good			

*This assessment should be based on number, nature and extent of threats

1.3 Is the 'Core Area' of TR free from human and biotic interference?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
The 'Core Area' has extensive human and biotic interference.	Poor	✓	TCP	56 villages inside the core area
The 'Core Area' has some human and biotic interference.	Fair			
The 'Core Area' has little human and biotic interference.	Good			
The 'Core Area' has no human and biotic interference.	Very good			

*This assessment should be based on existence and the efforts made by TR management to address issues related to human settlements/ villages inside the core area; livestock grazing, cultivation, encroachments etc, resource extraction/ livelihood dependence of local communities and should reflect the overall interference due to all the above factors. The issue of 'Unified Control' of the 'Core' and 'Buffer' zones under the Field Director would also be taken into account.

1.4 Has the TR complied with the four Statutory* Requirements (SR) along with Tripartite MoU and three Standard Operation Procedures (SOP)?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
None of the four SR, no compliance of Tripartite MoU and three SOPs met	Poor			SoPs yet to be distributed
Two of the four SR, 50% conditions of the Tripartite MoU and SOPs complied	Fair	✓		
Three of the four SR, 75% conditions of the Tripartite MoU and SOPs complied	Good			
All four SR, 100% conditions of the Tripartite MoU and SOPs complied	Very good			

***Statutory requirements are (1) Legal delineation and notification of Core and Buffer Areas; (2) Establishment of Tiger Conservation Foundation; (3) Development of a Tiger Conservation Plan; and (4) Constitution of a State-level Steering Committee under the Chairmanship of the Chief Minister. TA refers agreement between Field Director, State Government and NTCA. The 3 SOPs are on (i) Straying of Tiger in human dominated landscape, (ii) Tiger Mortality and (iii) Disposal of Carcasses**

2. Planning

2.1 Status of Tiger Conservation Plan (TCP) +?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No TCP in place.	Poor			Core & Buffer TCP submitted, Corridor TCP Under preparation
TCP is under preparation	Fair	✓		
TR has a relevant TCP	Good			
TR has a comprehensive and relevant TCP, duly approved by the NTCA	Very good			

***The scientific content and the participatory processes used in preparation of the TCP will be taken into account in assessing the quality of TCP.**

2.2 Does the TR safeguards the threatened biodiversity values?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR does not safeguard the threatened biodiversity values.	Poor			Proposed in the draft TCP
TR safeguards a few threatened biodiversity values.	Fair	✓		
TR safeguards a large number of threatened biodiversity values.	Good			
TR safeguards all threatened biodiversity values.	Very good			

***Remarks need to elaborate on the kind of safeguards and how they work or are intended to work**

2.3 Are stakeholders given an opportunity to participate in planning process?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little, if any opportunity for stakeholder participation in planning.	Poor			It was informed that the stakeholder participation has been incorporated in the microplan
Stakeholders participate in some planning.	Fair	✓		
Stakeholders participate in most planning processes.	Good			
Stakeholders routinely and systematically participate in all planning processes.	Very good			

***The result of participation must show in the field and not merely reported as a routine exercise.**

2.4 Are habitat management programmes systematically planned, relevant and monitored, and contribute effectively to Tiger and other endangered species conservation?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Habitat management programmes are entirely adhoc.	Poor		Mentioned in the TCP (4.2, page 96)	Mentioned in the TCP and also informed by the FD, ITR, during the meeting
Limited planning and monitoring programmes are in place for habitat management.	Fair	✓		
Habitat management programmes are generally planned and monitored.	Good			
Habitat management programmes are thoroughly planned and monitored.	Very good			

***This assessment should be primarily based on habitat management programmes in relation to habitats for species that are threatened (IUCN categories), are habitat specialists, subjected to seasonal movements, wide ranging with emphasis on the breeding and rearing habitat and may include factors such as food, water, shelter (all connotations).Habitat structure, composition, unique patches of vegetation and sensitive sites, sources of water and their distribution are integral. Corridors within buffer zone are critically important. For example, all riparian habitats. Have these been addressed? Is their a planning process in place? The management practices dealing with invasive species such as Lantana, Michania etc. would be examined.**

2.5 Does the TR has an effective Protection Strategy (PS)* and Security Plan and Security Audit (SA) in place?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR has little or no PS and SA.	Poor	✓	Patrolling camp map, TCP	No cases registered in last 3 yrs. No poaching cases registered since 1993. Only 13 Patrolling camps to man large core area of 1258.37 Sq. Kms
TR has an adhoc PS and SA.	Fair			
TR has a generally relevant PS and SA but is not very effective.	Good			
TR has a comprehensive and very effective PS and SA.	Very good			

***This assessment takes inter-alia into account the nature of threats, the number and location of patrolling camps and foot and mobile patrolling, needs that relate to available manpower, terrain difficulties, practicability of area coverage, readiness to contain specific threats with necessary support and facilities. The constitution and functioning of Special Tiger Protection Force (STPF), Number of offences reported, arrests made, prosecution initiated and conviction achieved will be taken into account.**

2.6 Has the TR been effective in the mitigation of human-wildlife conflicts?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Human-wildlife conflicts are significant but poorly addressed.	Poor		Compensation details provided	No human casualties between 2007 and 2011
TR has been able to mitigate few human-wildlife conflicts.	Fair	✓		
TR has been able to mitigate many human-wildlife conflicts.	Good			
TR has been effective in mitigating all human-wildlife conflicts.	Very good			

***The assessment will take into account the number of incidences reported and payment of compensation made and its timeliness.**

2.7 Is the TR integrated into a wider ecological network / landscape following the principles of the ecosystem approach?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR not integrated into a wider network/ landscape.	Poor			
Some limited attempts to integrate the TR into a network/ landscape.	Fair	✓		
TR is generally quite well integrated into a network/ landscape.	Good			
TR is fully integrated into a wider network/ landscape.	Very good			

***Assessment needs to consider the scope of opportunities on the landscape scale that exist. Consider whether any attempts have been made and what are these? Have all the important corridors been identified? What actions are planned / implemented for their security? Have the Forest Working Plans and Forest Development Corporation Plans within the identified landscapes taken cognizance of such new requirement? These should have been reflected in TCPs. Is there is any effort to rationalize landuse around TR? Is any effort being made to plan and use 'Smart Green Infrastructure'?**

3. Inputs

3.1 Are personnel adequate, well organized and deployed with access to adequate resources in the Tiger Reserve (TR)*?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Few, personnel explicitly allocated but poorly supported for TR management.	Poor		Staff details provided	
Some personnel explicitly allocated for TR management but not adequately supported and systematically linked to management objectives.	Fair			
Some personnel with fair support explicitly allocated towards achievement of specific TR management objectives.	Good	✓		
Adequate personnel appropriately supported and explicitly allocated towards achievement of specific TR management objectives.	Very good			

***This assessment should inter-alia be based on number of personnel allocated for attainment of TR objectives at the Range , Round, Beat and Patrolling camps levels or as relevant to the needs (sanctioned posts vis- a- vis existing personnel and needs beyond the sanctioned strengths. It is possible that posts have last been sanctioned several years back that do not now account for the current needs)**

3.2 Are resources (vehicle, equipment, building etc.) adequate, well organized and managed with desired access?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Few, if any, resources explicitly allocated for TR management.	Poor			Inadequate
Some resources explicitly allocated for TR management but not systematically linked to management objectives.	Fair	✓		Relevant Registers to be maintained
Some resources explicitly allocated towards achievement of specific TR management objectives.	Good			
Adequate resources explicitly allocated towards achievement of specific TR management objectives.	Very good			

*** These form a variety of resources. These may be segregated into immovable (structures) and movable categories and each further may be considered under the essential and desirable categories. It is best to start with what are the minimum needs to attain each objective, what is available and manner of use/deployment. The proportions of the 'essentials' and 'desirables' along the importance gradient of objectives would serve as pointers for score categories. Specific remarks would be vitally important.**

3.3 Are financial resources other than those of the State linked to priority actions and are funds adequate, released timely and utilized?

Assessment criteria*				
Condition	Category*	(Tick)	Reference document(s)	Remarks
Resource allocation is adhoc, funds are inadequate and seldom released in time and not utilized.	Poor			Inadequate funds
Some specific allocation for management of priority action. Funds are inadequate and there is some delay in release, partially utilized.	Fair	✓		
Comprehensive planning and allocation that meets the most important objectives. Generally funds released with not much delay and mostly utilized.	Good			
Comprehensive planning and allocation of resources for attainment of most objectives. Funds generally released on-time and are fully utilized.	Very good			

***Obtain details of funds released by NTCA and their utilization by TR in the last 3 years and indicate them under 'Remarks'. Also comment on the problems associated with fund allocations and their utilization.**

3.4 Are financial resources from the State linked to priority action and funds adequate, timely released and utilized for the management of Tiger Reserve?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Resource allocation is adhoc, funds are inadequate and seldom released in time and not utilized.	Poor			Inadequate funds from State
Some specific allocation for management of priority action. Funds are inadequate and there is some delay in release, partially utilized.	Fair	✓		
Comprehensive planning and allocation that meets the most important objectives. Generally funds released with not much delay and mostly utilized.	Good			
Comprehensive planning and allocation of resources for attainment of most objectives. Funds generally released on-time and are fully utilized.	Very good			

***Obtain details of funds released by State and their utilization by TR in the last 3 years and indicate them under 'Remarks'. Also comment on the problems associated with fund allocation and their utilization.**

3.5 What level of resources are provided by NGOs?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
NGOs contribute nothing for the management of the TR.	Poor			Limited local NGO participation and contribution
NGOs make some contribution to management of the TR but opportunities for collaboration are not systematically explored.	Fair	✓		
NGOs contributions are systematically sought and negotiated for the management of some TR level activities.	Good			
NGOs contributions are systematically sought and negotiated for the management of many TR level activities.	Very good			

4. Process

4.1 Does the TR have manpower resources trained in wildlife conservation for effective TR management?

Assessment criteria ⁺				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No trained officers and frontline staff in the TR.	Poor			Paucity of staff. Present staff also without wildlife training and orientation. Inadequacy of staff in the reserve is detrimental to overall management of the reserve.
Some trained officers and few trained frontline staff, posted in the TR.	Fair	✓		
All trained officers and fair number of trained frontline staff posted in the TR.	Good			
All trained officers and most of the trained frontline staff is posted in the TR.	Very good			

⁺Indicate % of trained staff in various categories. The number and thematic areas of the 'Internal Training' programmes organized in the TR in the last 3 years may be taken into account. Has the TR prepared a 'Staff Development Plan'? Is it being implemented?

4.2 Is TR staff management performance linked to achievement of management objectives?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No linkage between staff management performance and management objectives.	Poor			Adhoc linkage system in place
Some linkage between staff management performance and management objectives, but not consistently or systematically assessed.	Fair	✓		
Management performance for most staff is directly linked to achievement of relevant management objectives.	Good			
Management performance of all staff is directly linked to achievement of relevant management objectives.	Very good			

4.3 Is there effective public participation in TR management* and does it show in making a difference?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no public participation in TR management.	Poor			Some involvement of NGOs
Opportunistic public participation in some of the relevant aspects of TR management.	Fair	✓		
Systematic public participation in most of the relevant aspects of TR management.	Good			
Comprehensive and systematic public participation in all important and relevant aspects of TR management.	Very good			

⁺The involvement of NGOs/ NGIs in population estimation may be taken into account)

4.4 Is there a responsive system for handling complaints and comments* about TR management?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Ad-hoc approach to handling complaints.	Poor	✓		No system in place
Complaints handling system operational but not responsive to individual issues and with limited follow up.	Fair			
Coordinated system logs and responds effectively to most complaints.	Good			
All complaints systematically logged in coordinated system and timely response provided with minimal repeat complaints.	Very good			

⁺Does the TR maintains 'Suggestions Register'? What actions are taken to deal with suggestions?

*Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

4.5 Does TR management addresses the livelihood issues* of resource dependent communities, especially of women?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No livelihood issues are addressed by TR management.	Poor			A few livelihood issues addressed
Few livelihood issues are addressed by TR management.	Fair	✓		
Substantial livelihood issues are addressed by TR management.	Good			
Livelihood issues of resource dependent communities especially of women are addressed effectively by TR managers.	Very good			

**The number of mandays generated in the last 3 years may be taken into account. Are funds received from District Agencies and other sources? Provide details of funds received in last 3 years.*

4.6 Has the TR planned and implemented the voluntary 'Village Relocation' from the Core/ Critical Tiger Habitat (CTH)?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No planning and no implementation	Poor			Relocation project of Penguda Village is complete and is being sent to NTCA. The relocation project of Edapalli, Kodapadgu, Sagmeta, Pillur and Kandlaparti villages will be prepared in future.
Plans have been made but no implementation	Fair	✓		
Plans have been made and some implementation is in progress	Good			
Plans have been made and are being actively implemented/ no human habitation in the CTH	Very good			

**Assessment will look into the village relocation planning process including availability of manpower, financial resources and NGO support, if any. Is there a mechanism to address the complaints received in respect of relocation process? Effort must be made to assess post-relocation success or otherwise.*

5. Output

5.1 Is adequate information on TR management publicly available?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no information on TR management publicly available.	Poor	✓		No website, brochure, etc
Publicly available information is general and has limited relevance to management accountability and the condition of public assets.	Fair			
Publicly available information provides detailed insight into major management issues and condition of public assets.	Good			
Comprehensive reports are routinely available in public domain on management and condition of public assets.	Very good			

5.2 Are visitor services and facilities appropriate and adequate?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Visitor services and facilities do not exist.	Poor	✓	TCP	No tourism due to naal problems
Visitor services and facilities are very basic.	Fair			
Visitor services and facilities are monitored from time to time and are fairly effective.	Good			
Visitor services and facilities are conscientiously maintained, regularly upgraded and monitored for visitor satisfaction	Very good			

***Include the existence and quality of visitor and interpretation centers, including skills and capabilities of personnel manning these, TR related publications, films, videos; arrangements of stay (including places serving refreshments and food owned and managed by TR), watch towers and hides including safety factors, vehicles assigned for visitors including riding elephants, if any and their deployment, drinking water, rest rooms, garbage disposal, attended and self guided services in the field, visitor feed back on the quality of wilderness experience.**

5.3 Are research / monitoring related trends systematically evaluated and routinely reported and used to improve management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no systematic evaluation or routine reporting of trends.	Poor	✓		In the past, no research work has been carried out except study on "Diurnal Utilization of Habitat" by wild buffalo, Chital and Nilgai in 1988 by TFRI Jabalpur and status survey of wild buffalo by WII, BNHS and NGOs during 1999 and 2000. Research on Hill Mynas is yet to be initiated.
Some evaluation and reporting undertaken but neither systematic nor routine.	Fair			
Systematic evaluation and routine reporting of trends undertaken.	Good			
Systematic evaluation and comprehensive reporting of trends undertaken and attempts made at course corrections as relevant.	Very good			

***Not all TRs attract projects and researchers and with exceptions, little research takes place on the TRs own steam because of systemic limitations. However, monitoring of some critical issues is expected e.g. population of tiger, co-predators and prey with insights into their demography and distribution (some opportunistic sampling by sightings, signs and spatial distribution during assessment would be extremely useful in terms of expert impression and as a pulse), monitoring incidence of livestock grazing, fires, weeds, sources of water, a variety of illegal activities typically associated with the reserve, wildlife health (e.g. epidemics, immunization of livestock) regeneration and change in vegetation, visitors and their activities, offence cases, ex-gratia payments etc. Efforts must be made to assess the planning and implementation of Phase-IV monitoring protocols and the success of implementation of M-Stripes (wherever applicable). Are the 'Sykes and Horill' monitoring plots maintained and data analyzed?**

5.4 Is there a systematic maintenance schedule and funds in place for management of infrastructure / assets?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No systematic inventory or maintenance schedule.	Poor			Inventory maintenance is adhoc and inadequate. CRPF has taken over a few of the FD buildings.
Inventory maintenance is adhoc and so is the maintenance schedule.	Fair	✓		
Systematic inventory provides the basis for maintenance schedule but funds are inadequate.	Good			
Systematic inventory provides the basis for maintenance schedule and adequate funds are made available.	Very good			

6. Outcomes

6.1 Are populations of threatened species declining, stable or increasing?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Populations of key threatened/ endangered species are declining.	Poor		Estimation table for Wild Buffalo submitted	
Some threatened/ endangered species populations declining, some are increasing, most others are stable.	Fair	✓		
Several threatened/ endangered species populations increasing, most others are stable.	Good			
All threatened/ endangered species populations either increasing or stable.	Very good			

***This needs to practically relate to the natural ecosystem potential rather than being driven merely by numbers and visibility. The assessment score may be elaborated under remarks.**

6.2 Is the population of tigers showing a declining, stable or increasing trend?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Population of tiger is showing a declining trend	Poor			
Population of tiger is stable	Fair	✓		
Population of tiger is showing an increasing trend	Good			
Population of tiger has significantly increased	Very good			

***This assessment should be based in the context of available population estimate (2010-11) and the outcomes of the currently ongoing Phase-IV analyses.**

6.3 Have the threats* to the TR being reduced/ minimized? Or is there an increase?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Threats to the TR have not abated but have enhanced.	Poor		TCP	No Disaster Risk Management Plan
Some threats to the TR have abated, others continue their presence	Fair	✓		
Most threats to the TR have abated. The few remaining are vigorously being addressed	Good			
All threats to the TR have been effectively contained and an efficient system is in place to deal with any emerging situation	Very good			

***Does the TR has a Disaster Risk Management Plan to deal with existing as well as emerging threats?**

6.4 Are the expectations of visitors* generally met or exceeded?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Expectations of visitors generally not met.	Poor	✓	TCP	Due to naal problems, no tourism in Indravati TR. Also, supporting documents not submitted
Expectations of many visitors are met.	Fair			
Expectations of most visitors are met.	Good			
Expectations of all most all visitors are met.	Very good			

***What is the compliance status on Supreme Court/ NTCA Guidelines on Ecotourism in TRs?**

6.5 Are local communities supportive of TR management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Local communities are hostile.	Poor		Pictures submitted	Some local communities along with local NGOs supportive
Some are supportive.	Fair	✓		
Most locals are supportive of TR management.	Good			
All local communities supportive of TR management.	Very good			

**There could be many reasons for disenchantment. It could be real because of managerial neglect or the managerial efforts could be appropriate but there could be local elements/organizations who would like to keep the disaffection simmering for their own ulterior motives. Likewise success could be entirely because of the efforts of managers or they might be fortunate in striking partnerships with credible NGOs. Assessment may take the prevailing causes into account.*

7. MEE Score Card*

Framework Element Number	Framework Element Name	Number of Criteria (a)	Maximum Mark per question (b)	Total (a x b)	Marks obtained for the Element	Overall MEE Score and % age
1	Context	4	10	40	17.5	45.16%
2	Planning	7	10	70	32.5	
3	Inputs	5	10	50	27.5	
4	Process	6	10	60	27.5	
5	Outputs	4	10	40	12.5	
6	Outcomes	5	10	50	22.5	
Total		31		310	140	

**Efforts will be made by the NTCA-WII-MEE Team to address the issue of assigning 'differential' weightages to the 30 Assessment Criteria including 'normalization'.*

Assessment Criteria for addressing issues relating to Climate Change & Carbon capture in the Tiger Reserves (TRs)

1. Additional Criteria on Climate Change: Is the TR being consciously managed to adapt to climate change?

Condition	Category*	(Tick ✓)	Comment/ Explanation	Next Steps
There have been no efforts to consider adaptation to climate change in management	Poor			
Some initial thought has taken place about likely impacts of climate change, but this has yet to be translated into management plans	Fair	✓		
Detailed plans have been drawn up about how to adapt management to predicted climate change, but these have yet to be translated into active management.	Good			
Detailed plans have been drawn up about how to adapt management to predicted climate change, and these are already being implemented	Very good			

2. Additional Criteria on Climate Change: Is the TR being consciously managed to prevent carbon loss and to encourage further carbon capture?

Condition	Category*	(Tick ✓)	Comment/ Explanation	Next Steps
Carbon storage and carbon dioxide capture have not been considered in management of the TR	Poor			
Carbon storage and carbon dioxide capture have been considered in general terms, but has not yet been significantly reflected in management	Fair	✓		
There are active measures in place to reduce carbon loss from the TR, but no conscious measures to increase carbon dioxide capture	Good			
There are active measures in place both to reduce carbon loss from the TR and to increase carbon dioxide capture	Very good			

Management Effectiveness Evaluation (MEE) of Achanakmar Tiger Reserves

1. Context

1.1 Are the values of the TR well documented, assessed and monitored?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Values not systematically documented, assessed and monitored.	Poor		Draft TCP	
Values generally identified but not systematically assessed and monitored.	Fair			
Most values systematically identified, assessed and monitored.	Good	✓		
All values systematically identified, assessed and monitored.	Very good			

1.2 Are the threats to TR values well documented and assessed*?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Threats not systematically documented or assessed.	Poor		Draft TCP	
Threats generally identified but not systematically assessed.	Fair	✓		
Most threats systematically identified and assessed.	Good			
All threats systematically identified and assessed.	Very good			

**This assessment should be based on number, nature and extent of threats*

1.3 Is the 'Core Area' of TR free from human and biotic interference?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
The 'Core Area' has extensive human and biotic interference.	Poor			Cattle Camps inside the TR No programmes on weed eradication from the village relocated sites, Hunting by locals for local consumption noticed, Firelines not maintained, Cattle grazing noticed 52% shortage of Forest Guards
The 'Core Area' has some human and biotic interference.	Fair	✓		
The 'Core Area' has little human and biotic interference.	Good			
The 'Core Area' has no human and biotic interference.	Very good			

**This assessment should be based on existence and the efforts made by TR management to address issues related to human settlements/ villages inside the core area; livestock grazing, cultivation, encroachments etc, resource extraction/ livelihood dependence of local communities and should reflect the overall interference due to all the above factors. The issue of 'Unified Control' of the 'Core' and 'Buffer' zones under the Field Director would also be taken into account.*

1.4 Has the TR complied with the four Statutory* Requirements (SR) along with Tripartite MoU and three Standard Operation Procedures (SOP)?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
None of the four SR, no compliance of Tripartite MoU and three SOPs met	Poor		Copy of Establishment of Tiger Conservation Foundation notification of Core and Buffer Areas draft copy of Tiger Conservation Plan Constitution of a State-level Steering Committee	SoPs in local language available
Two of the four SR, 50% conditions of the Tripartite MoU and SOPs complied	Fair			
Three of the four SR, 75% conditions of the Tripartite MoU and SOPs complied	Good	✓		
All four SR, 100% conditions of the Tripartite MoU and SOPs complied	Very good			

**Statutory requirements are (1) Legal delineation and notification of Core and Buffer Areas; (2) Establishment of Tiger Conservation Foundation; (3) Development of a Tiger Conservation Plan; and (4) Constitution of a State-level Steering Committee under the Chairmanship of the Chief Minister. TA refers agreement between Field Director, State Government and NTCA. The 3 SOPs are on (i) Straying of Tiger in human dominated landscape, (ii) Tiger Mortality and (iii) Disposal of Carcasses*

2. Planning

2.1 Status of Tiger Conservation Plan (TCP)*?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No TCP in place.	Poor		Draft TCP	
TCP is under preparation	Fair	✓		
TR has a relevant TCP	Good			
TR has a comprehensive and relevant TCP, duly approved by the NTCA	Very good			

**The scientific content and the participatory processes used in preparation of the TCP will be taken into account in assessing the quality of TCP.*

2.2 Does the TR safeguards the threatened biodiversity values?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR does not safeguard the threatened biodiversity values.	Poor	✓		Tentative list of Rare, Endangered and Threatened (RET) species appended with draft TCP. Analysis and finetuning required Also, to include endemic floral and faunal species
TR safeguards a few threatened biodiversity values.	Fair			
TR safeguards a large number of threatened biodiversity values.	Good			
TR safeguards all threatened biodiversity values.	Very good			

**Remarks need to elaborate on the kind of safeguards and how they work or are intended to work*

2.3 Are stakeholders given an opportunity to participate in planning process?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little, if any opportunity for stakeholder participation in planning.	Poor			Meetings with villagers and tour operators held.
Stakeholders participate in some planning.	Fair			
Stakeholders participate in most planning processes.	Good	✓		
Stakeholders routinely and systematically participate in all planning processes.	Very good			

***The result of participation must show in the field and not merely reported as a routine exercise.**

2.4 Are habitat management programmes systematically planned, relevant and monitored, and contribute effectively to Tiger and other endangered species conservation?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Habitat management programmes are entirely adhoc.	Poor	✓		Habitat management programmes are entirely adhoc
Limited planning and monitoring programmes are in place for habitat management.	Fair			
Habitat management programmes are generally planned and monitored.	Good			
Habitat management programmes are thoroughly planned and monitored.	Very good			

***This assessment should be primarily based on habitat management programmes in relation to habitats for species that are threatened (IUCN categories), are habitat specialists, subjected to seasonal movements, wide ranging with emphasis on the breeding and rearing habitat and may include factors such as food, water, shelter (all connotations).Habitat structure, composition, unique patches of vegetation and sensitive sites, sources of water and their distribution are integral. Corridors within buffer zone are critically important. For example, all riparian habitats. Have these been addressed? Is their a planning process in place? The management practices dealing with invasive species such as Lantana, Michania etc. would be examined.**

2.5 Does the TR has an effective Protection Strategy (PS)* and Security Plan and Security Audit (SA) in place?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR has little or no PS and SA.	Poor			Inadequate no of patrolling camps (one camp / 25Sq. Kms), and inadequately manned No night patrolling, 3 offences recorded and 2 prosecution cases initiated but no arrests made so far
TR has an adhoc PS and SA.	Fair	✓		
TR has a generally relevant PS and SA but is not very effective.	Good			
TR has a comprehensive and very effective PS and SA.	Very good			

***This assessment takes inter-alia into account the nature of threats, the number and location of patrolling camps and foot and mobile patrolling, needs that relate to available manpower, terrain difficulties, practicability of area coverage, readiness to contain specific threats with necessary support and facilities. The constitution and functioning of Special Tiger Protection Force (STPF), Number of offences reported, arrests made, prosecution initiated and conviction achieved will be taken into account.**

2.6 Has the TR been effective in the mitigation of human-wildlife conflicts?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Human-wildlife conflicts are significant but poorly addressed.	Poor			Figures provided not corroborated by TCP figures
TR has been able to mitigate few human-wildlife conflicts.	Fair	✓		
TR has been able to mitigate many human-wildlife conflicts.	Good			
TR has been effective in mitigating all human-wildlife conflicts.	Very good			

*The assessment will take into account the number of incidences reported and payment of compensation made and its timeliness.

2.7 Is the TR integrated into a wider ecological network/ landscape following the principles of the ecosystem approach?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR not integrated into a wider network/ landscape.	Poor			Biosphere Reserve to be included in the Buffer areas. Plan thereof to be included in the TCP
Some limited attempts to integrate the TR into a network/ landscape.	Fair	✓		
TR is generally quite well integrated into a network/ landscape.	Good			
TR is fully integrated into a wider network/ landscape.	Very good			

*Assessment needs to consider the scope of opportunities on the landscape scale that exist. Consider whether any attempts have been made and what are these? Have all the important corridors been identified? What actions are planned/implemented for their security? Have the Forest Working Plans and Forest Development Corporation Plans within the identified landscapes taken cognizance of such new requirement? These should have been reflected in TCPs. Is there is any effort to rationalize landuse around TR? Is any effort being made to plan and use 'Smart Green Infrastructure'?

3. Inputs

3.1 Are personnel adequate, well organized and deployed with access to adequate resources in the Tiger Reserve (TR)*?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Few, personnel explicitly allocated but poorly supported for TR management.	Poor	✓		52% vacancies to be filled
Some personnel explicitly allocated for TR management but not adequately supported and systematically linked to management objectives.	Fair			
Some personnel with fair support explicitly allocated towards achievement of specific TR management objectives.	Good			
Adequate personnel appropriately supported and explicitly allocated towards achievement of specific TR management objectives.	Very good			

*This assessment should inter-alia be based on number of personnel allocated for attainment of TR objectives at the Range , Round, Beat and Patrolling camps levels or as relevant to the needs (sanctioned posts vis- a- vis existing personnel and needs beyond the sanctioned strengths. It is possible that posts have last been sanctioned several years back that do not now account for the current needs)

3.2 Are resources (vehicle, equipment, building etc.) adequate, well organized and managed with desired access?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Few, if any, resources explicitly allocated for TR management.	Poor			List of equipments provided but were not seen by the MEE team in field use. Team observed new vehicles without wireless sets
Some resources explicitly allocated for TR management but not systematically linked to management objectives.	Fair	✓		
Some resources explicitly allocated towards achievement of specific TR management objectives.	Good			
Adequate resources explicitly allocated towards achievement of specific TR management objectives.	Very good			

* These form a variety of resources. These may be segregated into immovable (structures) and movable categories and each further may be considered under the essential and desirable categories. It is best to start with what are the minimum needs to attain each objective, what is available and manner of use/deployment. The proportions of the 'essentials' and 'desirables' along the importance gradient of objectives would serve as pointers for score categories. Specific remarks would be vitally important.

3.3 Are financial resources other than those of the State linked to priority actions and are funds adequate, released timely and utilized?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Resource allocation is adhoc, funds are inadequate and seldom released in time and not utilized.	Poor		Receipts submitted	Funds released in time
Some specific allocation for management of priority action. Funds are inadequate and there is some delay in release, partially utilized.	Fair			
Comprehensive planning and allocation that meets the most important objectives. Generally funds released with not much delay and mostly utilized.	Good	✓		
Comprehensive planning and allocation of resources for attainment of most objectives. Funds generally released on-time and are fully utilized.	Very good			

*Obtain details of funds released by NTCA and their utilization by TR in the last 3 years and indicate them under 'Remarks'. Also comment on the problems associated with fund allocations and their utilization.

3.4 Are financial resources from the State linked to priority action and funds adequate, timely released and utilized for the management of Tiger Reserve?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Resource allocation is adhoc, funds are inadequate and seldom released in time and not utilized.	Poor			Funds to some extent are inadequate, and there is some delay in release
Some specific allocation for management of priority action. Funds are inadequate and there is some delay in release, partially utilized.	Fair			
Comprehensive planning and allocation that meets the most important objectives. Generally funds released with not much delay and mostly utilized.	Good	✓		
Comprehensive planning and allocation of resources for attainment of most objectives. Funds generally released on-time and are fully utilized.	Very good			

*Obtain details of funds released by State and their utilization by TR in the last 3 years and indicate them under 'Remarks'. Also comment on the problems associated with fund allocation and their utilization.

3.5 What level of resources are provided by NGOs?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
NGOs contribute nothing for the management of the TR.	Poor			NGO involvement in committees but no further actions except for in wildlife census by Nature Club
NGOs make some contribution to management of the TR but opportunities for collaboration are not systematically explored.	Fair	✓		
NGOs contributions are systematically sought and negotiated for the management of some TR level activities.	Good			
NGOs contributions are systematically sought and negotiated for the management of many TR level activities.	Very good			

4. Process

4.1 Does the TR have manpower resources trained in wildlife conservation for effective TR management?

Assessment criteria⁺				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No trained officers and frontline staff in the TR.	Poor		List of trained staff provided	Staff Development Plan available. Staff at all levels requires basic training in Wildlife and Management
Some trained officers and few trained frontline staff, posted in the TR.	Fair	✓		
All trained officers and and fair number of trained frontline staff posted in the TR.	Good			
All trained officers and most of the trained frontline staff is posted in the TR.	Very good			

***Indicate % of trained staff in various categories. The number and thematic areas of the 'Internal Training' programmes organized in the TR in the last 3 years may be taken into account. Has the TR prepared a 'Staff Development Plan'? Is it being implemented?**

4.2 Is TR staff management performance linked to achievement of management objectives?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No linkage between staff management performance and management objectives.	Poor			Team observed that the directions have been issued to link performance with the management objectives
Some linkage between staff management performance and management objectives, but not consistently or systematically assessed.	Fair			
Management performance for most staff is directly linked to achievement of relevant management objectives.	Good	✓		
Management performance of all staff is directly linked to achievement of relevant management objectives.	Very good			

4.3 Is there effective public participation in TR management* and does it show in making a difference?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no public participation in TR management.	Poor			Some public participation by NGOs and locals in relevant TR management
Opportunistic public participation in some of the relevant aspects of TR management.	Fair			
Systematic public participation in most of the relevant aspects of TR management.	Good	✓		
Comprehensive and systematic public participation in all important and relevant aspects of TR management.	Very good			

**The involvement of NGOs/ NGLs in population estimation may be taken into account)*

4.4 Is there a responsive system for handling complaints and comments* about TR management?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Ad-hoc approach to handling complaints.	Poor	✓		Suggestion / complaint books not maintained
Complaints handling system operational but not responsive to individual issues and with limited follow up.	Fair			
Coordinated system logs and responds effectively to most complaints.	Good			
All complaints systematically logged in coordinated system and timely response provided with minimal repeat complaints.	Very good			

**Does the TR maintain 'Suggestions Register'? What actions are taken to deal with suggestions?*

4.5 Does TR management addresses the livelihood issues* of resource dependent communities, especially of women?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No livelihood issues are addressed by TR management.	Poor			A few livelihood issues addressed No funds received from other agencies for the livelihood issues
Few livelihood issues are addressed by TR management.	Fair	✓		
Substantial livelihood issues are addressed by TR management.	Good			
Livelihood issues of resource dependent communities especially of women are addressed effectively by TR managers.	Very good			

**The number of mandays generated in the last 3 years may be taken into account. Are funds received from District Agencies and other sources? Provide details of funds received in last 3 years.*

4.6 Has the TR planned and implemented the voluntary 'Village Relocation' from the Core/ Critical Tiger Habitat (CTH)?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No planning and no implementation	Poor			6 villages relocated. Post village relocation plans to be drafted
Plans have been made but no implementation	Fair			
Plans have been made and some implementation is in progress	Good	✓		
Plans have been made and are being actively implemented/ no human habitation in the CTH	Very good			

***Assessment will look into the village relocation planning process including availability of manpower, financial resources and NGO support, if any. Is there a mechanism to address the complaints received in respect of relocation process? Effort must be made to assess post-relocation success or otherwise.**

5. Output

5.1 Is adequate information on TR management publicly available?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no information on TR management publicly available.	Poor			Website managed well
Publicly available information is general and has limited relevance to management accountability and the condition of public assets.	Fair			
Publicly available information provides detailed insight into major management issues and condition of public assets.	Good			
Comprehensive reports are routinely available in public domain on management and condition of public assets.	Very good	✓		

5.2 Are visitor services and facilities appropriate and adequate?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Visitor services and facilities do not exist.	Poor			Inadequate visitor services and facilities
Visitor services and facilities are very basic.	Fair	✓		
Visitor services and facilities are monitored from time to time and are fairly effective.	Good			
Visitor services and facilities are conscientiously maintained, regularly upgraded and monitored for visitor satisfaction	Very good			

***Include the existence and quality of visitor and interpretation centers, including skills and capabilities of personnel manning these, TR related publications, films, videos; arrangements of stay (including places serving refreshments and food owned and managed by TR), watch towers and hides including safety factors, vehicles assigned for visitors including riding elephants, if any and their deployment, drinking water, rest rooms, garbage disposal, attended and self guided services in the field, visitor feed back on the quality of wilderness experience.**

5.3 Are research/ monitoring related trends systematically evaluated and routinely reported and used to improve management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no systematic evaluation or routine reporting of trends.	Poor	✓		No systematic observations documented
Some evaluation and reporting undertaken but neither systematic nor routine.	Fair			
Systematic evaluation and routine reporting of trends undertaken.	Good			
Systematic evaluation and comprehensive reporting of trends undertaken and attempts made at course corrections as relevant.	Very good			

***Not all TRs attract projects and researchers and with exceptions, little research takes place on the TRs own steam because of systemic limitations. However, monitoring of some critical issues is expected e.g. population of tiger, co-predators and prey with insights into their demography and distribution (some opportunistic sampling by sightings, signs and spatial distribution during assessment would be extremely useful in terms of expert impression and as a pulse), monitoring incidence of livestock grazing, fires, weeds, sources of water, a variety of illegal activities typically associated with the reserve, wildlife health (e.g. epidemics, immunization of livestock) regeneration and change in vegetation, visitors and their activities, offence cases, ex-gratia payments etc. Efforts must be made to assess the planning and implementation of Phase-IV monitoring protocols and the success of implementation of M-Stripes (wherever applicable). Are the 'Sykes and Horill' monitoring plots maintained and data analyzed?**

5.4 Is there a systematic maintenance schedule and funds in place for management of infrastructure / assets?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No systematic inventory or maintenance schedule.	Poor			No records / registers maintained. However, funds are seemingly available
Inventory maintenance is adhoc and so is the maintenance schedule.	Fair	✓		
Systematic inventory provides the basis for maintenance schedule but funds are inadequate.	Good			
Systematic inventory provides the basis for maintenance schedule and adequate funds are made available.	Very good			

6. Outcomes

6.1 Are populations of threatened species declining, stable or increasing?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Populations of key threatened/ endangered species are declining.	Poor			Based on analytical report to be submitted. No documentation
Some threatened/ endangered species populations declining, some are increasing, most others are stable.	Fair	✓		
Several threatened/ endangered species populations increasing, most others are stable.	Good			
All threatened/ endangered species populations either increasing or stable.	Very good			

***This needs to practically relate to the natural ecosystem potential rather than being driven merely by numbers and visibility. The assessment score may be elaborated under remarks.**

6.2 Is the population of tigers showing a declining, stable or increasing trend?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Population of tiger is showing a declining trend	Poor			Phase – IV monitoring under process
Population of tiger is stable	Fair	✓		
Population of tiger is showing an increasing trend	Good			
Population of tiger has significantly increased	Very good			

**This assessment should be based in the context of available population estimate (2010-11) and the outcomes of the currently ongoing Phase-IV analyses.*

6.3 Have the threats* to the TR being reduced/ minimized? Or is there an increase?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Threats to the TR have not abated but have enhanced.	Poor			Disaster Risk Management Plan in place, committee formed
Some threats to the TR have abated, others continue their presence	Fair	✓		
Most threats to the TR have abated. The few remaining are vigorously being addressed	Good			
All threats to the TR have been effectively contained and an efficient system is in place to deal with any emerging situation	Very good			

**Does the TR has a Disaster Risk Management Plan to deal with existing as well as emerging threats?*

6.4 Are the expectations of visitors* generally met or exceeded?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Expectations of visitors generally not met.	Poor	✓		No registers / books maintained
Expectations of many visitors are met.	Fair			
Expectations of most visitors are met.	Good			
Expectations of all most all visitors are met.	Very good			

**What is the compliance status on Supreme Court/ NTCA Guidelines on Ecotourism in TRs?*

6.5 Are local communities supportive of TR management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Local communities are hostile.	Poor			
Some are supportive.	Fair			
Most locals are supportive of TR management.	Good	✓		
All local communities supportive of TR management.	Very good			

**There could be many reasons for disenchantment. It could be real because of managerial neglect or the managerial efforts could be appropriate but there could be local elements/organizations who would like to keep the disaffection simmering for their own ulterior motives. Likewise success could be entirely because of the efforts of managers or they might be fortunate in striking partnerships with credible NGOs. Assessment may take the prevailing causes into account.*

7. MEE Score Card*

Framework Element Number	Framework Element Name	Number of Criteria (a)	Maximum Mark per question (b)	Total (a x b)	Marks obtained for the Element	Overall MEE Score and % age
1	Context	4	10	40	25	54.03
2	Planning	7	10	70	32.5	
3	Inputs	5	10	50	27.5	
4	Process	6	10	60	35	
5	Outputs	4	10	40	22.5	
6	Outcomes	5	10	50	25	
Total		31		310	167.5	

**Efforts will be made by the NTCA-WII-MEE Team to address the issue of assigning 'differential' weightages to the 30 Assessment Criteria including 'normalization'.*

Assessment Criteria for addressing issues relating to Climate Change & Carbon capture in the Tiger Reserves (TRs)

1. Additional Criteria on Climate Change: Is the TR being consciously managed to adapt to climate change?

Condition	Category*	(Tick ✓)	Comment/ Explanation	Next Steps
There have been no efforts to consider adaptation to climate change in management	Poor			
Some initial thought has taken place about likely impacts of climate change, but this has yet to be translated into management plans	Fair	✓		
Detailed plans have been drawn up about how to adapt management to predicted climate change, but these have yet to be translated into active management.	Good			
Detailed plans have been drawn up about how to adapt management to predicted climate change, and these are already being implemented	Very good			

2. Additional Criteria on Climate Change: Is the TR being consciously managed to prevent carbon loss and to encourage further carbon capture?

Condition	Category*	(Tick ✓)	Comment/ Explanation	Next Steps
Carbon storage and carbon dioxide capture have not been considered in management of the TR	Poor			
Carbon storage and carbon dioxide capture have been considered in general terms, but has not yet been significantly reflected in management	Fair	✓		
There are active measures in place to reduce carbon loss from the TR, but no conscious measures to increase carbon dioxide capture	Good			
There are active measures in place both to reduce carbon loss from the TR and to increase carbon dioxide capture	Very good			

Management Effectiveness Evaluation (MEE) of Udanti-Sitanadi Tiger Reserve

1. Context

1.1 Are the values of the TR well documented, assessed and monitored?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Values not systematically documented, assessed and monitored.	Poor		Draft TCP	
Values generally identified but not systematically assessed and monitored.	Fair	✓		
Most values systematically identified, assessed and monitored.	Good			
All values systematically identified, assessed and monitored.	Very good			

1.2 Are the threats to TR values well documented and assessed*?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Threats not systematically documented or assessed.	Poor		Draft TCP	Threats included in the draft TCP
Threats generally identified but not systematically assessed.	Fair	✓		
Most threats systematically identified and assessed.	Good			
All threats systematically identified and assessed.	Very good			

**This assessment should be based on number, nature and extent of threats*

1.3 Is the 'Core Area' of TR free from human and biotic interference?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
The 'Core Area' has extensive human and biotic interference.	Poor			Udanti – 17 Sitanadi 33 villages inside the TR. Encroachments on the increase, Cattle grazing inside the TR noticed. Villages relocated 3
The 'Core Area' has some human and biotic interference.	Fair	✓		
The 'Core Area' has little human and biotic interference.	Good			
The 'Core Area' has no human and biotic interference.	Very good			

**This assessment should be based on existence and the efforts made by TR management to address issues related to human settlements/ villages inside the core area; livestock grazing, cultivation, encroachments etc, resource extraction/ livelihood dependence of local communities and should reflect the overall interference due to all the above factors. The issue of 'Unified Control' of the 'Core' and 'Buffer' zones under the Field Director would also be taken into account.*

1.4 Has the TR complied with the four Statutory* Requirements (SR) along with Tripartite MoU and three Standard Operation Procedures (SOP)?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
None of the four SR, no compliance of Tripartite MoU and three SOPs met	Poor		Notification of constitution submitted	
Two of the four SR, 50% conditions of the Tripartite MoU and SOPs complied	Fair	✓		
Three of the four SR, 75% conditions of the Tripartite MoU and SOPs complied	Good			
All four SR, 100% conditions of the Tripartite MoU and SOPs complied	Very good			

***Statutory requirements are (1) Legal delineation and notification of Core and Buffer Areas; (2) Establishment of Tiger Conservation Foundation; (3) Development of a Tiger Conservation Plan; and (4) Constitution of a State-level Steering Committee under the Chairmanship of the Chief Minister. TA refers agreement between Field Director, State Government and NTCA. The 3 SOPs are on (i) Straying of Tiger in human dominated landscape, (ii) Tiger Mortality and (iii) Disposal of Carcasses**

2. Planning

2.1 Status of Tiger Conservation Plan (TCP)*?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No TCP in place.	Poor			TCP under preparation
TCP is under preparation	Fair	✓		
TR has a relevant TCP	Good			
TR has a comprehensive and relevant TCP, duly approved by the NTCA	Very good			

***The scientific content and the participatory processes used in preparation of the TCP will be taken into account in assessing the quality of TCP.**

2.2 Does the TR safeguards the threatened biodiversity values?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR does not safeguard the threatened biodiversity values.	Poor		TCP, APO	
TR safeguards a few threatened biodiversity values.	Fair	✓		
TR safeguards a large number of threatened biodiversity values.	Good			
TR safeguards all threatened biodiversity values.	Very good			

***Remarks need to elaborate on the kind of safeguards and how they work or are intended to work**

2.3 Are stakeholders given an opportunity to participate in planning process?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little, if any opportunity for stakeholder participation in planning.	Poor			On meeting with the local senior person, it was found that villagers were involved in the planning meetings, but little opportunity was given to them to participate in planning process. Other stakeholders' participation other than EDCs and FMCs not observed
Stakeholders participate in some planning.	Fair	✓		
Stakeholders participate in most planning processes.	Good			
Stakeholders routinely and systematically participate in all planning processes.	Very good			

***The result of participation must show in the field and not merely reported as a routine exercise.**

2.4 Are habitat management programmes systematically planned, relevant and monitored, and contribute effectively to Tiger and other endangered species conservation?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Habitat management programmes are entirely adhoc.	Poor		WTI – FD wild buffalo recovery plan submitted	
Limited planning and monitoring programmes are in place for habitat management.	Fair			
Habitat management programmes are generally planned and monitored.	Good	✓		
Habitat management programmes are thoroughly planned and monitored.	Very good			

**This assessment should be primarily based on habitat management programmes in relation to habitats for species that are threatened (IUCN categories), are habitat specialists, subjected to seasonal movements, wide ranging with emphasis on the breeding and rearing habitat and may include factors such as food, water, shelter (all connotations).Habitat structure, composition, unique patches of vegetation and sensitive sites, sources of water and their distribution are integral. Corridors within buffer zone are critically important. For example, all riparian habitats. Have these been addressed? Is their a planning process in place? The management practices dealing with invasive species such as Lantana, Michania etc. would be examined.*

2.5 Does the TR has an effective Protection Strategy (PS)* and Security Plan and Security Audit (SA) in place?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR has little or no PS and SA.	Poor	✓		On an average one APC / 74 sq. kms No details were provided on arrests / prosecution submitted
TR has an adhoc PS and SA.	Fair			
TR has a generally relevant PS and SA but is not very effective.	Good			
TR has a comprehensive and very effective PS and SA.	Very good			

**This assessment takes inter-alia into account the nature of threats, the number and location of patrolling camps and foot and mobile patrolling, needs that relate to available manpower, terrain difficulties, practicability of area coverage, readiness to contain specific threats with necessary support and facilities. The constitution and functioning of Special Tiger Protection Force (STPF), Number of offences reported, arrests made, prosecution initiated and conviction achieved will be taken into account.*

2.6 Has the TR been effective in the mitigation of human-wildlife conflicts?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Human-wildlife conflicts are significant but poorly addressed.	Poor			Details on HWC provided, HWC has shown a decreasing trend. Tranquilizing equipment's including vehicles yet to be provided
TR has been able to mitigate few human-wildlife conflicts.	Fair	✓		
TR has been able to mitigate many human-wildlife conflicts.	Good			
TR has been effective in mitigating all human-wildlife conflicts.	Very good			

**The assessment will take into account the number of incidences reported and payment of compensation made and its timeliness.*

2.7 Is the TR integrated into a wider ecological network/ landscape following the principles of the ecosystem approach?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR not integrated into a wider network/ landscape.	Poor		Draft TCP	Integrated with Sonabeda WLS of Odisha in the east and with PAs of Bastar in the South. Buffer of TR needs to be consolidated by including prospective mining areas falling between Sitanadi and Udanti WLS
Some limited attempts to integrate the TR into a network/ landscape.	Fair	✓		
TR is generally quite well integrated into a network/ landscape.	Good			
TR is fully integrated into a wider network/ landscape.	Very good			

***Assessment needs to consider the scope of opportunities on the landscape scale that exist. Consider whether any attempts have been made and what are these? Have all the important corridors been identified? What actions are planned/implemented for their security? Have the Forest Working Plans and Forest Development Corporation Plans within the identified landscapes taken cognizance of such new requirement? These should have been reflected in TCPs. Is there is any effort to rationalize landuse around TR? Is any effort being made to plan and use 'Smart Green Infrastructure'?**

3. Inputs

3.1 Are personnel adequate, well organized and deployed with access to adequate resources in the Tiger Reserve (TR)*?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Few, personnel explicitly allocated but poorly supported for TR management.	Poor	✓		On an average one APC / 74 sq. kms General shortage of staff including that of Range Officers
Some personnel explicitly allocated for TR management but not adequately supported and systematically linked to management objectives.	Fair			
Some personnel with fair support explicitly allocated towards achievement of specific TR management objectives.	Good			
Adequate personnel appropriately supported and explicitly allocated towards achievement of specific TR management objectives.	Very good			

***This assessment should inter-alia be based on number of personnel allocated for attainment of TR objectives at the Range , Round, Beat and Patrolling camps levels or as relevant to the needs (sanctioned posts vis- a- vis existing personnel and needs beyond the sanctioned strengths. It is possible that posts have last been sanctioned several years back that do not now account for the current needs)**

3.2 Are resources (vehicle, equipment, building etc.) adequate, well organized and managed with desired access?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Few, if any, resources explicitly allocated for TR management.	Poor			Vehicles, equipments. Buildings etc, seemingly adequate, but registers not maintained
Some resources explicitly allocated for TR management but not systematically linked to management objectives.	Fair	✓		
Some resources explicitly allocated towards achievement of specific TR management objectives.	Good			
Adequate resources explicitly allocated towards achievement of specific TR management objectives.	Very good			

*** These form a variety of resources. These may be segregated into immovable (structures) and movable categories and each further may be considered under the essential and desirable categories. It is best to start with what are the minimum needs to attain each objective, what is available and manner of use/deployment. The proportions of the 'essentials' and 'desirables' along the importance gradient of objectives would serve as pointers for score categories. Specific remarks would be vitally important.**

3.3 Are financial resources other than those of the State linked to priority actions and are funds adequate, released timely and utilized?

Assessment criteria⁺				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Resource allocation is adhoc, funds are inadequate and seldom released in time and not utilized.	Poor			Funds are adequate
Some specific allocation for management of priority action. Funds are inadequate and there is some delay in release, partially utilized.	Fair			
Comprehensive planning and allocation that meets the most important objectives. Generally funds released with not much delay and mostly utilized.	Good	✓		
Comprehensive planning and allocation of resources for attainment of most objectives. Funds generally released on-time and are fully utilized.	Very good			

***Obtain details of funds released by NTCA and their utilization by TR in the last 3 years and indicate them under 'Remarks'. Also comment on the problems associated with fund allocations and their utilization.**

3.4 Are financial resources from the State linked to priority action and funds adequate, timely released and utilized for the management of Tiger Reserve?

Assessment criteria⁺				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Resource allocation is adhoc, funds are inadequate and seldom released in time and not utilized.	Poor			Funds from state need to be enhanced
Some specific allocation for management of priority action. Funds are inadequate and there is some delay in release, partially utilized.	Fair	✓		
Comprehensive planning and allocation that meets the most important objectives. Generally funds released with not much delay and mostly utilized.	Good			
Comprehensive planning and allocation of resources for attainment of most objectives. Funds generally released on-time and are fully utilized.	Very good			

***Obtain details of funds released by State and their utilization by TR in the last 3 years and indicate them under 'Remarks'. Also comment on the problems associated with fund allocation and their utilization.**

3.5 What level of resources are provided by NGOs?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
NGOs contribute nothing for the management of the TR.	Poor			Wildlife Trust of India and FD, work together for the Wild Buffalo Conservation. Need to involve more NGOs to improve resource base
NGOs make some contribution to management of the TR but opportunities for collaboration are not systematically explored.	Fair			
NGOs contributions are systematically sought and negotiated for the management of some TR level activities.	Good	✓		
NGOs contributions are systematically sought and negotiated for the management of many TR level activities.	Very good			

4. Process

4.1 Does the TR have manpower resources trained in wildlife conservation for effective TR management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No trained officers and frontline staff in the TR.	Poor			No data provided on trained staff. However there is a general paucity of trained staff (TCP). Forest staff at all levels need to be provided basic training in wildlife conservation and management.
Some trained officers and few trained frontline staff, posted in the TR.	Fair	✓		
All trained officers and and fair number of trained frontline staff posted in the TR.	Good			
All trained officers and most of the trained frontline staff is posted in the TR.	Very good			

**Indicate % of trained staff in various categories. The number and thematic areas of the 'Internal Training' programmes organized in the TR in the last 3 years may be taken into account. Has the TR prepared a 'Staff Development Plan'? Is it being implemented?*

4.2 Is TR staff management performance linked to achievement of management objectives?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No linkage between staff management performance and management objectives.	Poor			No proper linking system in place. Only adhoc arrangement being followed for rewarding good performance. Need to evolve and adopt a proper system linking performance of staff with management objectives
Some linkage between staff management performance and management objectives, but not consistently or systematically assessed.	Fair	✓		
Management performance for most staff is directly linked to achievement of relevant management objectives.	Good			
Management performance of all staff is directly linked to achievement of relevant management objectives.	Very good			

4.3 Is there effective public participation in TR management* and does it show in making a difference?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no public participation in TR management.	Poor			Visiting MEE team observed some level of public participation, which needs to be strengthened
Opportunistic public participation in some of the relevant aspects of TR management.	Fair	✓		
Systematic public participation in most of the relevant aspects of TR management.	Good			
Comprehensive and systematic public participation in all important and relevant aspects of TR management.	Very good			

**The involvement of NGOs/ NGIs in population estimation may be taken into account)*

4.4 Is there a responsive system for handling complaints and comments* about TR management?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Ad-hoc approach to handling complaints.	Poor	✓		Ad-hoc system being followed. No registers / suggestion books maintained
Complaints handling system operational but not responsive to individual issues and with limited follow up.	Fair			
Coordinated system logs and responds effectively to most complaints.	Good			
All complaints systematically logged in coordinated system and timely response provided with minimal repeat complaints.	Very good			

***Does the TR maintains 'Suggestions Register'? What actions are taken to deal with suggestions?**

4.5 Does TR management addresses the livelihood issues* of resource dependent communities, especially of women?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No livelihood issues are addressed by TR management.	Poor			FMCs are given 20% share of the spot value of forest produce
Few livelihood issues are addressed by TR management.	Fair			
Substantial livelihood issues are addressed by TR management.	Good	✓		
Livelihood issues of resource dependent communities especially of women are addressed effectively by TR managers.	Very good			

***The number of mandays generated in the last 3 years may be taken into account. Are funds received from District Agencies and other sources? Provide details of funds received in last 3 years.**

4.6 Has the TR planned and implemented the voluntary 'Village Relocation' from the Core/ Critical Tiger Habitat (CTH)?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No planning and no implementation	Poor	✓		To be included in the TCP
Plans have been made but no implementation	Fair			
Plans have been made and some implementation is in progress	Good			
Plans have been made and are being actively implemented/ no human habitation in the CTH	Very good			

***Assessment will look into the village relocation planning process including availability of manpower, financial resources and NGO support, if any. Is there a mechanism to address the complaints received in respect of relocation process? Effort must be made to assess post-relocation success or otherwise.**

5. Output

5.1 Is adequate information on TR management publicly available?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no information on TR management publicly available.	Poor	✓		No website / brochures of USTR
Publicly available information is general and has limited relevance to management accountability and the condition of public assets.	Fair			
Publicly available information provides detailed insight into major management issues and condition of public assets.	Good			
Comprehensive reports are routinely available in public domain on management and condition of public assets.	Very good			

5.2 Are visitor services and facilities appropriate and adequate?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Visitor services and facilities do not exist.	Poor			Koyba – tourism (EDC run). Due to LWE disturbances the visits of tourists are few and far between
Visitor services and facilities are very basic.	Fair	✓		
Visitor services and facilities are monitored from time to time and are fairly effective.	Good			
Visitor services and facilities are conscientiously maintained, regularly upgraded and monitored for visitor satisfaction	Very good			

**Include the existence and quality of visitor and interpretation centers, including skills and capabilities of personnel manning these, TR related publications, films, videos; arrangements of stay (including places serving refreshments and food owned and managed by TR), watch towers and hides including safety factors, vehicles assigned for visitors including riding elephants, if any and their deployment, drinking water, rest rooms, garbage disposal, attended and self guided services in the field, visitor feed back on the quality of wilderness experience.*

5.3 Are research/ monitoring related trends systematically evaluated and routinely reported and used to improve management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no systematic evaluation or routine reporting of trends.	Poor		Report submitted by WTI	Research work on Wild Buffalo
Some evaluation and reporting undertaken but neither systematic nor routine.	Fair			
Systematic evaluation and routine reporting of trends undertaken.	Good	✓		
Systematic evaluation and comprehensive reporting of trends undertaken and attempts made at course corrections as relevant.	Very good			

**Not all TRs attract projects and researchers and with exceptions, little research takes place on the TRs own steam because of systemic limitations. However, monitoring of some critical issues is expected e.g. population of tiger, co-predators and prey with insights into their demography and distribution (some opportunistic sampling by sightings, signs and spatial distribution during assessment would be extremely useful in terms of expert impression and as a pulse), monitoring incidence of livestock grazing, fires, weeds, sources of water, a variety of illegal activities typically associated with the reserve, wildlife health (e.g. epidemics, immunization of livestock) regeneration and change in vegetation, visitors and their activities, offence cases, ex-gratia payments etc. Efforts must be made to assess the planning and implementation of Phase-IV monitoring protocols and the success of implementation of M-Stripes (wherever applicable). Are the 'Sykes and Horill' monitoring plots maintained and data analyzed?*

5.4 Is there a systematic maintenance schedule and funds in place for management of infrastructure/assets?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No systematic inventory or maintenance schedule.	Poor			Inventory submitted but no maintenance registers available
Inventory maintenance is adhoc and so is the maintenance schedule.	Fair	✓		
Systematic inventory provides the basis for maintenance schedule but funds are inadequate.	Good			
Systematic inventory provides the basis for maintenance schedule and adequate funds are made available.	Very good			

6. Outcomes

6.1 Are populations of threatened species declining, stable or increasing?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Populations of key threatened/ endangered species are declining.	Poor			Documents not submitted. However continuous investment of money and technical resources is being made with respect to Conservation of Wild Buffalo
Some threatened/ endangered species populations declining, some are increasing, most others are stable.	Fair	✓		
Several threatened/ endangered species populations increasing, most others are stable.	Good			
All threatened/ endangered species populations either increasing or stable.	Very good			

**This needs to practically relate to the natural ecosystem potential rather than being driven merely by numbers and visibility. The assessment score may be elaborated under remarks.*

6.2 Is the population of tigers showing a declining, stable or increasing trend?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Population of tiger is showing a declining trend	Poor			Camera trap pictures submitted in a CD. Authorities advised to systematically maintain and monitor camera trap data.
Population of tiger is stable	Fair	✓		
Population of tiger is showing an increasing trend	Good			
Population of tiger has significantly increased	Very good			

**This assessment should be based in the context of available population estimate (2010-11) and the outcomes of the currently ongoing Phase-IV analyses.*

6.3 Have the threats* to the TR being reduced/ minimized? Or is there an increase?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Threats to the TR have not abated but have enhanced.	Poor			LWE threats
Some threats to the TR have abated, others continue their presence	Fair	✓		
Most threats to the TR have abated. The few remaining are vigorously being addressed	Good			
All threats to the TR have been effectively contained and an efficient system is in place to deal with any emerging situation	Very good			

**Does the TR has a Disaster Risk Management Plan to deal with existing as well as emerging threats?*

6.4 Are the expectations of visitors* generally met or exceeded?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Expectations of visitors generally not met.	Poor			Due to LWE disturbances the visits of tourists are few and far between
Expectations of many visitors are met.	Fair	✓		
Expectations of most visitors are met.	Good			
Expectations of all most all visitors are met.	Very good			

***What is the compliance status on Supreme Court/ NTCA Guidelines on Ecotourism in TRs?**

6.5 Are local communities supportive of TR management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Local communities are hostile.	Poor			The MEE team's interaction with local villagers indicated a good level of participation of the local communities in TR management
Some are supportive.	Fair			
Most locals are supportive of TR management.	Good	✓		
All local communities supportive of TR management.	Very good			

***There could be many reasons for disenchantment. It could be real because of managerial neglect or the managerial efforts could be appropriate but there could be local elements/organizations who would like to keep the disaffection simmering for their own ulterior motives. Likewise success could be entirely because of the efforts of managers or they might be fortunate in striking partnerships with credible NGOs. Assessment may take the prevailing causes into account.**

7. MEE Score Card*

Framework Element Number	Framework Element Name	Number of Criteria (a)	Maximum Mark per question (b)	Total (a x b)	Marks obtained for the Element	Overall MEE Score and % age
1	Context	4	10	40	20	50.81%
2	Planning	7	10	70	35	
3	Inputs	5	10	50	27.5	
4	Process	6	10	60	27.5	
5	Outputs	4	10	40	20	
6	Outcomes	5	10	50	27.5	
Total		31		310	157.5	

***Efforts will be made by the NTCA-WII-MEE Team to address the issue of assigning 'differential' weightages to the 30 Assessment Criteria including 'normalization'.**

Assessment Criteria for addressing issues relating to Climate Change & Carbon capture in the Tiger Reserves (TRs)

1. *Additional Criteria on Climate Change: Is the TR being consciously managed to adapt to climate change?*

Condition	Category*	(Tick ✓)	Comment/ Explanation	Next Steps
There have been no efforts to consider adaptation to climate change in management	Poor			
Some initial thought has taken place about likely impacts of climate change, but this has yet to be translated into management plans	Fair	✓		
Detailed plans have been drawn up about how to adapt management to predicted climate change, but these have yet to be translated into active management.	Good			
Detailed plans have been drawn up about how to adapt management to predicted climate change, and these are already being implemented	Very good			

2. *Additional Criteria on Climate Change: Is the TR being consciously managed to prevent carbon loss and to encourage further carbon capture?*

Condition	Category*	(Tick ✓)	Comment/ Explanation	Next Steps
Carbon storage and carbon dioxide capture have not been considered in management of the TR	Poor			
Carbon storage and carbon dioxide capture have been considered in general terms, but has not yet been significantly reflected in management	Fair	✓		
There are active measures in place to reduce carbon loss from the TR, but no conscious measures to increase carbon dioxide capture	Good			
There are active measures in place both to reduce carbon loss from the TR and to increase carbon dioxide capture	Very good			

Management Effectiveness Evaluation (MEE) of Similipal Tiger Reserves

1. Context

1.1 Are the values of the TR well documented, assessed and monitored?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Values not systematically documented, assessed and monitored.	Poor		Draft TCP (old & new)	Values identified and documented in the old TCP (not approved)
Values generally identified but not systematically assessed and monitored.	Fair	✓		
Most values systematically identified, assessed and monitored.	Good			
All values systematically identified, assessed and monitored.	Very good			

1.2 Are the threats to TR values well documented and assessed*?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Threats not systematically documented or assessed.	Poor		Draft TCP (old & new)	Threats identified and documented in the old TCP (not approved)
Threats generally identified but not systematically assessed.	Fair	✓		
Most threats systematically identified and assessed.	Good			
All threats systematically identified and assessed.	Very good			

*This assessment should be based on number, nature and extent of threats

1.3 Is the 'Core Area' of TR free from human and biotic interference?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
The 'Core Area' has extensive human and biotic interference.	Poor		List of villages & popn census submitted.	Village: 3 – relocated 2 – uninhabited 1 – inside core
The 'Core Area' has some human and biotic interference.	Fair	✓		
The 'Core Area' has little human and biotic interference.	Good			
The 'Core Area' has no human and biotic interference.	Very good			

*This assessment should be based on existence and the efforts made by TR management to address issues related to human settlements/ villages inside the core area; livestock grazing, cultivation, encroachments etc, resource extraction/ livelihood dependence of local communities and should reflect the overall interference due to all the above factors. The issue of 'Unified Control' of the 'Core' and 'Buffer' zones under the Field Director would also be taken into account.

1.4 Has the TR complied with the four Statutory* Requirements (SR) along with Tripartite MoU and three Standard Operation Procedures (SOP)?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
None of the four SR, no compliance of Tripartite MoU and three SOPs met	Poor		All the docs in place	
Two of the four SR, 50% conditions of the Tripartite MoU and SOPs complied	Fair			
Three of the four SR, 75% conditions of the Tri-partite MoU and SOPs complied	Good	✓		
All four SR, 100% conditions of the Tripartite MoU and SOPs complied	Very good			

***Statutory requirements are (1) Legal delineation and notification of Core and Buffer Areas; (2) Establishment of Tiger Conservation Foundation; (3) Development of a Tiger Conservation Plan; and (4) Constitution of a State-level Steering Committee under the Chairmanship of the Chief Minister. TA refers agreement between Field Director, State Government and NTCA. The 3 SOPs are on (i) Straying of Tiger in human dominated landscape, (ii) Tiger Mortality and (iii) Disposal of Carcasses**

2. Planning

2.1 Status of Tiger Conservation Plan (TCP)*?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No TCP in place.	Poor		Draft copy of TCP provided (soft copy)	Under preparation 3 Corridors identified Hadgarh-Kuldiha Conservation reserve proposed
TCP is under preparation	Fair	✓		
TR has a relevant TCP	Good			
TR has a comprehensive and relevant TCP, duly approved by the NTCA	Very good			

***The scientific content and the participatory processes used in preparation of the TCP will be taken into account in assessing the quality of TCP.**

2.2 Does the TR safeguards the threatened biodiversity values?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR does not safeguard the threatened biodiversity values.	Poor		Old TCP provided. Also safeguard actions included in the new TCP	Heavy biotic pressure continues
TR safeguards a few threatened biodiversity values.	Fair	✓		
TR safeguards a large number of threatened biodiversity values.	Good			
TR safeguards all threatened biodiversity values.	Very good			

***Remarks need to elaborate on the kind of safeguards and how they work or are intended to work**

2.3 Are stakeholders given an opportunity to participate in planning process?

Assessment criteria ⁺				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little, if any opportunity for stakeholder participation in planning.	Poor		Minutes of the executive committee meetings submitted	Stakeholders should also include paramilitary forces, Police Dept, local NGOs, tourism, etc
Stakeholders participate in some planning.	Fair			
Stakeholders participate in most planning processes.	Good	✓		
Stakeholders routinely and systematically participate in all planning processes.	Very good			

⁺The result of participation must show in the field and not merely reported as a routine exercise.

2.4 Are habitat management programmes systematically planned, relevant and monitored, and contribute effectively to Tiger and other endangered species conservation?

Assessment criteria ⁺				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Habitat management programmes are entirely adhoc.	Poor		Included in the TCP	Grasslands and invasive species monitored, action on ground yet to be taken.
Limited planning and monitoring programmes are in place for habitat management.	Fair	✓		
Habitat management programmes are generally planned and monitored.	Good			
Habitat management programmes are thoroughly planned and monitored.	Very good			

⁺This assessment should be primarily based on habitat management programmes in relation to habitats for species that are threatened (IUCN categories), are habitat specialists, subjected to seasonal movements, wide ranging with emphasis on the breeding and rearing habitat and may include factors such as food, water, shelter (all connotations). Habitat structure, composition, unique patches of vegetation and sensitive sites, sources of water and their distribution are integral. Corridors within buffer zone are critically important. For example, all riparian habitats. Have these been addressed? Is their a planning process in place? The management practices dealing with invasive species such as Lantana, Michania etc. would be examined.

2.5 Does the TR has an effective Protection Strategy (PS)* and Security Plan and Security Audit (SA) in place?

Assessment criteria ⁺				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR has little or no PS and SA.	Poor		Offence records not provided APCs information provided, number insufficient given the huge TR area Patrolling hours limited to (6 AM – 5 PM)	STPF on deputation from 4 divisions, Dog Squad, Tiger Cell (should include police forces), Akhand Shikar stopped. But villagers seen with bows and arrows with hunting dogs in the buffer and core area. Less motivated staff
TR has an adhoc PS and SA.	Fair	✓		
TR has a generally relevant PS and SA but is not very effective.	Good			
TR has a comprehensive and very effective PS and SA.	Very good			

⁺This assessment takes inter-alia into account the nature of threats, the number and location of patrolling camps and foot and mobile patrolling, needs that relate to available manpower, terrain difficulties, practicability of area coverage, readiness to contain specific threats with necessary support and facilities. The constitution and functioning of Special Tiger Protection Force (STPF), Number of offences reported, arrests made, prosecution initiated and conviction achieved will be taken into account.

2.6 Has the TR been effective in the mitigation of human-wildlife conflicts?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Human-wildlife conflicts are significant but poorly addressed.	Poor		List of conflict cases and compensation provided	Adhoc report of conflict cases by Villagers / FGs
TR has been able to mitigate few human-wildlife conflicts.	Fair	✓		
TR has been able to mitigate many human-wildlife conflicts.	Good			
TR has been effective in mitigating all human-wildlife conflicts.	Very good			

*The assessment will take into account the number of incidences reported and payment of compensation made and its timeliness.

2.7 Is the TR integrated into a wider ecological network/ landscape following the principles of the ecosystem approach?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR not integrated into a wider network/ landscape.	Poor		Proposal on Hadgarh-Kuldiha CR submitted	3 corridors identified
Some limited attempts to integrate the TR into a network/ landscape.	Fair			Proposed Hadgarh-Kuldiha Conservation Reserve
TR is generally quite well integrated into a network/ landscape.	Good	✓		Core within core (357 Sq. Kms) conceptualised
TR is fully integrated into a wider network/ landscape.	Very good		Corridors included in the TCP	

*Assessment needs to consider the scope of opportunities on the landscape scale that exist. Consider whether any attempts have been made and what are these? Have all the important corridors been identified? What actions are planned/implemented for their security? Have the Forest Working Plans and Forest Development Corporation Plans within the identified landscapes taken cognizance of such new requirement? These should have been reflected in TCPs. Is there is any effort to rationalize landuse around TR? Is any effort being made to plan and use 'Smart Green Infrastructure'?

3. Inputs

3.1 Are personnel adequate, well organized and deployed with access to adequate resources in the Tiger Reserve (TR)*?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Few, personnel explicitly allocated but poorly supported for TR management.	Poor	✓	Details of the staff not provided	Max age grp of FGs -45 to 55
Some personnel explicitly allocated for TR management but not adequately supported and systematically linked to management objectives.	Fair			Core – 14 lady FG
Some personnel with fair support explicitly allocated towards achievement of specific TR management objectives.	Good			9 STPF out of 63 in core
Adequate personnel appropriately supported and explicitly allocated towards achievement of specific TR management objectives.	Very good			Of the 7 ranges in core, 3 ROs only posted. Of the 12 ranges in buffer, 7 range with ROs. Staff unwilling to serve in the TR

*This assessment should inter-alia be based on number of personnel allocated for attainment of TR objectives at the Range , Round, Beat and Patrolling camps levels or as relevant to the needs (sanctioned posts vis- a- vis existing personnel and needs beyond the sanctioned strengths. It is possible that posts have last been sanctioned several years back that do not now account for the current needs)

*Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

3.2 Are resources (vehicle, equipment, building etc.) adequate, well organized and managed with desired access?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Few, if any, resources explicitly allocated for TR management.	Poor		Maintenance details of the vehicles, equipments, buildings etc not provided	Required Resources inadequate
Some resources explicitly allocated for TR management but not systematically linked to management objectives.	Fair	✓		APCs inadequate given the area of the TR
Some resources explicitly allocated towards achievement of specific TR management objectives.	Good			Facilities for STPF and FG staff proposed in the TCP
Adequate resources explicitly allocated towards achievement of specific TR management objectives.	Very good			

** These form a variety of resources. These may be segregated into immovable (structures) and movable categories and each further may be considered under the essential and desirable categories. It is best to start with what are the minimum needs to attain each objective, what is available and manner of use/deployment. The proportions of the 'essentials' and 'desirables' along the importance gradient of objectives would serve as pointers for score categories. Specific remarks would be vitally important.*

3.3 Are financial resources other than those of the State linked to priority actions and are funds adequate, released timely and utilized?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Resource allocation is adhoc, funds are inadequate and seldom released in time and not utilized.	Poor		NTCA documents	Now, timely releases (2013-14), however delayed earlier. APOs accepted & all funds provided
Some specific allocation for management of priority action. Funds are inadequate and there is some delay in release, partially utilized.	Fair			
Comprehensive planning and allocation that meets the most important objectives. Generally funds released with not much delay and mostly utilized.	Good	✓		
Comprehensive planning and allocation of resources for attainment of most objectives. Funds generally released on-time and are fully utilized.	Very good			

**Obtain details of funds released by NTCA and their utilization by TR in the last 3 years and indicate them under 'Remarks'. Also comment on the problems associated with fund allocations and their utilization.*

3.4 Are financial resources from the State linked to priority action and funds adequate, timely released and utilized for the management of Tiger Reserve?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Resource allocation is adhoc, funds are inadequate and seldom released in time and not utilized.	Poor		Doc – APO – CAMPA APO - Fire Supporting documents not provided	CAMPA – APC staff deployment (daily wages) Roads repair Habitat (only since 2013 – 14) Research training organised
Some specific allocation for management of priority action. Funds are inadequate and there is some delay in release, partially utilized.	Fair	✓		
Comprehensive planning and allocation that meets the most important objectives. Generally funds released with not much delay and mostly utilized.	Good			
Comprehensive planning and allocation of resources for attainment of most objectives. Funds generally released on-time and are fully utilized.	Very good			

**Obtain details of funds released by State and their utilization by TR in the last 3 years and indicate them under 'Remarks'. Also comment on the problems associated with fund allocation and their utilization.*

3.5 What level of resources are provided by NGOs?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
NGOs contribute nothing for the management of the TR.	Poor			NGO contribute in the management of TR at different levels, around 11 NGOs involved in various activities.
NGOs make some contribution to management of the TR but opportunities for collaboration are not systematically explored.	Fair			
NGOs contributions are systematically sought and negotiated for the management of some TR level activities.	Good			
NGOs contributions are systematically sought and negotiated for the management of many TR level activities.	Very good	✓		

4. Process

4.1 Does the TR have manpower resources trained in wildlife conservation for effective TR management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No trained officers and frontline staff in the TR.	Poor		List of trainings Exposures Staff development Plan (HRD plan)	Training details provided
Some trained officers and few trained frontline staff, posted in the TR.	Fair	✓		
All trained officers and and fair number of trained frontline staff posted in the TR.	Good			
All trained officers and most of the trained frontline staff is posted in the TR.	Very good			

**Indicate % of trained staff in various categories. The number and thematic areas of the 'Internal Training' programmes organized in the TR in the last 3 years may be taken into account. Has the TR prepared a 'Staff Development Plan'? Is it being implemented?*

4.2 Is TR staff management performance linked to achievement of management objectives?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No linkage between staff management performance and management objectives.	Poor			
Some linkage between staff management performance and management objectives, but not consistently or systematically assessed.	Fair			
Management performance for most staff is directly linked to achievement of relevant management objectives.	Good	✓		
Management performance of all staff is directly linked to achievement of relevant management objectives.	Very good			

4.3 Is there effective public participation in TR management* and does it show in making a difference?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no public participation in TR management.	Poor			Media & villagers, NGOs and institutions participate in wildlife Census Streetlights erected in consultation with District Collector
Opportunistic public participation in some of the relevant aspects of TR management.	Fair			
Systematic public participation in most of the relevant aspects of TR management.	Good	✓		
Comprehensive and systematic public participation in all important and relevant aspects of TR management.	Very good			

**The involvement of NGOs/ NGLs in population estimation may be taken into account)*

***Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

4.4 Is there a responsive system for handling complaints and comments* about TR management?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Ad-hoc approach to handling complaints.	Poor		Records	Emails, Website feedback, feedback registers at entry pts
Complaints handling system operational but not responsive to individual issues and with limited follow up.	Fair			
Coordinated system logs and responds effectively to most complaints.	Good	✓		
All complaints systematically logged in coordinated system and timely response provided with minimal repeat complaints.	Very good			

***Does the TR maintains 'Suggestions Register'? What actions are taken to deal with suggestions?**

4.5 Does TR management addresses the livelihood issues* of resource dependent communities, especially of women?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No livelihood issues are addressed by TR management.	Poor			Women food shops SHG Catering and Lodging Guides Daily wages
Few livelihood issues are addressed by TR management.	Fair			
Substantial livelihood issues are addressed by TR management.	Good	✓		
Livelihood issues of resource dependent communities especially of women are addressed effectively by TR managers.	Very good			

***The number of mandays generated in the last 3 years may be taken into account. Are funds received from District Agencies and other sources? Provide details of funds received in last 3 years.**

4.6 Has the TR planned and implemented the voluntary 'Village Relocation' from the Core/ Critical Tiger Habitat (CTH)?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No planning and no implementation	Poor		Minutes of the meeting provided	District level committee constituted
Plans have been made but no implementation	Fair	✓		
Plans have been made and some implementation is in progress	Good			
Plans have been made and are being actively implemented/ no human habitation in the CTH	Very good			No post relocation plan in place

***Assessment will look into the village relocation planning process including availability of manpower, financial resources and NGO support, if any. Is there a mechanism to address the complaints received in respect of relocation process? Effort must be made to assess post-relocation success or otherwise.**

5. Output

5.1 Is adequate information on TR management publicly available?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no information on TR management publicly available.	Poor		Copies of annual reports	Website Annual reports
Publicly available information is general and has limited relevance to management accountability and the condition of public assets.	Fair			
Publicly available information provides detailed insight into major management issues and condition of public assets.	Good			
Comprehensive reports are routinely available in public domain on management and condition of public assets.	Very good	✓		

***Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

5.2 Are visitor services and facilities appropriate and adequate?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Visitor services and facilities do not exist.	Poor			Facilities not adequate
Visitor services and facilities are very basic.	Fair	✓		
Visitor services and facilities are monitored from time to time and are fairly effective.	Good			
Visitor services and facilities are conscientiously maintained, regularly upgraded and monitored for visitor satisfaction	Very good			

***Include the existence and quality of visitor and interpretation centers, including skills and capabilities of personnel manning these, TR related publications, films, videos; arrangements of stay (including places serving refreshments and food owned and managed by TR), watch towers and hides including safety factors, vehicles assigned for visitors including riding elephants, if any and their deployment, drinking water, rest rooms, garbage disposal, attended and self guided services in the field, visitor feed back on the quality of wilderness experience.**

5.3 Are research/ monitoring related trends systematically evaluated and routinely reported and used to improve management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no systematic evaluation or routine reporting of trends.	Poor		Botanist, field biologist and faunal researchers in place	Data evaluated and evaluation undertaken systematically
Some evaluation and reporting undertaken but neither systematic nor routine.	Fair			
Systematic evaluation and routine reporting of trends undertaken.	Good	✓		
Systematic evaluation and comprehensive reporting of trends undertaken and attempts made at course corrections as relevant.	Very good			

***Not all TRs attract projects and researchers and with exceptions, little research takes place on the TRs own steam because of systemic limitations. However, monitoring of some critical issues is expected e.g. population of tiger, co-predators and prey with insights into their demography and distribution (some opportunistic sampling by sightings, signs and spatial distribution during assessment would be extremely useful in terms of expert impression and as a pulse), monitoring incidence of livestock grazing, fires, weeds, sources of water, a variety of illegal activities typically associated with the reserve, wildlife health (e.g. epidemics, immunization of livestock) regeneration and change in vegetation, visitors and their activities, offence cases, ex-gratia payments etc. Efforts must be made to assess the planning and implementation of Phase-IV monitoring protocols and the success of implementation of M-Stripes (wherever applicable). Are the 'Sykes and Horill' monitoring plots maintained and data analyzed?**

***Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

5.4 Is there a systematic maintenance schedule and funds in place for management of infrastructure/assets?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No systematic inventory or maintenance schedule.	Poor	✓		No such document maintained
Inventory maintenance is adhoc and so is the maintenance schedule.	Fair			
Systematic inventory provides the basis for maintenance schedule but funds are inadequate.	Good			
Systematic inventory provides the basis for maintenance schedule and adequate funds are made available.	Very good			

6. Outcomes

6.1 Are populations of threatened species declining, stable or increasing?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Populations of key threatened/ endangered species are declining.	Poor	✓	Data not provided	No relevant data available to assess the wildlife popn trends
Some threatened/ endangered species populations declining, some are increasing, most others are stable.	Fair			
Several threatened/ endangered species populations increasing, most others are stable.	Good			
All threatened/ endangered species populations either increasing or stable.	Very good			

**This needs to practically relate to the natural ecosystem potential rather than being driven merely by numbers and visibility. The assessment score may be elaborated under remarks.*

6.2 Is the population of tigers showing a declining, stable or increasing trend?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Population of tiger is showing a declining trend	Poor	✓	Data not provided	No relevant data available to assess the popn trends
Population of tiger is stable	Fair			
Population of tiger is showing an increasing trend	Good			
Population of tiger has significantly increased	Very good			

**This assessment should be based in the context of available population estimate (2010-11) and the outcomes of the currently ongoing Phase-IV analyses.*

6.3 Have the threats* to the TR being reduced/ minimized? Or is there an increase?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Threats to the TR have not abated but have enhanced.	Poor			Threats identified, but no Disaster risk management plan
Some threats to the TR have abated, others continue their presence	Fair	✓		
Most threats to the TR have abated. The few remaining are vigorously being addressed	Good			
All threats to the TR have been effectively contained and an efficient system is in place to deal with any emerging situation	Very good			

**Does the TR has a Disaster Risk Management Plan to deal with existing as well as emerging threats?*

6.4 Are the expectations of visitors* generally met or exceeded?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Expectations of visitors generally not met.	Poor			Around 5% of core area for tourism (34 Sq. Kms)
Expectations of many visitors are met.	Fair			
Expectations of most visitors are met.	Good	✓		
Expectations of all most all visitors are met.	Very good			

***What is the compliance status on Supreme Court/ NTCA Guidelines on Ecotourism in TRs?**

6.5 Are local communities supportive of TR management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Local communities are hostile.	Poor			Some are supportive, however FD, does not favor involvement of locals in protection or management because of their hunting tradition.
Some are supportive.	Fair	✓		
Most locals are supportive of TR management.	Good			
All local communities supportive of TR management.	Very good			

***There could be many reasons for disenchantment. It could be real because of managerial neglect or the managerial efforts could be appropriate but there could be local elements/organizations who would like to keep the disaffection simmering for their own ulterior motives. Likewise success could be entirely because of the efforts of managers or they might be fortunate in striking partnerships with credible NGOs. Assessment may take the prevailing causes into account.**

7. MEE Score Card*

Framework Element Number	Framework Element Name	Number of Criteria (a)	Maximum Mark per question (b)	Total (a x b)	Marks obtained for the Element	Overall MEE Score and % age
1	Context	4	10	40	22.5	58.06%
2	Planning	7	10	70	40	
3	Inputs	5	10	50	30	
4	Process	6	10	60	40	
5	Outputs	4	10	40	25	
6	Outcomes	5	10	50	22.5	
Total		31		310	180	

***Efforts will be made by the NTCA-WII-MEE Team to address the issue of assigning 'differential' weightages to the 30 Assessment Criteria including 'normalization'.**

Assessment Criteria for addressing issues relating to Climate Change & Carbon capture in the Tiger Reserves (TRs)

1. *Additional Criteria on Climate Change: Is the TR being consciously managed to adapt to climate change?*

Condition	Category*	(Tick ✓)	Comment/ Explanation	Next Steps
There have been no efforts to consider adaptation to climate change in management	Poor			
Some initial thought has taken place about likely impacts of climate change, but this has yet to be translated into management plans	Fair	✓		
Detailed plans have been drawn up about how to adapt management to predicted climate change, but these have yet to be translated into active management.	Good			
Detailed plans have been drawn up about how to adapt management to predicted climate change, and these are already being implemented	Very good			

2. *Additional Criteria on Climate Change: Is the TR being consciously managed to prevent carbon loss and to encourage further carbon capture?*

Condition	Category*	(Tick ✓)	Comment/ Explanation	Next Steps
Carbon storage and carbon dioxide capture have not been considered in management of the TR	Poor			
Carbon storage and carbon dioxide capture have been considered in general terms, but has not yet been significantly reflected in management	Fair	✓		
There are active measures in place to reduce carbon loss from the TR, but no conscious measures to increase carbon dioxide capture	Good			
There are active measures in place both to reduce carbon loss from the TR and to increase carbon dioxide capture	Very good			

Management Effectiveness Evaluation (MEE) of Satkosia Tiger Reserve

1. Context

1.1 Are the values of the TR well documented, assessed and monitored?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Values not systematically documented, assessed and monitored.	Poor		TCP – Old (2008 – 12) & New	
Values generally identified but not systematically assessed and monitored.	Fair	✓		
Most values systematically identified, assessed and monitored.	Good			
All values systematically identified, assessed and monitored.	Very good			

***Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

1.2 Are the threats to TR values well documented and assessed*?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Threats not systematically documented or assessed.	Poor		TCP – Old (2008 – 12) & New	
Threats generally identified but not systematically assessed.	Fair	✓		
Most threats systematically identified and assessed.	Good			
All threats systematically identified and assessed.	Very good			

***This assessment should be based on number, nature and extent of threats**

1.3 Is the 'Core Area' of TR free from human and biotic interference?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
The 'Core Area' has extensive human and biotic interference.	Poor		TCP – Old (2008 – 12) & New	Satkosia: Only one village inside the core willing to be relocated
The 'Core Area' has some human and biotic interference.	Fair	✓		One major observation made is the core and buffers are divided by a road. The buffer has over 50 villages, of which a few are just adjoining the road that cuts the TR into core & buffer
The 'Core Area' has little human and biotic interference.	Good			
The 'Core Area' has no human and biotic interference.	Very good			Baisipalli: 7 villages to be relocated of which settlement of rights in respect of claimants who are not residing within the TR but are located in 3 villages outside the TR, is yet to be completed

***This assessment should be based on existence and the efforts made by TR management to address issues related to human settlements/ villages inside the core area; livestock grazing, cultivation, encroachments etc, resource extraction/ livelihood dependence of local communities and should reflect the overall interference due to all the above factors. The issue of 'Unified Control' of the 'Core' and 'Buffer' zones under the Field Director would also be taken into account.**

***Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

1.4 Has the TR complied with the four Statutory* Requirements (SR) along with Tripartite MoU and three Standard Operation Procedures (SOP)?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
None of the four SR, no compliance of Tripartite MoU and three SOPs met	Poor		Documents provided	
Two of the four SR, 50% conditions of the Tripartite MoU and SOPs complied	Fair	✓		
Three of the four SR, 75% conditions of the Tri-partite MoU and SOPs complied	Good			
All four SR, 100% conditions of the Tripartite MoU and SOPs complied	Very good			

***Statutory requirements are (1) Legal delineation and notification of Core and Buffer Areas; (2) Establishment of Tiger Conservation Foundation; (3) Development of a Tiger Conservation Plan; and (4) Constitution of a State-level Steering Committee under the Chairmanship of the Chief Minister. TA refers agreement between Field Director, State Government and NTCA. The 3 SOPs are on (i) Straying of Tiger in human dominated landscape, (ii) Tiger Mortality and (iii) Disposal of Carcasses**

2. Planning

2.1 Status of Tiger Conservation Plan (TCP)*?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No TCP in place.	Poor		Draft TCP submitted	under preparation TCP prepared by the TR authorities and submitted to NTCA
TCP is under preparation	Fair	✓		
TR has a relevant TCP	Good			
TR has a comprehensive and relevant TCP, duly approved by the NTCA	Very good			

***The scientific content and the participatory processes used in preparation of the TCP will be taken into account in assessing the quality of TCP.**

2.2 Does the TR safeguards the threatened biodiversity values?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR does not safeguard the threatened biodiversity values.	Poor		Old TCP	Threatened biodiversity values identified, plans to safeguard the biodiversity are yet to be drafted
TR safeguards a few threatened biodiversity values.	Fair	✓		
TR safeguards a large number of threatened biodiversity values.	Good			
TR safeguards all threatened biodiversity values.	Very good			

***Remarks need to elaborate on the kind of safeguards and how they work or are intended to work**

2.3 Are stakeholders given an opportunity to participate in planning process?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little, if any opportunity for stakeholder participation in planning.	Poor		Letter of the formation of the committee	Stakeholders Committee formed on April 26, 2014, and so it is difficult to assess the quality of participation
Stakeholders participate in some planning.	Fair	✓		
Stakeholders participate in most planning processes.	Good			
Stakeholders routinely and systematically participate in all planning processes.	Very good			

***The result of participation must show in the field and not merely reported as a routine exercise.**

2.4 Are habitat management programmes systematically planned, relevant and monitored, and contribute effectively to Tiger and other endangered species conservation?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Habitat management programmes are entirely adhoc.	Poor		Included in the TCP	Weed eradication programme Before formulation of TCP, started in 2013 – 14, no structured weed eradication programme, plan for provision of salt licks and water holes were there. Only since 2013 -14 some adhoc action for weed eradication / provision of salt licks and water holes started
Limited planning and monitoring programmes are in place for habitat management.	Fair	✓		
Habitat management programmes are generally planned and monitored.	Good			
Habitat management programmes are thoroughly planned and monitored.	Very good			

**This assessment should be primarily based on habitat management programmes in relation to habitats for species that are threatened (IUCN categories), are habitat specialists, subjected to seasonal movements, wide ranging with emphasis on the breeding and rearing habitat and may include factors such as food, water, shelter (all connotations).Habitat structure, composition, unique patches of vegetation and sensitive sites, sources of water and their distribution are integral. Corridors within buffer zone are critically important. For example, all riparian habitats. Have these been addressed? Is their a planning process in place? The management practices dealing with invasive species such as Lantana, Michania etc. would be examined.*

2.5 Does the TR has an effective Protection Strategy (PS)* and Security Plan and Security Audit (SA) in place?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR has little or no PS and SA.	Poor		Offence records list	Crime dossier
TR has an adhoc PS and SA.	Fair			
TR has a generally relevant PS and SA but is not very effective.	Good	✓		Offence reports
TR has a comprehensive and very effective PS and SA.	Very good			Anti poaching squads with defined routes

**This assessment takes inter-alia into account the nature of threats, the number and location of patrolling camps and foot and mobile patrolling, needs that relate to available manpower, terrain difficulties, practicability of area coverage, readiness to contain specific threats with necessary support and facilities. The constitution and functioning of Special Tiger Protection Force (STPF), Number of offences reported, arrests made, prosecution initiated and conviction achieved will be taken into account.*

2.6 Has the TR been effective in the mitigation of human-wildlife conflicts?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Human-wildlife conflicts are significant but poorly addressed.	Poor		Records submitted	
TR has been able to mitigate few human-wildlife conflicts.	Fair			
TR has been able to mitigate many human-wildlife conflicts.	Good	✓		
TR has been effective in mitigating all human-wildlife conflicts.	Very good			

**The assessment will take into account the number of incidences reported and payment of compensation made and its timeliness.*

2.7 Is the TR integrated into a wider ecological network/ landscape following the principles of the ecosystem approach?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR not integrated into a wider network/ landscape.	Poor		Included in the TCP	
Some limited attempts to integrate the TR into a network/ landscape.	Fair			
TR is generally quite well integrated into a network/ landscape.	Good	✓		
TR is fully integrated into a wider network/ landscape.	Very good			

***Assessment needs to consider the scope of opportunities on the landscape scale that exist. Consider whether any attempts have been made and what are these? Have all the important corridors been identified? What actions are planned / implemented for their security? Have the Forest Working Plans and Forest Development Corporation Plans within the identified landscapes taken cognizance of such new requirement? These should have been reflected in TCPs. Is there is any effort to rationalize landuse around TR? Is any effort being made to plan and use 'Smart Green Infrastructure'?**

3. Inputs

3.1 Are personnel adequate, well organized and deployed with access to adequate resources in the Tiger Reserve (TR)*?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Few, personnel explicitly allocated but poorly supported for TR management.	Poor	✓		<p>Satkosia Gorge Sanctuary of the TR was visited by the MEE team. The Baisapalli WLS part could not be visited because of law and order problem</p> <p>APCs to increase as currently each APC (20 nos) covers 26.5 Sq. kms</p> <p>About 45 APCs required (to be included in the TCP)</p> <p>Satkosia WL Division has 5 Ranges, and only one of these at present is being manned by a Range Officer. ROs are to be posted in the remaining 4 Ranges. All the 4 Ranges of Mahanadi WL Division of the TR are functioning without ROs for the last 6 months. This hampers effective management of the TR</p>
Some personnel explicitly allocated for TR management but not adequately supported and systematically linked to management objectives.	Fair			
Some personnel with fair support explicitly allocated towards achievement of specific TR management objectives.	Good			
Adequate personnel appropriately supported and explicitly allocated towards achievement of specific TR management objectives.	Very good			

***This assessment should inter-alia be based on number of personnel allocated for attainment of TR objectives at the Range , Round, Beat and Patrolling camps levels or as relevant to the needs (sanctioned posts vis- a- vis existing personnel and needs beyond the sanctioned strengths. It is possible that posts have last been sanctioned several years back that do not now account for the current needs)**

3.2 Are resources (vehicle, equipment, building etc.) adequate, well organized and managed with desired access?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Few, if any, resources explicitly allocated for TR management.	Poor			Some resources allocated but inadequate. The resources allocated regards to the staff postings, which however falls short compared to the area of the TR. APCs in poor condition.
Some resources explicitly allocated for TR management but not systematically linked to management objectives.	Fair	✓		
Some resources explicitly allocated towards achievement of specific TR management objectives.	Good			
Adequate resources explicitly allocated towards achievement of specific TR management objectives.	Very good			

** These form a variety of resources. These may be segregated into immovable (structures) and movable categories and each further may be considered under the essential and desirable categories. It is best to start with what are the minimum needs to attain each objective, what is available and manner of use/deployment. The proportions of the 'essentials' and 'desirables' along the importance gradient of objectives would serve as pointers for score categories. Specific remarks would be vitally important.*

3.3 Are financial resources other than those of the State linked to priority actions and are funds adequate, released timely and utilized?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Resource allocation is adhoc, funds are inadequate and seldom released in time and not utilized.	Poor		Copy of details of the funds released, provided	Delay in release of funds from the state, inadequate funds released. 2 nd instalments not released in time Insufficient funds for immunization
Some specific allocation for management of priority action. Funds are inadequate and there is some delay in release, partially utilized.	Fair	✓		
Comprehensive planning and allocation that meets the most important objectives. Generally funds released with not much delay and mostly utilized.	Good			
Comprehensive planning and allocation of resources for attainment of most objectives. Funds generally released on-time and are fully utilized.	Very good			

**Obtain details of funds released by NTCA and their utilization by TR in the last 3 years and indicate them under 'Remarks'. Also comment on the problems associated with fund allocations and their utilization.*

3.4 Are financial resources from the State linked to priority action and funds adequate, timely released and utilized for the management of Tiger Reserve?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Resource allocation is adhoc, funds are inadequate and seldom released in time and not utilized.	Poor		Copy of details of the funds released, provided	Funds released quarterly. Funds insufficient as informed by the DD.
Some specific allocation for management of priority action. Funds are inadequate and there is some delay in release, partially utilized.	Fair	✓		
Comprehensive planning and allocation that meets the most important objectives. Generally funds released with not much delay and mostly utilized.	Good			
Comprehensive planning and allocation of resources for attainment of most objectives. Funds generally released on-time and are fully utilized.	Very good			

**Obtain details of funds released by State and their utilization by TR in the last 3 years and indicate them under 'Remarks'. Also comment on the problems associated with fund allocation and their utilization.*

3.5 What level of resources are provided by NGOs?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
NGOs contribute nothing for the management of the TR.	Poor			Adhoc contribution of a few NGOs
NGOs make some contribution to management of the TR but opportunities for collaboration are not systematically explored.	Fair	✓		
NGOs contributions are systematically sought and negotiated for the management of some TR level activities.	Good			
NGOs contributions are systematically sought and negotiated for the management of many TR level activities.	Very good			

4. Process

4.1 Does the TR have manpower resources trained in wildlife conservation for effective TR management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No trained officers and frontline staff in the TR.	Poor			Tranquilizing team in place with gun, medicine, vehicle, cage for anti-depredation Phase – IV trainings conducted Ecoguide trainings (state level) conducted Fire protection training conducted
Some trained officers and few trained frontline staff, posted in the TR.	Fair			
All trained officers and fair number of trained frontline staff posted in the TR.	Good	✓		
All trained officers and most of the trained frontline staff is posted in the TR.	Very good			

**Indicate % of trained staff in various categories. The number and thematic areas of the 'Internal Training' programmes organized in the TR in the last 3 years may be taken into account. Has the TR prepared a 'Staff Development Plan'? Is it being implemented?*

4.2 Is TR staff management performance linked to achievement of management objectives?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No linkage between staff management performance and management objectives.	Poor	✓	No supporting documents provided	
Some linkage between staff management performance and management objectives, but not consistently or systematically assessed.	Fair			
Management performance for most staff is directly linked to achievement of relevant management objectives.	Good			
Management performance of all staff is directly linked to achievement of relevant management objectives.	Very good			

4.3 Is there effective public participation in TR management* and does it show in making a difference?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no public participation in TR management.	Poor			Public participation in wildlife census NGOs provided with training on phase IV monitoring
Opportunistic public participation in some of the relevant aspects of TR management.	Fair	✓		
Systematic public participation in most of the relevant aspects of TR management.	Good			
Comprehensive and systematic public participation in all important and relevant aspects of TR management.	Very good			

**The involvement of NGOs/ NGIs in population estimation may be taken into account)*

4.4 Is there a responsive system for handling complaints and comments* about TR management?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Ad-hoc approach to handling complaints.	Poor			Complaint box provided Complaints / suggestions through emails on website accepted
Complaints handling system operational but not responsive to individual issues and with limited follow up.	Fair			
Coordinated system logs and responds effectively to most complaints.	Good	✓		
All complaints systematically logged in coordinated system and timely response provided with minimal repeat complaints.	Very good			

**Does the TR maintains 'Suggestions Register'? What actions are taken to deal with suggestions?*

4.5 Does TR management addresses the livelihood issues* of resource dependent communities, especially of women?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No livelihood issues are addressed by TR management.	Poor			NTFP collection Poultry farming since last 6 months Antipoaching squad employing villagers
Few livelihood issues are addressed by TR management.	Fair	✓		
Substantial livelihood issues are addressed by TR management.	Good			
Livelihood issues of resource dependent communities especially of women are addressed effectively by TR managers.	Very good			

**The number of mandays generated in the last 3 years may be taken into account. Are funds received from District Agencies and other sources? Provide details of funds received in last 3 years.*

4.6 Has the TR planned and implemented the voluntary 'Village Relocation' from the Core/ Critical Tiger Habitat (CTH)?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No planning and no implementation	Poor		Village relocation plan	NGOs like NEWS support in relocation plans
Plans have been made but no implementation	Fair			
Plans have been made and some implementation is in progress	Good	✓		
Plans have been made and are being actively implemented/ no human habitation in the CTH	Very good			

***Assessment will look into the village relocation planning process including availability of manpower, financial resources and NGO support, if any. Is there a mechanism to address the complaints received in respect of relocation process? Effort must be made to assess post-relocation success or otherwise.**

5. Output

5.1 Is adequate information on TR management publicly available?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no information on TR management publicly available.	Poor			Website managed well
Publicly available information is general and has limited relevance to management accountability and the condition of public assets.	Fair			
Publicly available information provides detailed insight into major management issues and condition of public assets.	Good			
Comprehensive reports are routinely available in public domain on management and condition of public assets.	Very good	✓		

5.2 Are visitor services and facilities appropriate and adequate?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Visitor services and facilities do not exist.	Poor			Basic facilities available, which need to be expanded to accommodate general public visiting the TR
Visitor services and facilities are very basic.	Fair	✓		
Visitor services and facilities are monitored from time to time and are fairly effective.	Good			
Visitor services and facilities are conscientiously maintained, regularly upgraded and monitored for visitor satisfaction	Very good			

***Include the existence and quality of visitor and interpretation centers, including skills and capabilities of personnel manning these, TR related publications, films, videos; arrangements of stay (including places serving refreshments and food owned and managed by TR), watch towers and hides including safety factors, vehicles assigned for visitors including riding elephants, if any and their deployment, drinking water, rest rooms, garbage disposal, attended and self guided services in the field, visitor feed back on the quality of wilderness experience.**

5.3 Are research/ monitoring related trends systematically evaluated and routinely reported and used to improve management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no systematic evaluation or routine reporting of trends.	Poor	✓	Not made available	
Some evaluation and reporting undertaken but neither systematic nor routine.	Fair			
Systematic evaluation and routine reporting of trends undertaken.	Good			
Systematic evaluation and comprehensive reporting of trends undertaken and attempts made at course corrections as relevant.	Very good			

***Not all TRs attract projects and researchers and with exceptions, little research takes place on the TRs own steam because of systemic limitations. However, monitoring of some critical issues is expected e.g. population of tiger, co-predators and prey with insights into their demography and distribution (some opportunistic sampling by sightings, signs and spatial distribution during assessment would be extremely useful in terms of expert impression and as a pulse), monitoring incidence of livestock grazing, fires, weeds, sources of water, a variety of illegal activities typically associated with the reserve, wildlife health (e.g. epidemics, immunization of livestock) regeneration and change in vegetation, visitors and their activities, offence cases, ex-gratia payments etc. Efforts must be made to assess the planning and implementation of Phase-IV monitoring protocols and the success of implementation of M-Stripes (wherever applicable). Are the 'Sykes and Horill' monitoring plots maintained and data analyzed?**

5.4 Is there a systematic maintenance schedule and funds in place for management of infrastructure/assets?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No systematic inventory or maintenance schedule.	Poor			
Inventory maintenance is adhoc and so is the maintenance schedule.	Fair	✓		
Systematic inventory provides the basis for maintenance schedule but funds are inadequate.	Good			
Systematic inventory provides the basis for maintenance schedule and adequate funds are made available.	Very good			

6. Outcomes

6.1 Are populations of threatened species declining, stable or increasing?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Populations of key threatened/ endangered species are declining.	Poor	✓	No data or other supporting documents available	
Some threatened/ endangered species populations declining, some are increasing, most others are stable.	Fair			
Several threatened/ endangered species populations increasing, most others are stable.	Good			
All threatened/ endangered species populations either increasing or stable.	Very good			

***This needs to practically relate to the natural ecosystem potential rather than being driven merely by numbers and visibility. The assessment score may be elaborated under remarks.**

6.2 Is the population of tigers showing a declining, stable or increasing trend?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Population of tiger is showing a declining trend	Poor	✓	No data or other supporting documents available	
Population of tiger is stable	Fair			
Population of tiger is showing an increasing trend	Good			
Population of tiger has significantly increased	Very good			

**This assessment should be based in the context of available population estimate (2010-11) and the outcomes of the currently ongoing Phase-IV analyses.*

6.3 Have the threats* to the TR being reduced/ minimized? Or is there an increase?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Threats to the TR have not abated but have enhanced.	Poor			
Some threats to the TR have abated, others continue their presence	Fair			
Most threats to the TR have abated. The few remaining are vigorously being addressed	Good	✓		
All threats to the TR have been effectively contained and an efficient system is in place to deal with any emerging situation	Very good			

**Does the TR has a Disaster Risk Management Plan to deal with existing as well as emerging threats?*

6.4 Are the expectations of visitors* generally met or exceeded?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Expectations of visitors generally not met.	Poor			
Expectations of many visitors are met.	Fair	✓		
Expectations of most visitors are met.	Good			
Expectations of all most all visitors are met.	Very good			

**What is the compliance status on Supreme Court/ NTCA Guidelines on Ecotourism in TRs?*

6.5 Are local communities supportive of TR management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Local communities are hostile.	Poor			
Some are supportive.	Fair	✓		
Most locals are supportive of TR management.	Good			
All local communities supportive of TR management.	Very good			

**There could be many reasons for disenchantment. It could be real because of managerial neglect or the managerial efforts could be appropriate but there could be local elements/organizations who would like to keep the disaffection simmering for their own ulterior motives. Likewise success could be entirely because of the efforts of managers or they might be fortunate in striking partnerships with credible NGOs. Assessment may take the prevailing causes into account.*

7. MEE Score Card⁺

Framework Element Number	Framework Element Name	Number of Criteria (a)	Maximum Mark per question (b)	Total (a x b)	Marks obtained for the Element	Overall MEE Score and % age
1	Context	4	10	40	20	53.23%
2	Planning	7	10	70	42.5	
3	Inputs	5	10	50	22.5	
4	Process	6	10	60	35	
5	Outputs	4	10	40	22.5	
6	Outcomes	5	10	50	22.5	
Total		31		310	165	

⁺Efforts will be made by the NTCA-WII-MEE Team to address the issue of assigning 'differential' weightages to the 30 Assessment Criteria including 'normalization'.

Assessment Criteria for addressing issues relating to Climate Change & Carbon capture in the Tiger Reserves (TRs)

1. Additional Criteria on Climate Change: Is the TR being consciously managed to adapt to climate change?

Condition	Category*	(Tick ✓)	Comment/ Explanation	Next Steps
There have been no efforts to consider adaptation to climate change in management	Poor			
Some initial thought has taken place about likely impacts of climate change, but this has yet to be translated into management plans	Fair	✓		
Detailed plans have been drawn up about how to adapt management to predicted climate change, but these have yet to be translated into active management.	Good			
Detailed plans have been drawn up about how to adapt management to predicted climate change, and these are already being implemented	Very good			

2. Additional Criteria on Climate Change: Is the TR being consciously managed to prevent carbon loss and to encourage further carbon capture?

Condition	Category*	(Tick ✓)	Comment/ Explanation	Next Steps
Carbon storage and carbon dioxide capture have not been considered in management of the TR	Poor			
Carbon storage and carbon dioxide capture have been considered in general terms, but has not yet been significantly reflected in management	Fair	✓		
There are active measures in place to reduce carbon loss from the TR, but no conscious measures to increase carbon dioxide capture	Good			
There are active measures in place both to reduce carbon loss from the TR and to increase carbon dioxide capture	Very good			

Management Effectiveness Evaluation (MEE) of Nagarjunsagar Srisailem Tiger Reserve

1. Context

1.1 Are the values of the TR well documented, assessed and monitored?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Values not systematically documented, assessed and monitored.	Poor		TCP, Management Plan	Values - 6 categories
Values generally identified but not systematically assessed and monitored.	Fair			
Most values systematically identified, assessed and monitored.	Good	✓		
All values systematically identified, assessed and monitored.	Very good			

1.2 Are the threats to TR values well documented and assessed*?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Threats not systematically documented or assessed.	Poor		TCP, security plan (annx-II)	Cattle grazing – fringe only for local cattle and within core only those habitations in the core (no restrictions for cattle, goats not permitted) Pilgrimage – through the TCF, restricted traffic from 9PM to 6 AM – from Dornalla to Sikhram (50 kms) and Mannanur to Domalpenta (60 kms), unrestricted traffic between Biarlutti to Pedamanthnalla (25 kms) speed breakers at regular intervals, single route road. Encroachment – 5000 Ha, regularized as title deeds under RoFR Act. Villages – 27 inside the Core of which 2 considered a threat, have been planned for relocation (TCP)
Threats generally identified but not systematically assessed.	Fair			
Most threats systematically identified and assessed.	Good	✓		
All threats systematically identified and assessed.	Very good			

*This assessment should be based on number, nature and extent of threats

1.3 Is the 'Core Area' of TR free from human and biotic interference?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
The 'Core Area' has extensive human and biotic interference.	Poor		TCP – area of villages, human and cattle popn	Human popn – 7500 in 5938 Sq. kms and 5000 + in two proposed villages. Cattle – 10,000 in 28 villages. Buffer no villages
The 'Core Area' has some human and biotic interference.	Fair	✓		
The 'Core Area' has little human and biotic interference.	Good			
The 'Core Area' has no human and biotic interference.	Very good			

*This assessment should be based on existence and the efforts made by TR management to address issues related to human settlements/ villages inside the core area; livestock grazing, cultivation, encroachments etc, resource extraction/ livelihood dependence of local communities and should reflect the overall interference due to all the above factors. The issue of 'Unified Control' of the 'Core' and 'Buffer' zones under the Field Director would also be taken into account.

*Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

1.4 Has the TR complied with the four Statutory* Requirements (SR) along with Tripartite MoU and three Standard Operation Procedures (SOP)?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
None of the four SR, no compliance of Tripartite MoU and three SOPs met	Poor		TCP & MEE notes TCF – GO (meetings details not available) communication letters with NTCA, State-level Steering Committee – meetings conducted along with SBWL(documents) SoPs circulated in English to all Div & range offices in English (official language of the state)	
Two of the four SR, 50% conditions of the Tripartite MoU and SOPs complied	Fair			
Three of the four SR, 75% conditions of the Tri-partite MoU and SOPs complied	Good	✓		
All four SR, 100% conditions of the Tripartite MoU and SOPs complied	Very good			

***Statutory requirements are (1) Legal delineation and notification of Core and Buffer Areas; (2) Establishment of Tiger Conservation Foundation; (3) Development of a Tiger Conservation Plan; and (4) Constitution of a State-level Steering Committee under the Chairmanship of the Chief Minister. TA refers agreement between Field Director, State Government and NTCA. The 3 SOPs are on (i) Straying of Tiger in human dominated landscape, (ii) Tiger Mortality and (iii) Disposal of Carcasses**

2. Planning

2.1 Status of Tiger Conservation Plan (TCP)*?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No TCP in place.	Poor		TCP	Undivided Final draft for NSTR submitted to NTCA on May 28, 2014, comments awaited from NTCA
TCP is under preparation	Fair			
TR has a relevant TCP	Good	✓		
TR has a comprehensive and relevant TCP, duly approved by the NTCA	Very good			

***The scientific content and the participatory processes used in preparation of the TCP will be taken into account in assessing the quality of TCP.**

2.2 Does the TR safeguards the threatened biodiversity values?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR does not safeguard the threatened biodiversity values.	Poor		Endemic species – TCP,	Grassland management, water resource management, weed removal in sporadic cases, view lines and fire lines, 68 – APCs, 7 – strike forces, 1 police force, 8 check posts, 4 river parties
TR safeguards a few threatened biodiversity values.	Fair			
TR safeguards a large number of threatened biodiversity values.	Good	✓		
TR safeguards all threatened biodiversity values.	Very good			

***Remarks need to elaborate on the kind of safeguards and how they work or are intended to work**

2.3 Are stakeholders given an opportunity to participate in planning process?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little, if any opportunity for stakeholder participation in planning.	Poor		TCP document	Villages - 116 EDCs Federation of EDCs, maximum activities conducted through EDCs
Stakeholders participate in some planning.	Fair	✓		
Stakeholders participate in most planning processes.	Good			
Stakeholders routinely and systematically participate in all planning processes.	Very good			

*The result of participation must show in the field and not merely reported as a routine exercise.

2.4 Are habitat management programmes systematically planned, relevant and monitored, and contribute effectively to Tiger and other endangered species conservation?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Habitat management programmes are entirely adhoc.	Poor		TCP - list of species	Boundary demarcation (batvarpalli 50 pillars), maintenance of fodder plots, weed removal, improvement of roads and pathway, view lines development, salt licks, water resource management (saucer natural and artificial), crop compensation,
Limited planning and monitoring programmes are in place for habitat management.	Fair			
Habitat management programmes are generally planned and monitored.	Good	✓		
Habitat management programmes are thoroughly planned and monitored.	Very good			

*This assessment should be primarily based on habitat management programmes in relation to habitats for species that are threatened (IUCN categories), are habitat specialists, subjected to seasonal movements, wide ranging with emphasis on the breeding and rearing habitat and may include factors such as food, water, shelter (all connotations).Habitat structure, composition, unique patches of vegetation and sensitive sites, sources of water and their distribution are integral. Corridors within buffer zone are critically important. For example, all riparian habitats. Have these been addressed? Is their a planning process in place? The management practices dealing with invasive species such as Lantana, Michania etc. would be examined.

2.5 Does the TR has an effective Protection Strategy (PS)* and Security Plan and Security Audit (SA) in place?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR has little or no PS and SA.	Poor		List of cases, Details of camps – MEE	68 base camps are presently functioning in NSTR with average area coverage of 93 Km2 by each camp. Based on the threat perception, it is considered appropriate that each camp should not have a jurisdiction of >25 Km2. This implies that a total of about 238 base camps are required to effectively manage the NSTR
TR has an adhoc PS and SA.	Fair	✓		
TR has a generally relevant PS and SA but is not very effective.	Good			
TR has a comprehensive and very effective PS and SA.	Very good			

*This assessment takes inter-alia into account the nature of threats, the number and location of patrolling camps and foot and mobile patrolling, needs that relate to available manpower, terrain difficulties, practicability of area coverage, readiness to contain specific threats with necessary support and facilities. The constitution and functioning of Special Tiger Protection Force (STPF), Number of offences reported, arrests made, prosecution initiated and conviction achieved will be taken into account.

2.6 Has the TR been effective in the mitigation of human-wildlife conflicts?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Human-wildlife conflicts are significant but poorly addressed.	Poor		MEE docs, Details of compensation – timeliness doc to be submitted for last one yr, rest for last 3 yrs	Animal Rescue Van, full time vet to be engaged
TR has been able to mitigate few human-wildlife conflicts.	Fair	✓		
TR has been able to mitigate many human-wildlife conflicts.	Good			
TR has been effective in mitigating all human-wildlife conflicts.	Very good			

*The assessment will take into account the number of incidences reported and payment of compensation made and its timeliness.

2.7 Is the TR integrated into a wider ecological network / landscape following the principles of the ecosystem approach?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR not integrated into a wider network/ landscape.	Poor		Corridor plan from NSTR – SVNP – MEE Notification copy of GBM – TCP	Corridor plan from NSTR – SVNP GBM declared as Extended core during the year in July 2012
Some limited attempts to integrate the TR into a network/ landscape.	Fair			
TR is generally quite well integrated into a network/ landscape.	Good	✓		
TR is fully integrated into a wider network/ landscape.	Very good			

*Assessment needs to consider the scope of opportunities on the landscape scale that exist. Consider whether any attempts have been made and what are these? Have all the important corridors been identified? What actions are planned / implemented for their security? Have the Forest Working Plans and Forest Development Corporation Plans within the identified landscapes taken cognizance of such new requirement? These should have been reflected in TCPs. Is there is any effort to rationalize landuse around TR? Is any effort being made to plan and use 'Smart Green Infrastructure'?

3. Inputs

3.1 Are personnel adequate, well organized and deployed with access to adequate resources in the Tiger Reserve (TR)*?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Few, personnel explicitly allocated but poorly supported for TR management.	Poor		MEE doc	Adequate personnel available, govt as well as contractual. Reorganization exercise completed, existing ranges, sections and beats reorganized There is general shortage of Beat Officers (Forest Guards) in the TR. A huge area of 5938 Km2 of the TR (Core: 3722 Km2, Buffer: 2216 Km2) is managed by only 123 BOs with each having a patrolling jurisdiction of >48 Km2. The number is proposed to be increased to 224 BOs after the reorganization, which still will mean an average large patrolling beat of 26.5 Km2. Larger beats do not ensure proper and effective protection and management of the TR
Some personnel explicitly allocated for TR management but not adequately supported and systematically linked to management objectives.	Fair	✓		
Some personnel with fair support explicitly allocated towards achievement of specific TR management objectives.	Good			
Adequate personnel appropriately supported and explicitly allocated towards achievement of specific TR management objectives.	Very good			

*This assessment should inter-alia be based on number of personnel allocated for attainment of TR objectives at the Range , Round, Beat and Patrolling camps levels or as relevant to the needs (sanctioned posts vis- a- vis existing personnel and needs beyond the sanctioned strengths. It is possible that posts have last been sanctioned several years back that do not now account for the current needs)

3.2 Are resources (vehicle, equipment, building etc.) adequate, well organized and managed with desired access?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Few, if any, resources explicitly allocated for TR management.	Poor		MEE doc	Well organized adequate resources Vehicles – A to J registers maintained as per AP GO. Buildings – constructed as per SSR (PWD), camps constructed – 60, 8 approved (Permanent)
Some resources explicitly allocated for TR management but not systematically linked to management objectives.	Fair			
Some resources explicitly allocated towards achievement of specific TR management objectives.	Good	✓		
Adequate resources explicitly allocated towards achievement of specific TR management objectives.	Very good			

** These form a variety of resources. These may be segregated into immovable (structures) and movable categories and each further may be considered under the essential and desirable categories. It is best to start with what are the minimum needs to attain each objective, what is available and manner of use/deployment. The proportions of the 'essentials' and 'desirables' along the importance gradient of objectives would serve as pointers for score categories. Specific remarks would be vitally important.*

1. *Provide with registers of maintenance of the vehicles and buildings and equipments*
2. *Table on no of vehicles, buildings and equipments (available and required/ planned)*

3.3 Are financial resources other than those of the State linked to priority actions and are funds adequate, released timely and utilized?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Resource allocation is adhoc, funds are inadequate and seldom released in time and not utilized.	Poor		MEE doc – page 59	
Some specific allocation for management of priority action. Funds are inadequate and there is some delay in release, partially utilized.	Fair			
Comprehensive planning and allocation that meets the most important objectives. Generally funds released with not much delay and mostly utilized.	Good	✓		
Comprehensive planning and allocation of resources for attainment of most objectives. Funds generally released on-time and are fully utilized.	Very good			

**Obtain details of funds released by NTCA and their utilization by TR in the last 3 years and indicate them under 'Remarks'. Also comment on the problems associated with fund allocations and their utilization.*

details of funds released by Center and their utilization by TR in the last 3 years

3.4 Are financial resources from the State linked to priority action and funds adequate, timely released and utilized for the management of Tiger Reserve?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Resource allocation is adhoc, funds are inadequate and seldom released in time and not utilized.	Poor		MEE doc – Page 59	
Some specific allocation for management of priority action. Funds are inadequate and there is some delay in release, partially utilized.	Fair			
Comprehensive planning and allocation that meets the most important objectives. Generally funds released with not much delay and mostly utilized.	Good	✓		
Comprehensive planning and allocation of resources for attainment of most objectives. Funds generally released on-time and are fully utilized.	Very good			

**Obtain details of funds released by State and their utilization by TR in the last 3 years and indicate them under 'Remarks'. Also comment on the problems associated with fund allocation and their utilization.*

3.5 What level of resources are provided by NGOs?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
NGOs contribute nothing for the management of the TR.	Poor		MEE Doc	WWF supported in solar pump installation, WCT supported in logistics, systematically managed
NGOs make some contribution to management of the TR but opportunities for collaboration are not systematically explored.	Fair			
NGOs contributions are systematically sought and negotiated for the management of some TR level activities.	Good	✓		
NGOs contributions are systematically sought and negotiated for the management of many TR level activities.	Very good			

4. Process

4.1 Does the TR have manpower resources trained in wildlife conservation for effective TR management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No trained officers and frontline staff in the TR.	Poor		MSTriPES training by WII and NTCA, PGD WL Management ACF, Srisailem, Phase IV training at Kanha, Periyar and WII	Trainings conducted at circle and division levels, ARREST training programme at Bangkok,
Some trained officers and few trained frontline staff, posted in the TR.	Fair	✓		
All trained officers and and fair number of trained frontline staff posted in the TR.	Good			
All trained officers and most of the trained frontline staff is posted in the TR.	Very good			

**Indicate % of trained staff in various categories. The number and thematic areas of the 'Internal Training' programmes organized in the TR in the last 3 years may be taken into account. Has the TR prepared a 'Staff Development Plan'? Is it being implemented?*

4.2 Is TR staff management performance linked to achievement of management objectives?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No linkage between staff management performance and management objectives.	Poor		MEE doc	Phase – IV monitoring to cover 3600 Sq Kms, MSTriPE implementation (presented by the FD in 1 st STC)
Some linkage between staff management performance and management objectives, but not consistently or systematically assessed.	Fair	✓		
Management performance for most staff is directly linked to achievement of relevant management objectives.	Good			
Management performance of all staff is directly linked to achievement of relevant management objectives.	Very good			

4.3 Is there effective public participation in TR management* and does it show in making a difference?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no public participation in TR management.	Poor		Meeting details (foresters, Member Sec,	EDC meeting minutes / details Watchers involved in the protection of NSTR from EDCs only, fire watchers (5 mths) – additional 350 EDC members from Jan – May (5K/mth), all the view line works, fire line works, weed removal and employment generation activities are being done by EDC members only, and it has been integrated with NREGS programme also, lead has been taken by park management Awarded NTCA, 2013 “Best HUMAN Resources Management award”, by NTCA, RBS, 2011 awards to the local EDC members.
Opportunistic public participation in some of the relevant aspects of TR management.	Fair			
Systematic public participation in most of the relevant aspects of TR management.	Good	✓		
Comprehensive and systematic public participation in all important and relevant aspects of TR management.	Very good			

**The involvement of NGOs / NGLs in population estimation may be taken into account)*

4.4 Is there a responsive system for handling complaints and comments* about TR management?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Ad-hoc approach to handling complaints.	Poor		MEE doc	RTI applications attended as per provisions, Flying squad div exclusively to attend the complaints Toll free number and caller tune to all the CUG members prepared by All India Radio Phone nos of DFOs and RFOs painted on village walls for complaints and information EEC, Park and Lab is having system of obtaining suggestions from visitors, website with feedback options , complaint registers at RFO and above
Complaints handling system operational but not responsive to individual issues and with limited follow up.	Fair			
Coordinated system logs and responds effectively to most complaints.	Good	✓		
All complaints systematically logged in coordinated system and timely response provided with minimal repeat complaints.	Very good			

**Does the TR maintains ‘Suggestions Register’? What actions are taken to deal with suggestions?*

4.5 Does TR management addresses the livelihood issues* of resource dependent communities, especially of women?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No livelihood issues are addressed by TR management.	Poor		TCP	No funds received from district agencies 512 kms of fire line built by locals, 252 kms of view lines, 1000 Ha weed removal, 20 permanent water bodies, 350 tiger trackers (permanent) employed for protection), 350 fire watchers (5 mths) employed from local communities Sewing machine provided to women along with trainings imparted
Few livelihood issues are addressed by TR management.	Fair	✓		
Substantial livelihood issues are addressed by TR management.	Good			
Livelihood issues of resource dependent communities especially of women are addressed effectively by TR managers.	Very good			

**The number of mandays generated in the last 3 years may be taken into account. Are funds received from District Agencies and other sources? Provide details of funds received in last 3 years.*

4.6 Has the TR planned and implemented the voluntary 'Village Relocation' from the Core/ Critical Tiger Habitat (CTH)?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No planning and no implementation	Poor		MEE Doc & TCP	Process of consultation in two villages, and Chenchu tribe is a part & parcel of the ecosystem of NSTR and they have been engaged in the management of NSTR.
Plans have been made but no implementation	Fair	✓		
Plans have been made and some implementation is in progress	Good			
Plans have been made and are being actively implemented/ no human habitation in the CTH	Very good			

***Assessment will look into the village relocation planning process including availability of manpower, financial resources and NGO support, if any. Is there a mechanism to address the complaints received in respect of relocation process? Effort must be made to assess post-relocation success or otherwise.**

5. Output

5.1 Is adequate information on TR management publicly available?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no information on TR management publicly available.	Poor		Brochures Posters, 3 EECs, ecological Park, Bio Lab NSTR booklet	Website: www.nstr.in Brochures Posters, Pamphlets Roadside boards
Publicly available information is general and has limited relevance to management accountability and the condition of public assets.	Fair			
Publicly available information provides detailed insight into major management issues and condition of public assets.	Good			
Comprehensive reports are routinely available in public domain on management and condition of public assets.	Very good	✓		

5.2 Are visitor services and facilities appropriate and adequate?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Visitor services and facilities do not exist.	Poor		Website (accommodation)	CBET complex (commercial), Mannanur, 10 GHs at diff locations (as per availability), 6 safari vehicles, documentary on NSTR, maintained by community
Visitor services and facilities are very basic.	Fair			
Visitor services and facilities are monitored from time to time and are fairly effective.	Good	✓		
Visitor services and facilities are conscientiously maintained, regularly upgraded and monitored for visitor satisfaction	Very good			

***Include the existence and quality of visitor and interpretation centers, including skills and capabilities of personnel manning these, TR related publications, films, videos; arrangements of stay (including places serving refreshments and food owned and managed by TR), watch towers and hides including safety factors, vehicles assigned for visitors including riding elephants, if any and their deployment, drinking water, rest rooms, garbage disposal, attended and self guided services in the field, visitor feed back on the quality of wilderness experience.**

5.3 Are research / monitoring related trends systematically evaluated and routinely reported and used to improve management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no systematic evaluation or routine reporting of trends.	Poor		MEE Doc, Reports to be submitted	Phase IV monitoring MSTriPE Monitoring, Mouse deer reintroduction, Long term monitoring of forest tree communities, LEMON India (NCBS), Prey preference of Tiger & Sympatric of Carnivore in two Field sites Scat analysis by NCBS & WII
Some evaluation and reporting undertaken but neither systematic nor routine.	Fair			
Systematic evaluation and routine reporting of trends undertaken.	Good	✓		
Systematic evaluation and comprehensive reporting of trends undertaken and attempts made at course corrections as relevant.	Very good			

**Not all TRs attract projects and researchers and with exceptions, little research takes place on the TRs own steam because of systemic limitations. However, monitoring of some critical issues is expected e.g. population of tiger, co-predators and prey with insights into their demography and distribution (some opportunistic sampling by sightings, signs and spatial distribution during assessment would be extremely useful in terms of expert impression and as a pulse), monitoring incidence of livestock grazing, fires, weeds, sources of water, a variety of illegal activities typically associated with the reserve, wildlife health (e.g. epidemics, immunization of livestock) regeneration and change in vegetation, visitors and their activities, offence cases, ex-gratia payments etc. Efforts must be made to assess the planning and implementation of Phase-IV monitoring protocols and the success of implementation of M-Stripes (wherever applicable). Are the 'Sykes and Horill' monitoring plots maintained and data analyzed?*

5.4 Is there a systematic maintenance schedule and funds in place for management of infrastructure / assets?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No systematic inventory or maintenance schedule.	Poor		MEE Doc page No 92	
Inventory maintenance is adhoc and so is the maintenance schedule.	Fair			
Systematic inventory provides the basis for maintenance schedule but funds are inadequate.	Good	✓		
Systematic inventory provides the basis for maintenance schedule and adequate funds are made available.	Very good			

6. Outcomes

6.1 Are populations of threatened species declining, stable or increasing?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Populations of key threatened/ endangered species are declining.	Poor		WII report 2006 & 2010 TCP Core Plan page 42 (8 day protocol in summer and winter)	WII reports
Some threatened/ endangered species populations declining, some are increasing, most others are stable.	Fair			
Several threatened/ endangered species populations increasing, most others are stable.	Good	✓		
All threatened/ endangered species populations either increasing or stable.	Very good			

**This needs to practically relate to the natural ecosystem potential rather than being driven merely by numbers and visibility. The assessment score may be elaborated under remarks.*

6.2 Is the population of tigers showing a declining, stable or increasing trend?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Population of tiger is showing a declining trend	Poor		TCP	WII data for 2006 & 2010 is 37 – 45 & 53 – 67, respt & 2014 NSTR popn may range between 65 - 80
Population of tiger is stable	Fair			
Population of tiger is showing an increasing trend	Good	✓		
Population of tiger has significantly increased	Very good			

**This assessment should be based in the context of available population estimate (2010-11) and the outcomes of the currently ongoing Phase-IV analyses.*

6.3 Have the threats* to the TR being reduced/ minimized? Or is there an increase?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Threats to the TR have not abated but have enhanced.	Poor		MEE Doc page No 97 – 100	Human – Wildlife Conflict cases Fire incidents (www.apfdgis.gov.in) Security Plan in place (TCP Annex 16)
Some threats to the TR have abated, others continue their presence	Fair			
Most threats to the TR have abated. The few remaining are vigorously being addressed	Good	✓		
All threats to the TR have been effectively contained and an efficient system is in place to deal with any emerging situation	Very good			

**Does the TR has a Disaster Risk Management Plan to deal with existing as well as emerging threats?*

Disaster Risk Management Plan in place with STPF

Show effective patrolling techniques and its reports

Lawyers in place for the Nagpur division for all wildlife related cases

FD and NGO members working in the landscape as potential informers

Registers and data on decrease in threats due to several reasons, please mention them

6.4 Are the expectations of visitors* generally met or exceeded?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Expectations of visitors generally not met.	Poor		MEE docs page No 101 – 104)	Visitor register CBET is maintained at Mannanur, 2 nd CBET in Mallethirtham
Expectations of many visitors are met.	Fair			
Expectations of most visitors are met.	Good	✓		
Expectations of all most all visitors are met.	Very good			

**What is the compliance status on Supreme Court/ NTCA Guidelines on Ecotourism in TRs?*

6.5 Are local communities supportive of TR management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Local communities are hostile.	Poor			All supportive of TR management EDCs, VSSs, Participation through national level NGOs like WWF, WCT, NCBS and WCS and HyTICOs
Some are supportive.	Fair			
Most locals are supportive of TR management.	Good	✓		
All local communities supportive of TR management.	Very good			

**There could be many reasons for disenchantment. It could be real because of managerial neglect or the managerial efforts could be appropriate but there could be local elements/organizations who would like to keep the disaffection simmering for their own ulterior motives. Likewise success could be entirely because of the efforts of managers or they might be fortunate in striking partnerships with credible NGOs. Assessment may take the prevailing causes into account.*

***Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

7. MEE Score Card⁺

Framework Element Number	Framework Element Name	Number of Criteria (a)	Maximum Mark per question (b)	Total (a x b)	Marks obtained for the Element	Overall MEE Score and % age
1	Context	4	10	40	27.5	68.55
2	Planning	7	10	70	45	
3	Inputs	5	10	50	35	
4	Process	6	10	60	35	
5	Outputs	4	10	40	32.5	
6	Outcomes	5	10	50	37.5	
Total		31		310	212.5	

⁺*Efforts will be made by the NTCA-WII-MEE Team to address the issue of assigning 'differential' weightages to the 30 Assessment Criteria including 'normalization'.*

Assessment Criteria for addressing issues relating to Climate Change & Carbon capture in the Tiger Reserves (TRs)

1. *Additional Criteria on Climate Change: Is the TR being consciously managed to adapt to climate change?*

Condition	Category*	(Tick ✓)	Comment/ Explanation	Next Steps
There have been no efforts to consider adaptation to climate change in management	Poor		MEE doc page No 106 - 108	
Some initial thought has taken place about likely impacts of climate change, but this has yet to be translated into management plans	Fair	✓		
Detailed plans have been drawn up about how to adapt management to predicted climate change, but these have yet to be translated into active management.	Good			
Detailed plans have been drawn up about how to adapt management to predicted climate change, and these are already being implemented	Very good			

2. *Additional Criteria on Climate Change: Is the TR being consciously managed to prevent carbon loss and to encourage further carbon capture?*

Condition	Category*	(Tick ✓)	Comment/ Explanation	Next Steps
Carbon storage and carbon dioxide capture have not been considered in management of the TR	Poor			
Carbon storage and carbon dioxide capture have been considered in general terms, but has not yet been significantly reflected in management	Fair	✓		
There are active measures in place to reduce carbon loss from the TR, but no conscious measures to increase carbon dioxide capture	Good			
There are active measures in place both to reduce carbon loss from the TR and to increase carbon dioxide capture	Very good			

Management Effectiveness Evaluation (MEE) of Kawal Tiger Reserve Tiger Reserve

1. Context

1.1 Are the values of the TR well documented, assessed and monitored?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Values not systematically documented, assessed and monitored.	Poor		TCP Notification of WLS Leopard estimates	High number of species like wild pigs and Nilgai
Values generally identified but not systematically assessed and monitored.	Fair	✓		
Most values systematically identified, assessed and monitored.	Good			
All values systematically identified, assessed and monitored.	Very good			

1.2 Are the threats to TR values well documented and assessed*?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Threats not systematically documented or assessed.	Poor		TCP, PPT copy	Weed control, villages to be relocated
Threats generally identified but not systematically assessed.	Fair			
Most threats systematically identified and assessed.	Good	✓		
All threats systematically identified and assessed.	Very good			

*This assessment should be based on number, nature and extent of threats

1.3 Is the 'Core Area' of TR free from human and biotic interference?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
The 'Core Area' has extensive human and biotic interference.	Poor		TCP Minutes of the meetings with villagers	Cattle grazing seen 37 villages inside the core (1,00,000 human popn and 1.2 lakh cattle) 287 tribal helpers engaged in protection 110 tribals as fire protection watchers Under NREGA nursery 1 – 2 lakh seedlings
The 'Core Area' has some human and biotic interference.	Fair	✓		
The 'Core Area' has little human and biotic interference.	Good			
The 'Core Area' has no human and biotic interference.	Very good			

*This assessment should be based on existence and the efforts made by TR management to address issues related to human settlements/ villages inside the core area; livestock grazing, cultivation, encroachments etc, resource extraction/ livelihood dependence of local communities and should reflect the overall interference due to all the above factors. The issue of 'Unified Control' of the 'Core' and 'Buffer' zones under the Field Director would also be taken into account.

1.4 Has the TR complied with the four Statutory* Requirements (SR) along with Tripartite MoU and three Standard Operation Procedures (SOP)?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
None of the four SR, no compliance of Tripartite MoU and three SOPs met	Poor		Notification of Core and Buffer. Copy of TCP	Foundation proposed by the PCCF, Steering committee proposed. All 3 SoPs in local languages
Two of the four SR, 50% conditions of the Tripartite MoU and SOPs complied	Fair	✓		
Three of the four SR, 75% conditions of the Tri-partite MoU and SOPs complied	Good			
All four SR, 100% conditions of the Tripartite MoU and SOPs complied	Very good			

***Statutory requirements are (1) Legal delineation and notification of Core and Buffer Areas; (2) Establishment of Tiger Conservation Foundation; (3) Development of a Tiger Conservation Plan; and (4) Constitution of a State-level Steering Committee under the Chairmanship of the Chief Minister. TA refers agreement between Field Director, State Government and NTCA. The 3 SOPs are on (i) Straying of Tiger in human dominated landscape, (ii) Tiger Mortality and (iii) Disposal of Carcasses**

2. Planning

2.1 Status of Tiger Conservation Plan (TCP)*?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No TCP in place.	Poor		TCP	Relevant TCP, village relocation plan to be advanced from 2017 – 18 to ASAP
TCP is under preparation	Fair			
TR has a relevant TCP	Good	✓		
TR has a comprehensive and relevant TCP, duly approved by the NTCA	Very good			

***The scientific content and the participatory processes used in preparation of the TCP will be taken into account in assessing the quality of TCP.**

2.2 Does the TR safeguards the threatened biodiversity values?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR does not safeguard the threatened biodiversity values.	Poor		PA values documented, values Research reports	
TR safeguards a few threatened biodiversity values.	Fair			
TR safeguards a large number of threatened biodiversity values.	Good	✓		
TR safeguards all threatened biodiversity values.	Very good			

***Remarks need to elaborate on the kind of safeguards and how they work or are intended to work**

2.3 Are stakeholders given an opportunity to participate in planning process?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little, if any opportunity for stakeholder participation in planning.	Poor			District Police, irrigations dept, NGOs, An alternate bridge suggested by people from the edge of the core (Gangapur) to buffer (Somwarpeth) (Nawapeth – Gangapur road, within the core) to decrease disturbance in the core
Stakeholders participate in some planning.	Fair	✓		
Stakeholders participate in most planning processes.	Good			
Stakeholders routinely and systematically participate in all planning processes.	Very good			

***The result of participation must show in the field and not merely reported as a routine exercise.**

2.4 Are habitat management programmes systematically planned, relevant and monitored, and contribute effectively to Tiger and other endangered species conservation?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Habitat management programmes are entirely adhoc.	Poor			Identified but not as per IUCN categories, but as per WPA.
Limited planning and monitoring programmes are in place for habitat management.	Fair			
Habitat management programmes are generally planned and monitored.	Good	✓		
Habitat management programmes are thoroughly planned and monitored.	Very good			

***This assessment should be primarily based on habitat management programmes in relation to habitats for species that are threatened (IUCN categories), are habitat specialists, subjected to seasonal movements, wide ranging with emphasis on the breeding and rearing habitat and may include factors such as food, water, shelter (all connotations).Habitat structure, composition, unique patches of vegetation and sensitive sites, sources of water and their distribution are integral. Corridors within buffer zone are critically important. For example, all riparian habitats. Have these been addressed? Is their a planning process in place? The management practices dealing with invasive species such as Lantana, Michania etc. would be examined.**

2.5 Does the TR has an effective Protection Strategy (PS)* and Security Plan and Security Audit (SA) in place?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR has little or no PS and SA.	Poor		Security plan, The rapid action report Offences reports submitted	At present, 38 base camps are functional in Kawwal TR with average area coverage of 53 Km2 by each camp. Based on the threat perception, it is considered appropriate that each camp should not have a jurisdiction of >25 Km2. This implies that a total of about 81 base camps are required to effectively manage and protect the Kawwal TR. Similarly, Kadamb Range of the TR which is elongated in shape requires 2 strike forces instead of the present 1
TR has an adhoc PS and SA.	Fair	✓		
TR has a generally relevant PS and SA but is not very effective.	Good			
TR has a comprehensive and very effective PS and SA.	Very good			

***This assessment takes inter-alia into account the nature of threats, the number and location of patrolling camps and foot and mobile patrolling, needs that relate to available manpower, terrain difficulties, practicability of area coverage, readiness to contain specific threats with necessary support and facilities. The constitution and functioning of Special Tiger Protection Force (STPF), Number of offences reported, arrests made, prosecution initiated and conviction achieved will be taken into account.**

2.6 Has the TR been effective in the mitigation of human-wildlife conflicts?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Human-wildlife conflicts are significant but poorly addressed.	Poor		Bajaj insurance doc, Compensation docs, FD conflict data	Rescue and conflict mitigation capability and infrastructure need strengthening including veterinary services
TR has been able to mitigate few human-wildlife conflicts.	Fair			
TR has been able to mitigate many human-wildlife conflicts.	Good	✓		
TR has been effective in mitigating all human-wildlife conflicts.	Very good			

***The assessment will take into account the number of incidences reported and payment of compensation made and its timeliness.**

2.7 Is the TR integrated into a wider ecological network/ landscape following the principles of the ecosystem approach?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR not integrated into a wider network/ landscape.	Poor		Ecological network doc Corridor protection plan	Eco sensitive zone to include the buffer and not core
Some limited attempts to integrate the TR into a network/ landscape.	Fair	✓		
TR is generally quite well integrated into a network/ landscape.	Good			
TR is fully integrated into a wider network/ landscape.	Very good			

***Assessment needs to consider the scope of opportunities on the landscape scale that exist. Consider whether any attempts have been made and what are these? Have all the important corridors been identified? What actions are planned / implemented for their security? Have the Forest Working Plans and Forest Development Corporation Plans within the identified landscapes taken cognizance of such new requirement? These should have been reflected in TCPs. Is there is any effort to rationalize landuse around TR? Is any effort being made to plan and use 'Smart Green Infrastructure'?**

3. Inputs

3.1 Are personnel adequate, well organized and deployed with access to adequate resources in the Tiger Reserve (TR)*?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Few, personnel explicitly allocated but poorly supported for TR management.	Poor		List of staff, Details of Camps	Trainings by WTI/ Forest Academy, Dullapalli Each FG covers around 22.6 Sq. Kms
Some personnel explicitly allocated for TR management but not adequately supported and systematically linked to management objectives.	Fair	✓		
Some personnel with fair support explicitly allocated towards achievement of specific TR management objectives.	Good			
Adequate personnel appropriately supported and explicitly allocated towards achievement of specific TR management objectives.	Very good			

***This assessment should inter-alia be based on number of personnel allocated for attainment of TR objectives at the Range , Round, Beat and Patrolling camps levels or as relevant to the needs (sanctioned posts vis- a- vis existing personnel and needs beyond the sanctioned strengths. It is possible that posts have last been sanctioned several years back that do not now account for the current needs)**

3.2 Are resources (vehicle, equipment, building etc.) adequate, well organized and managed with desired access?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Few, if any, resources explicitly allocated for TR management.	Poor		Assets documents range-wise maintained	No base camps have wireless sets, but equipped with walky talkie 185 camera Traps installed, 300 more proposed as per requirement (grids), 8 watch towers
Some resources explicitly allocated for TR management but not systematically linked to management objectives.	Fair			
Some resources explicitly allocated towards achievement of specific TR management objectives.	Good	✓		
Adequate resources explicitly allocated towards achievement of specific TR management objectives.	Very good			

*** These form a variety of resources. These may be segregated into immovable (structures) and movable categories and each further may be considered under the essential and desirable categories. It is best to start with what are the minimum needs to attain each objective, what is available and manner of use/deployment. The proportions of the 'essentials' and 'desirables' along the importance gradient of objectives would serve as pointers for score categories. Specific remarks would be vitally important.**

***Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

3.3 Are financial resources other than those of the State linked to priority actions and are funds adequate, released timely and utilized?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Resource allocation is adhoc, funds are inadequate and seldom released in time and not utilized.	Poor		NTCA funds APOs	There is a delay in release of funds from the state of about 3 – 6 months, which results in underutilization of funds. Funds insufficient
Some specific allocation for management of priority action. Funds are inadequate and there is some delay in release, partially utilized.	Fair	✓		
Comprehensive planning and allocation that meets the most important objectives. Generally funds released with not much delay and mostly utilized.	Good			
Comprehensive planning and allocation of resources for attainment of most objectives. Funds generally released on-time and are fully utilized.	Very good			

***Obtain details of funds released by NTCA and their utilization by TR in the last 3 years and indicate them under 'Remarks'. Also comment on the problems associated with fund allocations and their utilization.**

3.4 Are financial resources from the State linked to priority action and funds adequate, timely released and utilized for the management of Tiger Reserve?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Resource allocation is adhoc, funds are inadequate and seldom released in time and not utilized.	Poor		NTCA funds APOs	There is a delay in release of funds from the state of about 3 – 6 months, which results in underutilization of funds. Funds insufficient
Some specific allocation for management of priority action. Funds are inadequate and there is some delay in release, partially utilized.	Fair	✓		
Comprehensive planning and allocation that meets the most important objectives. Generally funds released with not much delay and mostly utilized.	Good			
Comprehensive planning and allocation of resources for attainment of most objectives. Funds generally released on-time and are fully utilized.	Very good			

***Obtain details of funds released by State and their utilization by TR in the last 3 years and indicate them under 'Remarks'. Also comment on the problems associated with fund allocation and their utilization.**

3.5 What level of resources are provided by NGOs?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
NGOs contribute nothing for the management of the TR.	Poor		Reports on various works done by NGOs	HyTiCoS – capacity building, motivational programmes, prey predator monitoring, Bird Watch Society, WWF for Solar water pumps Panthera and WCS CePF
NGOs make some contribution to management of the TR but opportunities for collaboration are not systematically explored.	Fair			
NGOs contributions are systematically sought and negotiated for the management of some TR level activities.	Good	✓		
NGOs contributions are systematically sought and negotiated for the management of many TR level activities.	Very good			

4. Process

4.1 Does the TR have manpower resources trained in wildlife conservation for effective TR management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No trained officers and frontline staff in the TR.	Poor		Photographs and schedules of trainings	Wildlife Management trainings and exchange programmes. No staff development plans
Some trained officers and few trained frontline staff, posted in the TR.	Fair	✓		
All trained officers and fair number of trained frontline staff posted in the TR.	Good			
All trained officers and most of the trained frontline staff is posted in the TR.	Very good			

*Indicate % of trained staff in various categories. The number and thematic areas of the 'Internal Training' programmes organized in the TR in the last 3 years may be taken into account. Has the TR prepared a 'Staff Development Plan'? Is it being implemented?

4.2 Is TR staff management performance linked to achievement of management objectives?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No linkage between staff management performance and management objectives.	Poor		Document performance oriented counseling for transfer. Performance awards	Counseling system (grading based on performance) of transfer
Some linkage between staff management performance and management objectives, but not consistently or systematically assessed.	Fair			
Management performance for most staff is directly linked to achievement of relevant management objectives.	Good	✓		
Management performance of all staff is directly linked to achievement of relevant management objectives.	Very good			

4.3 Is there effective public participation in TR management* and does it show in making a difference?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no public participation in TR management.	Poor		Gram Sabha meetings, NGI reports	Gram Sabhas, villagers voluntarily participate
Opportunistic public participation in some of the relevant aspects of TR management.	Fair			
Systematic public participation in most of the relevant aspects of TR management.	Good	✓		
Comprehensive and systematic public participation in all important and relevant aspects of TR management.	Very good			

*The involvement of NGOs/ NGIs in population estimation may be taken into account)

4.4 Is there a responsive system for handling complaints and comments* about TR management?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Ad-hoc approach to handling complaints.	Poor		Records of complaints, Toll free number publicity	Control room, toll free number, brochures / pamphlets Grievance Cell at Dist HQ, Flying Squad fdptkawal@gmail.com http://202.53.72.35/Kawal
Complaints handling system operational but not responsive to individual issues and with limited follow up.	Fair			
Coordinated system logs and responds effectively to most complaints.	Good	✓		
All complaints systematically logged in coordinated system and timely response provided with minimal repeat complaints.	Very good			

*Does the TR maintains 'Suggestions Register'? What actions are taken to deal with suggestions?

*Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

4.5 Does TR management addresses the livelihood issues* of resource dependent communities, especially of women?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No livelihood issues are addressed by TR management.	Poor		Minutes of EDC meetings, Expense docs of EDCs for last two yrs	63 EDCs (2004 onwards changed from VSS)
Few livelihood issues are addressed by TR management.	Fair	✓		
Substantial livelihood issues are addressed by TR management.	Good			
Livelihood issues of resource dependent communities especially of women are addressed effectively by TR managers.	Very good			

***The number of mandays generated in the last 3 years may be taken into account. Are funds received from District Agencies and other sources? Provide details of funds received in last 3 years.**

4.6 Has the TR planned and implemented the voluntary 'Village Relocation' from the Core/ Critical Tiger Habitat (CTH)?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No planning and no implementation	Poor		Gram Sabha resolutions	Identified 11 villages. Ready to vacate 5. Total villages Core 37. Planned village relocation in 2017-18
Plans have been made but no implementation	Fair	✓		
Plans have been made and some implementation is in progress	Good			
Plans have been made and are being actively implemented/ no human habitation in the CTH	Very good			

***Assessment will look into the village relocation planning process including availability of manpower, financial resources and NGO support, if any. Is there a mechanism to address the complaints received in respect of relocation process? Effort must be made to assess post-relocation success or otherwise.**

5. Output

5.1 Is adequate information on TR management publicly available?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no information on TR management publicly available.	Poor		Documents brochures etc	Website ready but yet to be launched
Publicly available information is general and has limited relevance to management accountability and the condition of public assets.	Fair			
Publicly available information provides detailed insight into major management issues and condition of public assets.	Good	✓		
Comprehensive reports are routinely available in public domain on management and condition of public assets.	Very good			

5.2 Are visitor services and facilities appropriate and adequate?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Visitor services and facilities do not exist.	Poor	✓		No structure in place. Tourism zones identified, no staff deployed for tourism
Visitor services and facilities are very basic.	Fair			
Visitor services and facilities are monitored from time to time and are fairly effective.	Good			
Visitor services and facilities are conscientiously maintained, regularly upgraded and monitored for visitor satisfaction	Very good			

***Include the existence and quality of visitor and interpretation centers, including skills and capabilities of personnel manning these, TR related publications, films, videos; arrangements of stay (including places serving refreshments and food owned and managed by TR), watch towers and hides including safety factors, vehicles assigned for visitors including riding elephants, if any and their deployment, drinking water, rest rooms, garbage disposal, attended and self guided services in the field, visitor feed back on the quality of wilderness experience.**

5.3 Are research/ monitoring related trends systematically evaluated and routinely reported and used to improve management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no systematic evaluation or routine reporting of trends.	Poor		Reports	Phase I & IV monitoring done.
Some evaluation and reporting undertaken but neither systematic nor routine.	Fair			
Systematic evaluation and routine reporting of trends undertaken.	Good	✓		
Systematic evaluation and comprehensive reporting of trends undertaken and attempts made at course corrections as relevant.	Very good			

***Not all TRs attract projects and researchers and with exceptions, little research takes place on the TRs own steam because of systemic limitations. However, monitoring of some critical issues is expected e.g. population of tiger, co-predators and prey with insights into their demography and distribution (some opportunistic sampling by sightings, signs and spatial distribution during assessment would be extremely useful in terms of expert impression and as a pulse), monitoring incidence of livestock grazing, fires, weeds, sources of water, a variety of illegal activities typically associated with the reserve, wildlife health (e.g. epidemics, immunization of livestock) regeneration and change in vegetation, visitors and their activities, offence cases, ex-gratia payments etc. Efforts must be made to assess the planning and implementation of Phase-IV monitoring protocols and the success of implementation of M-Stripes (wherever applicable). Are the 'Sykes and Horill' monitoring plots maintained and data analyzed?**

5.4 Is there a systematic maintenance schedule and funds in place for management of infrastructure / assets?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No systematic inventory or maintenance schedule.	Poor	✓		No records
Inventory maintenance is adhoc and so is the maintenance schedule.	Fair			
Systematic inventory provides the basis for maintenance schedule but funds are inadequate.	Good			
Systematic inventory provides the basis for maintenance schedule and adequate funds are made available.	Very good			

6. Outcomes

6.1 Are populations of threatened species declining, stable or increasing?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Populations of key threatened/ endangered species are declining.	Poor			Species like Nilgai and wild pig are increasing. Also, prey species like Chital stable.
Some threatened/ endangered species populations declining, some are increasing, most others are stable.	Fair	✓		
Several threatened/ endangered species populations increasing, most others are stable.	Good			
All threatened/ endangered species populations either increasing or stable.	Very good			

***This needs to practically relate to the natural ecosystem potential rather than being driven merely by numbers and visibility. The assessment score may be elaborated under remarks.**

6.2 Is the population of tigers showing a declining, stable or increasing trend?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Population of tiger is showing a declining trend	Poor			Tigers are using the corridors
Population of tiger is stable	Fair	✓		
Population of tiger is showing an increasing trend	Good			
Population of tiger has significantly increased	Very good			

***This assessment should be based in the context of available population estimate (2010-11) and the outcomes of the currently ongoing Phase-IV analyses.**

6.3 Have the threats* to the TR being reduced / minimized? Or is there an increase?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Threats to the TR have not abated but have enhanced.	Poor		Fire zone copy	Decrease in encroachment, water resources good,
Some threats to the TR have abated, others continue their presence	Fair			
Most threats to the TR have abated. The few remaining are vigorously being addressed	Good	✓		
All threats to the TR have been effectively contained and an efficient system is in place to deal with any emerging situation	Very good			

***Does the TR has a Disaster Risk Management Plan to deal with existing as well as emerging threats?**

6.4 Are the expectations of visitors* generally met or exceeded?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Expectations of visitors generally not met.	Poor	✓		Tourism in planning phase , no tourism in Kawal
Expectations of many visitors are met.	Fair			
Expectations of most visitors are met.	Good			
Expectations of all most all visitors are met.	Very good			

***What is the compliance status on Supreme Court/ NTCA Guidelines on Ecotourism in TRs?**

6.5 Are local communities supportive of TR management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Local communities are hostile.	Poor		Reports on works in local village	
Some are supportive.	Fair			
Most locals are supportive of TR management.	Good	✓		
All local communities supportive of TR management.	Very good			

**There could be many reasons for disenchantment. It could be real because of managerial neglect or the managerial efforts could be appropriate but there could be local elements/organizations who would like to keep the disaffection simmering for their own ulterior motives. Likewise success could be entirely because of the efforts of managers or they might be fortunate in striking partnerships with credible NGOs. Assessment may take the prevailing causes into account.*

7. MEE Score Card*

Framework Element Number	Framework Element Name	Number of Criteria (a)	Maximum Mark per question (b)	Total (a x b)	Marks obtained for the Element	Overall MEE Score and % age
1	Context	4	10	40	22.5	58.87
2	Planning	7	10	70	45	
3	Inputs	5	10	50	30	
4	Process	6	10	60	37.5	
5	Outputs	4	10	40	20	
6	Outcomes	5	10	50	27.5	
Total		31		310	182.5	

**Efforts will be made by the NTCA-WII-MEE Team to address the issue of assigning 'differential' weightages to the 30 Assessment Criteria including 'normalization'.*

Assessment Criteria for addressing issues relating to Climate Change & Carbon capture in the Tiger Reserves (TRs)

1. Additional Criteria on Climate Change: Is the TR being consciously managed to adapt to climate change?

Condition	Category*	(Tick ✓)	Comment/ Explanation	Next Steps
There have been no efforts to consider adaptation to climate change in management	Poor			
Some initial thought has taken place about likely impacts of climate change, but this has yet to be translated into management plans	Fair	✓		
Detailed plans have been drawn up about how to adapt management to predicted climate change, but these have yet to be translated into active management.	Good			
Detailed plans have been drawn up about how to adapt management to predicted climate change, and these are already being implemented	Very good			

2. Additional Criteria on Climate Change: Is the TR being consciously managed to prevent carbon loss and to encourage further carbon capture?

Condition	Category*	(Tick ✓)	Comment/ Explanation	Next Steps
Carbon storage and carbon dioxide capture have not been considered in management of the TR	Poor			
Carbon storage and carbon dioxide capture have been considered in general terms, but has not yet been significantly reflected in management	Fair	✓		
There are active measures in place to reduce carbon loss from the TR, but no conscious measures to increase carbon dioxide capture	Good			
There are active measures in place both to reduce carbon loss from the TR and to increase carbon dioxide capture	Very good			

Management Effectiveness Evaluation (MEE) of Palamau Tiger Reserve

1. Context

1.1 Are the values of the TR well documented, assessed and monitored?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Values not systematically documented, assessed and monitored.	Poor		TCP / notification	As per NP notification, the values generally identified
Values generally identified but not systematically assessed and monitored.	Fair	✓		
Most values systematically identified, assessed and monitored.	Good			
All values systematically identified, assessed and monitored.	Very good			

1.2 Are the threats to TR values well documented and assessed*?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Threats not systematically documented or assessed.	Poor		Draft TCP	
Threats generally identified but not systematically assessed.	Fair			
Most threats systematically identified and assessed.	Good	✓		
All threats systematically identified and assessed.	Very good			

***This assessment should be based on number, nature and extent of threats**

1.3 Is the 'Core Area' of TR free from human and biotic interference?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
The 'Core Area' has extensive human and biotic interference.	Poor		TCP & map	Villages – 8 (CTH) & 3 buffer, cattle grazing
The 'Core Area' has some human and biotic interference.	Fair	✓		
The 'Core Area' has little human and biotic interference.	Good			
The 'Core Area' has no human and biotic interference.	Very good			

***This assessment should be based on existence and the efforts made by TR management to address issues related to human settlements/ villages inside the core area; livestock grazing, cultivation, encroachments etc, resource extraction/ livelihood dependence of local communities and should reflect the overall interference due to all the above factors. The issue of 'Unified Control' of the 'Core' and 'Buffer' zones under the Field Director would also be taken into account.**

1.4 Has the TR complied with the four Statutory* Requirements (SR) along with Tripartite MoU and three Standard Operation Procedures (SOP)?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
None of the four SR, no compliance of Tripartite MoU and three SOPs met	Poor			Steering committee not constituted
Two of the four SR, 50% conditions of the Tripartite MoU and SOPs complied	Fair			
Three of the four SR, 75% conditions of the Tripartite MoU and SOPs complied	Good	✓		
All four SR, 100% conditions of the Tripartite MoU and SOPs complied	Very good			

***Statutory requirements are (1) Legal delineation and notification of Core and Buffer Areas; (2) Establishment of Tiger Conservation Foundation; (3) Development of a Tiger Conservation Plan; and (4) Constitution of a State-level Steering Committee under the Chairmanship of the Chief Minister. TA refers agreement between Field Director, State Government and NTCA. The 3 SOPs are on (i) Straying of Tiger in human dominated landscape, (ii) Tiger Mortality and (iii) Disposal of Carcasses**

2. Planning

2.1 Status of Tiger Conservation Plan (TCP)*?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No TCP in place.	Poor		Final Draft TCP	Suggestions from NTCA been incorporated, final approval from NTCA awaited
TCP is under preparation	Fair			
TR has a relevant TCP	Good	✓		
TR has a comprehensive and relevant TCP, duly approved by the NTCA	Very good			

***The scientific content and the participatory processes used in preparation of the TCP will be taken into account in assessing the quality of TCP.**

2.2 Does the TR safeguards the threatened biodiversity values?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR does not safeguard the threatened biodiversity values.	Poor		reports	
TR safeguards a few threatened biodiversity values.	Fair	✓		
TR safeguards a large number of threatened biodiversity values.	Good			
TR safeguards all threatened biodiversity values.	Very good			

***Remarks need to elaborate on the kind of safeguards and how they work or are intended to work**

2.3 Are stakeholders given an opportunity to participate in planning process?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little, if any opportunity for stakeholder participation in planning.	Poor			Villagers, hotels, teachers, media, etc, involved in the process Schools in villages
Stakeholders participate in some planning.	Fair	✓		
Stakeholders participate in most planning processes.	Good			
Stakeholders routinely and systematically participate in all planning processes.	Very good			

***The result of participation must show in the field and not merely reported as a routine exercise.**

2.4 Are habitat management programmes systematically planned, relevant and monitored, and contribute effectively to Tiger and other endangered species conservation?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Habitat management programmes are entirely adhoc.	Poor		Grasslands, water management plans to be submitted (few brief points mentioned in the TCP)	Research and study required in the area. Good Grasslands, water managements but not leading to improved prey species. No plans for weed eradication. Dispersal of water holes / check dams at strategic areas and creation of grasslands
Limited planning and monitoring programmes are in place for habitat management.	Fair			
Habitat management programmes are generally planned and monitored.	Good	✓		
Habitat management programmes are thoroughly planned and monitored.	Very good			

**This assessment should be primarily based on habitat management programmes in relation to habitats for species that are threatened (IUCN categories), are habitat specialists, subjected to seasonal movements, wide ranging with emphasis on the breeding and rearing habitat and may include factors such as food, water, shelter (all connotations).Habitat structure, composition, unique patches of vegetation and sensitive sites, sources of water and their distribution are integral. Corridors within buffer zone are critically important. For example, all riparian habitats. Have these been addressed? Is their a planning process in place? The management practices dealing with invasive species such as Lantana, Michania etc. would be examined.*

2.5 Does the TR has an effective Protection Strategy (PS)* and Security Plan and Security Audit (SA) in place?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR has little or no PS and SA.	Poor		Offence records Raids list / doc	Patrolling camps / APC (11) throughout PTR Strike force present Naxal affected areas restrict movements in all areas leading to not very effective
TR has an adhoc PS and SA.	Fair			
TR has a generally relevant PS and SA but is not very effective.	Good	✓		
TR has a comprehensive and very effective PS and SA.	Very good			

**This assessment takes inter-alia into account the nature of threats, the number and location of patrolling camps and foot and mobile patrolling, needs that relate to available manpower, terrain difficulties, practicability of area coverage, readiness to contain specific threats with necessary support and facilities. The constitution and functioning of Special Tiger Protection Force (STPF), Number of offences reported, arrests made, prosecution initiated and conviction achieved will be taken into account.*

2.6 Has the TR been effective in the mitigation of human-wildlife conflicts?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Human-wildlife conflicts are significant but poorly addressed.	Poor		Notification – extn of post Report on No of incidences Report on compensation paid	75 Post are annual retains ion / extension posts after end of financial year, the posts including of the FD are extended by the Govt, after July. Last year the extension order was issued on 17 Oct 2013. After this order, AG provides cheque drawal powers to the FD, hence the compensations are delayed 25K immediate in case of death (exgratia) (total 2 lakhs) Serious Injured / grievance – 75K (from state) Post need to be permanent No Veterinarian, mobile vet Mr. Pramod Kumar animal husbandry, assists
TR has been able to mitigate few human-wildlife conflicts.	Fair			
TR has been able to mitigate many human-wildlife conflicts.	Good	✓		
TR has been effective in mitigating all human-wildlife conflicts.	Very good			

**The assessment will take into account the number of incidences reported and payment of compensation made and its timeliness.*

1. STPF team of Nagpur may meet them.

2. **Table on incidences and compensation may be produced**

2.7 **Is the TR integrated into a wider ecological network / landscape following the principles of the ecosystem approach?**

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR not integrated into a wider network/ landscape.	Poor			Adhoc data collection / compilation inadequate staff Corridors identified, but no actions towards its securement
Some limited attempts to integrate the TR into a network/ landscape.	Fair	✓		
TR is generally quite well integrated into a network/ landscape.	Good			
TR is fully integrated into a wider network/ landscape.	Very good			

***Assessment needs to consider the scope of opportunities on the landscape scale that exist. Consider whether any attempts have been made and what are these? Have all the important corridors been identified? What actions are planned/implemented for their security? Have the Forest Working Plans and Forest Development Corporation Plans within the identified landscapes taken cognizance of such new requirement? These should have been reflected in TCPs. Is there is any effort to rationalize landuse around TR? Is any effort being made to plan and use 'Smart Green Infrastructure'?**

3. **Inputs**

3.1 **Are personnel adequate, well organized and deployed with access to adequate resources in the Tiger Reserve (TR)*?**

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Few, personnel explicitly allocated but poorly supported for TR management.	Poor			TR suffers from severe manpower shortage as against the sanctioned strength, they are running short of 163 FG's, 6 Foresters, 3 RFO's and 2 ACF's. To compensate with this problem, the TR has employed 154 daily wage trekkers
Some personnel explicitly allocated for TR management but not adequately supported and systematically linked to management objectives.	Fair	✓		
Some personnel with fair support explicitly allocated towards achievement of specific TR management objectives.	Good			
Adequate personnel appropriately supported and explicitly allocated towards achievement of specific TR management objectives.	Very good			

***This assessment should inter-alia be based on number of personnel allocated for attainment of TR objectives at the Range , Round, Beat and Patrolling camps levels or as relevant to the needs (sanctioned posts vis- a- vis existing personnel and needs beyond the sanctioned strengths. It is possible that posts have last been sanctioned several years back that do not now account for the current needs)**

3.2 **Are resources (vehicle, equipment, building etc.) adequate, well organized and managed with desired access?**

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Few, if any, resources explicitly allocated for TR management.	Poor			Insufficient / inefficient equipment's / personal
Some resources explicitly allocated for TR management but not systematically linked to management objectives.	Fair	✓		
Some resources explicitly allocated towards achievement of specific TR management objectives.	Good			
Adequate resources explicitly allocated towards achievement of specific TR management objectives.	Very good			

*** These form a variety of resources. These may be segregated into immovable (structures) and movable categories and each further may be considered under the essential and desirable categories. It is best to start with what are the minimum needs to attain each objective, what is available and manner of use/deployment. The proportions of the 'essentials' and 'desirables' along the importance gradient of objectives would serve as pointers for score categories. Specific remarks would be vitally important.**

3. **Provide with registers of maintenance of the vehicles and buildings and equipments**

4. **Table on no of vehicles, buildings and equipments (available and required/ planned)**

3.3 **Are financial resources other than those of the State linked to priority actions and are funds adequate, released timely and utilized?**

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Resource allocation is adhoc, funds are inadequate and seldom released in time and not utilized.	Poor			Funds adequate but not released in time by the state, therefore underutilization of funds Allocation is fine
Some specific allocation for management of priority action. Funds are inadequate and there is some delay in release, partially utilized.	Fair			
Comprehensive planning and allocation that meets the most important objectives. Generally funds released with not much delay and mostly utilized.	Good	✓		
Comprehensive planning and allocation of resources for attainment of most objectives. Funds generally released on-time and are fully utilized.	Very good			

***Obtain details of funds released by NTCA and their utilization by TR in the last 3 years and indicate them under 'Remarks'. Also comment on the problems associated with fund allocations and their utilization.**

3.4 **Are financial resources from the State linked to priority action and funds adequate, timely released and utilized for the management of Tiger Reserve?**

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Resource allocation is adhoc, funds are inadequate and seldom released in time and not utilized.	Poor			Funds sufficient but untimely released and inadequate utilization of funds due to staff constraints
Some specific allocation for management of priority action. Funds are inadequate and there is some delay in release, partially utilized.	Fair	✓		
Comprehensive planning and allocation that meets the most important objectives. Generally funds released with not much delay and mostly utilized.	Good			
Comprehensive planning and allocation of resources for attainment of most objectives. Funds generally released on-time and are fully utilized.	Very good			

***Obtain details of funds released by State and their utilization by TR in the last 3 years and indicate them under 'Remarks'. Also comment on the problems associated with fund allocation and their utilization.**

3.5 **What level of resources are provided by NGOs?**

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
NGOs contribute nothing for the management of the TR.	Poor		Reports	NGO contribution are not systematically sought
NGOs make some contribution to management of the TR but opportunities for collaboration are not systematically explored.	Fair	✓		
NGOs contributions are systematically sought and negotiated for the management of some TR level activities.	Good			
NGOs contributions are systematically sought and negotiated for the management of many TR level activities.	Very good			

4. Process

4.1 Does the TR have manpower resources trained in wildlife conservation for effective TR management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No trained officers and frontline staff in the TR.	Poor			Critical shortage of staff
Some trained officers and few trained frontline staff, posted in the TR.	Fair	✓		
All trained officers and fair number of trained frontline staff posted in the TR.	Good			
All trained officers and most of the trained frontline staff is posted in the TR.	Very good			

*Indicate % of trained staff in various categories. The number and thematic areas of the 'Internal Training' programmes organized in the TR in the last 3 years may be taken into account. Has the TR prepared a 'Staff Development Plan'? Is it being implemented?

4.2 Is TR staff management performance linked to achievement of management objectives?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No linkage between staff management performance and management objectives.	Poor			Cash awards to TPF / trekkers, certificates to rest till rangers Conflicts with comments provided
Some linkage between staff management performance and management objectives, but not consistently or systematically assessed.	Fair	✓		
Management performance for most staff is directly linked to achievement of relevant management objectives.	Good			
Management performance of all staff is directly linked to achievement of relevant management objectives.	Very good			

4.3 Is there effective public participation in TR management* and does it show in making a difference?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no public participation in TR management.	Poor			EDC, villagers, eco development
Opportunistic public participation in some of the relevant aspects of TR management.	Fair	✓		
Systematic public participation in most of the relevant aspects of TR management.	Good			
Comprehensive and systematic public participation in all important and relevant aspects of TR management.	Very good			

*The involvement of NGOs/ NGLs in population estimation may be taken into account)

4.4 Is there a responsive system for handling complaints and comments* about TR management?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Ad-hoc approach to handling complaints.	Poor	✓		No proper system in place for handling complaints and comments
Complaints handling system operational but not responsive to individual issues and with limited follow up.	Fair			
Coordinated system logs and responds effectively to most complaints.	Good			
All complaints systematically logged in coordinated system and timely response provided with minimal repeat complaints.	Very good			

*Does the TR maintains 'Suggestions Register'? What actions are taken to deal with suggestions?

4.5 Does TR management addresses the livelihood issues* of resource dependent communities, especially of women?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No livelihood issues are addressed by TR management.	Poor		Self-help grp docs to be provided	registered 42 Self-help group – revolving funds (12000) (clothes, mahua, bamboo) Loans from banks yet to approved
Few livelihood issues are addressed by TR management.	Fair	✓		
Substantial livelihood issues are addressed by TR management.	Good			
Livelihood issues of resource dependent communities especially of women are addressed effectively by TR managers.	Very good			

***The number of mandays generated in the last 3 years may be taken into account. Are funds received from District Agencies and other sources? Provide details of funds received in last 3 years.**

4.6 Has the TR planned and implemented the voluntary 'Village Relocation' from the Core/ Critical Tiger Habitat (CTH)?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No planning and no implementation	Poor	✓		It was informed that the State Govt is not in favor of Village relocation, therefore no planning on village relocation
Plans have been made but no implementation	Fair			
Plans have been made and some implementation is in progress	Good			
Plans have been made and are being actively implemented/ no human habitation in the CTH	Very good			

***Assessment will look into the village relocation planning process including availability of manpower, financial resources and NGO support, if any. Is there a mechanism to address the complaints received in respect of relocation process? Effort must be made to assess post-relocation success or otherwise.**

5. Output

5.1 Is adequate information on TR management publicly available?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no information on TR management publicly available.	Poor			Jharenvis.com website has some information Brochures, no website on PTR
Publicly available information is general and has limited relevance to management accountability and the condition of public assets.	Fair	✓		
Publicly available information provides detailed insight into major management issues and condition of public assets.	Good			
Comprehensive reports are routinely available in public domain on management and condition of public assets.	Very good			

Website, brochures, info on hotels, resorts, TR entry points, TR tickets booth and receptions, facebook and other online pages

5.2 Are visitor services and facilities appropriate and adequate?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Visitor services and facilities do not exist.	Poor			
Visitor services and facilities are very basic.	Fair	✓		
Visitor services and facilities are monitored from time to time and are fairly effective.	Good			
Visitor services and facilities are conscientiously maintained, regularly upgraded and monitored for visitor satisfaction	Very good			

***Include the existence and quality of visitor and interpretation centers, including skills and capabilities of personnel manning these, TR related publications, films, videos; arrangements of stay (including places serving refreshments and food owned and managed by TR), watch towers and hides including safety factors, vehicles assigned for visitors including riding elephants, if any and their deployment, drinking water, rest rooms, garbage disposal, attended and self guided services in the field, visitor feed back on the quality of wilderness experience.**

5.3 Are research/ monitoring related trends systematically evaluated and routinely reported and used to improve management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no systematic evaluation or routine reporting of trends.	Poor		Few documents provided	No systematic reporting of research / monitoring related management
Some evaluation and reporting undertaken but neither systematic nor routine.	Fair	✓		
Systematic evaluation and routine reporting of trends undertaken.	Good			
Systematic evaluation and comprehensive reporting of trends undertaken and attempts made at course corrections as relevant.	Very good			

***Not all TRs attract projects and researchers and with exceptions, little research takes place on the TRs own steam because of systemic limitations. However, monitoring of some critical issues is expected e.g. population of tiger, co-predators and prey with insights into their demography and distribution (some opportunistic sampling by sightings, signs and spatial distribution during assessment would be extremely useful in terms of expert impression and as a pulse), monitoring incidence of livestock grazing, fires, weeds, sources of water, a variety of illegal activities typically associated with the reserve, wildlife health (e.g. epidemics, immunization of livestock) regeneration and change in vegetation, visitors and their activities, offence cases, ex-gratia payments etc. Efforts must be made to assess the planning and implementation of Phase-IV monitoring protocols and the success of implementation of M-Stripes (wherever applicable). Are the 'Sykes and Horill' monitoring plots maintained and data analyzed?**

5.4 Is there a systematic maintenance schedule and funds in place for management of infrastructure / assets?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No systematic inventory or maintenance schedule.	Poor			No systematic maintenance schedule
Inventory maintenance is adhoc and so is the maintenance schedule.	Fair	✓		
Systematic inventory provides the basis for maintenance schedule but funds are inadequate.	Good			
Systematic inventory provides the basis for maintenance schedule and adequate funds are made available.	Very good			

6. Outcomes

6.1 Are populations of threatened species declining, stable or increasing?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Populations of key threatened/ endangered species are declining.	Poor			No categorized listing of species <i>To be rated after the details</i> Higher authorities write to conduct research work as per the traditional techniques
Some threatened/ endangered species populations declining, some are increasing, most others are stable.	Fair	✓		
Several threatened/ endangered species populations increasing, most others are stable.	Good			
All threatened/ endangered species populations either increasing or stable.	Very good			

***This needs to practically relate to the natural ecosystem potential rather than being driven merely by numbers and visibility. The assessment score may be elaborated under remarks.**

6.2 Is the population of tigers showing a declining, stable or increasing trend?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Population of tiger is showing a declining trend	Poor			No estimations conducted / adhoc scat collection Data inadequate Higher authorities write to conduct research work as per the traditional techniques
Population of tiger is stable	Fair	✓		
Population of tiger is showing an increasing trend	Good			
Population of tiger has significantly increased	Very good			

***This assessment should be based in the context of available population estimate (2010-11) and the outcomes of the currently ongoing Phase-IV analyses.**

6.3 Have the threats* to the TR being reduced/ minimized? Or is there an increase?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Threats to the TR have not abated but have enhanced.	Poor	✓		Threats identified
Some threats to the TR have abated, others continue their presence	Fair			
Most threats to the TR have abated. The few remaining are vigorously being addressed	Good			
All threats to the TR have been effectively contained and an efficient system is in place to deal with any emerging situation	Very good			

***Does the TR has a Disaster Risk Management Plan to deal with existing as well as emerging threats?**

6.4 Are the expectations of visitors* generally met or exceeded?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Expectations of visitors generally not met.	Poor			
Expectations of many visitors are met.	Fair			
Expectations of most visitors are met.	Good	✓		
Expectations of all most all visitors are met.	Very good			

***What is the compliance status on Supreme Court/ NTCA Guidelines on Ecotourism in TRs?**

***Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

6.5 Are local communities supportive of TR management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Local communities are hostile.	Poor			
Some are supportive.	Fair	✓		
Most locals are supportive of TR management.	Good			
All local communities supportive of TR management.	Very good			

**There could be many reasons for disenchantment. It could be real because of managerial neglect or the managerial efforts could be appropriate but there could be local elements/organizations who would like to keep the disaffection simmering for their own ulterior motives. Likewise success could be entirely because of the efforts of managers or they might be fortunate in striking partnerships with credible NGOs. Assessment may take the prevailing causes into account.*

7. MEE Score Card*

Framework Element Number	Framework Element Name	Number of Criteria (a)	Maximum Mark per question (b)	Total (a x b)	Marks obtained for the Element	Overall MEE Score and % age
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2	Planning	7	10	70	45	
3	Inputs	5	10	50	27.5	
4	Process	6	10	60	25	
5	Outputs	4	10	40	20	
6	Outcomes	5	10	50	25	
Total		31		310	167.5	

**Efforts will be made by the NTCA-WII-MEE Team to address the issue of assigning 'differential' weightages to the 30 Assessment Criteria including 'normalization'.*

Assessment Criteria for addressing issues relating to Climate Change & Carbon capture in the Tiger Reserves (TRs)

1. *Additional Criteria on Climate Change: Is the TR being consciously managed to adapt to climate change?*

Condition	Category*	(Tick ✓)	Comment/ Explanation	Next Steps
There have been no efforts to consider adaptation to climate change in management	Poor	✓		
Some initial thought has taken place about likely impacts of climate change, but this has yet to be translated into management plans	Fair			
Detailed plans have been drawn up about how to adapt management to predicted climate change, but these have yet to be translated into active management.	Good			
Detailed plans have been drawn up about how to adapt management to predicted climate change, and these are already being implemented	Very good			

2. *Additional Criteria on Climate Change: Is the TR being consciously managed to prevent carbon loss and to encourage further carbon capture?*

Condition	Category*	(Tick ✓)	Comment/ Explanation	Next Steps
Carbon storage and carbon dioxide capture have not been considered in management of the TR	Poor	✓		
Carbon storage and carbon dioxide capture have been considered in general terms, but has not yet been significantly reflected in management	Fair			
There are active measures in place to reduce carbon loss from the TR, but no conscious measures to increase carbon dioxide capture	Good			
There are active measures in place both to reduce carbon loss from the TR and to increase carbon dioxide capture	Very good			

Cluster: IV

S.No.	Name of Tiger Reserve	Page No.
25.	Bandipur Tiger Reserve, Karnataka	359
26.	Nagarhole Tiger Reserve, Karnataka	378
27.	Bhadra Tiger Reserve, Karnataka	394
28.	Dandeli-Anshi Tiger Reserve, Karnataka	413
29.	Biligiri Ranganatha Swamy Temple Tiger Reserve, Karnataka	435
30.	Periyar Tiger Reserve, Kerala	457
31.	Parambikulam Tiger Reserve, Kerala	482
32.	Kalakad-Mundanthurai Tiger Reserve, Tamil Nadu	506
33.	Anamalai Tiger Reserve, Tamil Nadu	529
34.	Mudumalai Tiger Reserve, Tamil Nadu	551
35.	Sathyamangalam Tiger Reserve, Tamil Nadu	573

Management Effectiveness Evaluation (MEE) of Bandipur Tiger Reserve

1. Context

1.1 Are the values of the TR well documented, assessed and monitored?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Values not systematically documented, assessed and monitored.	Poor		Draft Tiger Conservation Plan Chapter-1, 2,6 & 7 and discussion with TR authorities	<p>Bandipur Tiger Reserve (BTR), formerly notified as Bandipur National Park in 1970, had been earlier included under "Project Tiger" in 1973 as one of the first nine Tiger Reserves of the country.</p> <p>The Tiger Reserve is situated in the contiguous landscape spread in the two revenue districts of Mysore and Chamarajanagar. It is surrounded by Mudumalai Tiger Reserve in the South, Wynad Wildlife Sanctuary in the South West and on the North West Side the Kabini Reservoir, which separates it from the Nagarahole Tiger Reserve.</p> <p>It is part of the Bandipur-Mudumalai-Satyamangala-Wynad- Nagarahole Tiger Conservation Landscape with tiger occupancy in 21,435 km² containing the single largest population of Tigers in India.</p> <p>This Landscape is home to single largest Asian Elephant population in the world and is part of the Mysore Elephant Reserve (MER) notified on 25-11- 2002. The Tiger and the Elephants are the flagship and umbrella species for the conservation of all the Biota that this ecosystem represents.</p> <p>It is also part of the Nilgiri Biosphere Reserve, notified on 01-09-1986 by the Government of India under the Man and Biosphere (MAB) Programme of the IUCN. The Reserve is endowed with rich floral and faunal diversity and is recognized as one of the Mega Biodiversity Areas in the country.</p> <p>Biogeographically, Bandipur Tiger Reserve lies in one of the richest biodiversity areas representing "5 B Western Ghats Mountains Biogeography Zone". The forest types are: (i) The Scrub type –Dry Deciduous Scrub, (ii) Southern Tropical Dry Deciduous type and (iii) Southern Tropical Moist Deciduous type. About 35 species of mammals, 227 species of birds, 34 species of reptiles, 21 species of amphibians and 25 species of fishes are found in BTR. All the values have been systematically identified and documented in the Draft Tiger Conservation Plan. Mechanisms are in place for their periodic assessment and monitoring.</p>
Values generally identified but not systematically assessed and monitored.	Fair			
Most values systematically identified, assessed and monitored.	Good			
All values systematically identified, assessed and monitored.	Very good	✓		

1.2 Are the threats to TR values well documented and assessed*?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Threats not systematically documented or assessed.	Poor		Draft Tiger Conservation Plan Chapter- 6 & 7 and discussion with TR authorities	Most of the threats to Tiger Reserve have been identified and assessed in the draft Tiger Conservation Plan. Poaching, forest fires, anthropogenic pressures from local villagers and their cattle in surrounding villages, human-wildlife conflict, changing land use patterns in the buffer areas and existence of highways through the tiger reserve have been identified to be threats to the TR. However, during field visit and from discussions, it was felt that the threats related to spread of alien invasive species (particularly lantana, which is reportedly has occupied about 300km ²) and loss of bamboo forests arising out of repeated gregarious bamboo flowering (in last 3 cycles) needs intensive assessment.
Threats generally identified but not systematically assessed.	Fair			
Most threats systematically identified and assessed.	Good	✓		
All threats systematically identified and assessed.	Very good			

***This assessment should be based on number, nature and extent of threats**

1.3 Is the 'Core Area' of TR free from human and biotic interference?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
The 'Core Area' has extensive human and biotic interference.	Poor		Draft Tiger Conservation Plan, written information and discussion with the TR authorities	The core area is free from human settlements. The dependence of the village community on the Reserve is mainly to meet the requirement of Fuel wood and Grazing of the cattle. However, due to the TR managements efforts in association with the Namma Sangha, a Cooperative Society, in the last decade or so, the dependence of the village community to meet their fuel wood requirement has been brought down to a considerable extent. The Reserve management is continuously endeavoring in providing these families with the alternative sources of Energy. About 35,000 LPG connections have been issued so far (3771 in 2011-12 and 154 in 2012-13) under various schemes. Most of the forests of buffer area except only 42.73 km ² of Gundlupet territorial forest sub-division have been placed in the unified control of TR Administration.
The 'Core Area' has some human and biotic interference.	Fair			
The 'Core Area' has little human and biotic interference.	Good			
The 'Core Area' has no human and biotic interference.	Very good	✓		

***This assessment should be based on existence and the efforts made by TR management to address issues related to human settlements/ villages inside the core area; livestock grazing, cultivation, encroachments etc, resource extraction/ livelihood dependence of local communities and should reflect the overall interference due to all the above factors. The issue of 'Unified Control' of the 'Core' and 'Buffer' zones under the Field Director would also be taken into account.**

1.4 Has the TR complied with the four Statutory* Requirements (SR) along with Tripartite MoU and three Standard Operation Procedures (SOP)?

Assessment criteria				
Condition	Catego- ry*	(Tick ✓)	Reference document(s)	Remarks
None of the four SR, no compliance of Tripartite MoU and three SOPs met	Poor		Draft Tiger Conservation Plan, written information and discussion with the TR authorities	Under section 38V of WL (P) Act 872.24 km ² of Bandipur National Park has been notified as Core or Critical Tiger habitat by the Karnataka Government's notification no. FEE 299FWL 2007 dated 20-12-2007. Buffer Zone around the core or critical tiger habitat, comprising of 118.27 km ² of forest area and 465.79 km ² area of 118 villages, have been notified vide Govt. notification no. FEE 136 FWL 2008, dated 31-08-2010. Tiger Conservation Foundation has been established vide Go no. FEE 104 FWL 2007, dated 13-02-2007. A Draft Tiger Conservation Plan has been prepared and is under process of finalization. The State Level Steering Committee under the chairmanship of the Chief Minister has been constituted and 3rd meetings had been held on 26-07-2011. The compliance report on various clauses of Tripartite Agreement (MOU) is being submitted with APO. Regarding compliance of the 3 SOPs attention is required for the guide lines in connection with carcass disposal of tiger. Deep freeze must be in place because TR faces too many man-animal conflicts.
Two of the four SR, 50% conditions of the Tripartite MoU and SOPs complied	Fair			
Three of the four SR, 75% conditions of the Tripartite MoU and SOPs complied	Good	✓		
All four SR, 100% conditions of the Tripartite MoU and SOPs complied	Very good			

***Statutory requirements are (1) Legal delineation and notification of Core and Buffer Areas; (2) Establishment of Tiger Conservation Foundation; (3) Development of a Tiger Conservation Plan; and (4) Constitution of a State-level Steering Committee under the Chairmanship of the Chief Minister. TA refers agreement between Field Director, State Government and NTCA. The 3 SOPs are on (i) Straying of Tiger in human dominated landscape, (ii) Tiger Mortality and (iii) Disposal of Carcasses**

2. Planning

2.1 Status of Tiger Conservation Plan (TCP)*?

Assessment criteria				
Condition	Catego- ry*	(Tick ✓)	Reference document(s)	Remarks
No TCP in place.	Poor		Draft Tiger Conservation Plan and information/ reports received during discussions with the TR authorities	A draft Tiger Conservation Plan for the core for period of 2009-10 to 2019-20 has been prepared and submitted to NTCA. It was reported that some modifications/additions are under process to incorporate the suggestions made in the meeting held by NTCA.
TCP is under preparation	Fair			
TR has a relevant TCP	Good	✓		
TR has a comprehensive and relevant TCP, duly approved by the NTCA	Very good			

***The scientific content and the participatory processes used in preparation of the TCP will be taken into account in assessing the quality of TCP.**

2.2 Does the TR safeguards the threatened biodiversity values?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR does not safeguard the threatened biodiversity values.	Poor		Draft Tiger Conservation Plan and information/ reports received during discussions with the TR authorities	The threats to biodiversity values have been assessed in chapter-6 and 7 of the draft plan and strategy has been worked out for holistic conservation. Statutory and management measures are in place to make the core undisturbed. Strategies to prevent Poaching, Snaring, Illegal Grazing, Illegal collection of Forest Produce, Illegal fishing, Encroachment and Control of fire arms have been prescribed. In addition Theme Plans for protection, fire management, human wildlife conflict, prophylactic vaccination of livestock, Tiger/wildlife monitoring has been prepared.
TR safeguards a few threatened biodiversity values.	Fair			
TR safeguards a large number of threatened biodiversity values.	Good			
TR safeguards all threatened biodiversity values.	Very good	✓		

***Remarks need to elaborate on the kind of safeguards and how they work or are intended to work**

2.3 Are stakeholders given an opportunity to participate in planning process?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little, if any opportunity for stakeholder participation in planning.	Poor		Draft Tiger Conservation Plan and information/ reports received during discussions with the TR authorities	There are no villages in the core. There are only 22 EDC, which are involved to some extent in alternative livelihood-planning activities during the process of preparation of micro plans. They are also involved in planning and deciding the activities to be taken up by various self help groups and the EDC. Although the park authorities informed that some stakeholders meetings have been held for preparation of the Draft TCP, the details could not be provided. There are district level committees of Nilgiri Biosphere Reserve in place to monitor the implementation of Management Action Plan of the Biosphere Reserve. In 2010-11, 2011-12 and 2012-13 the no. of cattle immunized in buffer area are 10000, 5000, and 20000 respectively.
Stakeholders participate in some planning.	Fair			
Stakeholders participate in most planning processes.	Good	✓		
Stakeholders routinely and systematically participate in all planning processes.	Very good			

***The result of participation must show in the field and not merely reported as a routine exercise.**

2.4 Are habitat management programmes systematically planned, relevant and monitored, and contribute effectively to Tiger and other endangered species conservation?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Habitat management programmes are entirely ad hoc.	Poor		Draft Tiger Conservation Plan and information/ reports received during discussions with the TR authorities	Habitat Management programmes have been systematically planned to make the core area inviolate and secure it for the Tiger, Co-predators and their prey species. Strategies to prevent Poaching, Illegal Grazing/Illegal collection of Forest Produce, Illegal fishing, Encroachment and Control of Fire arms have been prescribed. Detailed plans for fire management, human wildlife conflict, prophylactic vaccination of livestock, Tiger/wildlife monitoring has been prepared. The vegetation types, water bodies/ sources and threats to habitat due to invasive species have also been identified. To secure the Kanyanapura Elephant Corridor 7000 acres of forest area under the control of revenue authorities have been notified as protected forests. However, it is desirable to make extensive plans for preventing spread of invasive species, such as Lantana, which has been reported to have occupied about 300 km ² area of the Tiger Reserve.
Limited planning and monitoring programmes are in place for habitat management.	Fair			
Habitat management programmes are generally planned and monitored.	Good	✓		
Habitat management programmes are thoroughly planned and monitored.	Very good			

***This assessment should be primarily based on habitat management programmes in relation to habitats for species that are threatened (IUCN categories), are habitat specialists, subjected to seasonal movements, wide ranging with emphasis on the breeding and rearing habitat and may include factors such as food, water, shelter (all connotations).Habitat structure, composition, unique patches of vegetation and sensitive sites, sources of water and their distribution are integral. Corridors within buffer zone are critically important. For example, all riparian habitats. Have these been addressed? Is their a planning process in place? The management practices dealing with invasive species such as Lantana, Michania etc. would be examined.**

2.5 Does the TR has an effective Protection Strategy (PS)* and Security Plan and Security Audit (SA) in place?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR has little or no PS and SA.	Poor		Draft Tiger Conservation Plan and information/ reports received during discussions with the TR authorities	The Protection Strategy involves Anti Poaching Camps with regular patrolling, Intelligence gathering, Fire arm inventories around the reserve, monsoon patrolling , periodical anti snare operations and deployment of STPF etc. Anti-Poaching Strategy includes Establishment of 46 anti-poaching camps with 4-5 watchers engaged from the local tribes/ community. Each camp covers 10-15 km ² area. These are connected by wireless and daily monitoring is carried out by foot patrolling and findings including animal sighting/signs are recorded. However, During field visit at Chammanhalla anti-poaching camp, anti-poaching register was found unfilled since last one year which indicates that monitoring mechanism is weak. A Special Tiger Protection Force (STPF) of 112 personnel has been established for Bandipur-Nagarhole Tiger Reserve. The sanction was to raise 3 platoons, each consisting of one FRO, 6 Dy. FROs and 30 FGs. However, in place of 30 FGs in a platoon actually 21 FGs and 9 watchers have been recruited. This force is headed by an Assistant Conservator of Forests. The details of Wildlife offence cases in last 3 years are as under:
TR has an adhoc PS and SA.	Fair			
TR has a generally relevant PS and SA but is not very effective.	Good	✓		
TR has a comprehensive and very effective PS and SA.	Very good			

Year	No. of Cases	Persons arrested	Convicted
2010-11	15	24	0
2011-12	12	7	0
2012-13	29	24	0

Except 2 cases (Closed) of 2010-11 all other cases are pending.
The no. of Undetected Offence Record cases included in the

***Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

				<p>above are 26 (2010-11: 4, 2011-12: 5 and 2012-13: 17) of which 16 cases are road accidents. The cases pending at RFO level / charge sheet not submitted are 2 for 10-11 and 12 for 12-13. During discussion it was also known that recently a Deputy Superintendent of Police was arrested by TR officials for poaching of wildlife. This is a matter of great concern and stringent action should be ensured. The Security Plan is yet to be approved. No details about security audit could be provided.</p>
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***This assessment takes inter-alia into account the nature of threats, the number and location of patrolling camps and foot and mobile patrolling, needs that relate to available manpower, terrain difficulties, practicability of area coverage, readiness to contain specific threats with necessary support and facilities. The constitution and functioning of Special Tiger Protection Force (STPF), Number of offences reported, arrests made, prosecution initiated and conviction achieved will be taken into account.**

2.6 Has the TR been effective in the mitigation of human-wildlife conflicts?

are
has the TR been effective in the mitigation of human wildlife conflicts?

Assessment criteria*																								
Condition	Catego ry*	(Tick ✓)	Reference document(s)	Remarks																				
Human-wildlife conflicts are significant but poorly addressed.	Poor		Draft Tiger Conservation Plan and information/ reports received during discussions with the TR authorities	The northern border of the TR, being contiguous with large number of villages, is prone to very high degree of Human-Wildlife conflict mostly due to elephants. The area has been categorized into High, Medium and Low Risk Zones on the basis of the degree of conflicts. During the last four to five years, the barriers such as Elephant Proof Trenches and Solar Power Fence are put in place over the entire length of about 200 Km. except for certain areas in Moliyur and N.Begur Ranges. In addition, the creation of Service Road Network all along the border and the establishment of Solar Shed at vantage locations for the effective maintenance of the barriers and patrolling of the border areas has contained the depredation within a reasonably satisfactory levels. The anti depredation squads are in place during the peak cropping season. In the Kaniyanapura Elephant Corridor area, the adjoining revenue lands over an extent of about 7000 Acres have been consolidated by way of notifying the same under Section 4 of the Karnataka Forest Act, 1963 to ensure free passage of elephants inn large forest landscape. Further, mushrooming of Resorts, Eco-unfriendly activities like mining, quarrying, commercial agricultural/horticultural ventures, housing projects and the establishment of industries etc. have been brought under control by regulations of the Eco-Sensitive Zone notified on dated 4 th October, 2012 under the Environment (Protection) Act, 1986. The conflict arising from the straying out of Elephants and Tigers is being addressed by way of having Rapid Response Teams well equipped with vehicles, the tranquilizing guns. The service of recently created Special Tiger Protection Force is also being utilised. From the status of ex-gratia payment in last 3 years given in the table below it is evident that the no. of cases is decreasing.																				
TR has been able to mitigate few human-wildlife conflicts.	Fair																							
TR has been able to mitigate many human-wildlife conflicts.	Good																							
TR has been effective in mitigating all human-wildlife conflicts.	Very good	✓																						
				<table><tr><th>Category</th><th>2010-11</th><th>2011-12</th><th>2012-13</th></tr><tr><td>Crop damage</td><td>8198 cases 172.14 lac</td><td>965 cases 19.69 lac</td><td>878 case 18.82 lac</td></tr><tr><td>Human death /injury</td><td>11 cases 3.49 lac</td><td>12 cases 1.34 lac</td><td>15 cases 6.79 lac</td></tr><tr><td>Cattle killings</td><td>207 cases 5.33 lac</td><td>115 cases 2.60 lac</td><td>49 cases 1.39 lac</td></tr><tr><td>Total Comp-- ensation</td><td>8416 cases 180.97 lac</td><td>1092 case 23.63 lac</td><td>963 case 27.27 lac</td></tr></table>	Category	2010-11	2011-12	2012-13	Crop damage	8198 cases 172.14 lac	965 cases 19.69 lac	878 case 18.82 lac	Human death /injury	11 cases 3.49 lac	12 cases 1.34 lac	15 cases 6.79 lac	Cattle killings	207 cases 5.33 lac	115 cases 2.60 lac	49 cases 1.39 lac	Total Comp-- ensation	8416 cases 180.97 lac	1092 case 23.63 lac	963 case 27.27 lac
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***The assessment will take into account the number of incidences reported and payment of compensation made and its timeliness.**

2.7 Is the TR integrated into a wider ecological network/ landscape following the principles of the ecosystem approach?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR not integrated into a wider network/ landscape.	Poor		Draft Tiger Conservation Plan and information/ reports received during discussions with the TR authorities.	Tiger Reserve is part of the Bandipur-Mudumalai-Satyamangala- Wynad- Nagarhole Tiger Conservation Landscape with tiger occupancy in 21,435 km ² containing the single largest population of Tigers in India. To secure the traditional migratory route for elephants in Western ghats around Moyar gorge, a 500 meter wide strip, known as the "Kanyanapura Elephant Corridor", has been planned. For this 7000 acres of forest area under the control of revenue authorities have been notified as protected forests. In addition, 365 acres of Govt. revenue land has been added and efforts are being made to acquire 175 acres of private land. Further to control/ regulate the mushrooming of Resorts, Eco-unfriendly activities like mining, quarrying, commercial agricultural/horticultural ventures, housing projects and the establishment of industries etc. Eco-Sensitive Zone around the core, comprising of 597.45 km ² area has been notified on dated 4 th October, 2012 under the Environment (Protection) Act, 1986. This includes 123 revenue villages as well as the entire buffer lying within.
Some limited attempts to integrate the TR into a network/ landscape.	Fair			
TR is generally quite well integrated into a network/ landscape.	Good			
TR is fully integrated into a wider network/ landscape.	Very good	✓		

***Assessment needs to consider the scope of opportunities on the landscape scale that exist. Consider whether any attempts have been made and what are these? Have all the important corridors been identified? What actions are planned/implemented for their security? Have the Forest Working Plans and Forest Development Corporation Plans within the identified landscapes taken cognizance of such new requirement? These should have been reflected in TCPs. Is there is any effort to rationalize landuse around TR? Is any effort being made to plan and use 'Smart Green Infrastructure'?**

3. Inputs

3.1 Are personnel adequate, well organized and deployed with access to adequate resources in the Tiger Reserve (TR)*?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Few, personnel explicitly allocated but poorly supported for TR management.	Poor		Draft Tiger Conservation Plan and information/ reports received during discussions with the TR authorities.	The Tiger Reserve is managed by a director in the rank of Conservator of Forests assisted by two ACFs and 13 Range Forest Officers (RFO). Bandipur TR along with Nagarhole TR is supervised by Additional PCCF, Project Tiger with Headquarters at Mysore. Against 321 sanctioned posts 263 personnel are in position and 58 posts are vacant. Except the cadre of Deputy Range Forest Officers (vacancy 16=53%) and Forest Guards (vacancy 24 =21%) all other front line cadres are almost filled up. Out of a total of 200 Executing and protection staff (Forest Watchers, Forest Guards, Dy. RFO and RFOs), 174 (87%) are in the age group of below 40 years. There are 103 beats and 46 anti poaching camps. In addition 3 platoons of Special Tiger Protection Force, consisting of 112 persons have been constituted for Bandipur and Nagarhole TR.
Some personnel explicitly allocated for TR management but not adequately supported and systematically linked to management objectives.	Fair			
Some personnel with fair support explicitly allocated towards achievement of specific TR management objectives.	Good			
Adequate personnel appropriately supported and explicitly allocated towards achievement of specific TR management objectives.	Very good	✓		

***This assessment should inter-alia be based on number of personnel allocated for attainment of TR objectives at the Range , Round, Beat and Patrolling camps levels or as relevant to the needs (sanctioned posts vis- a- vis existing personnel and needs beyond the sanctioned strengths. It is possible that posts have last been sanctioned several years back that do not now account for the current needs)**

***Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

3.2 Are resources (vehicle, equipment, building etc.) adequate, well organized and managed with desired access?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Few, if any, resources explicitly allocated for TR management.	Poor		Draft Tiger Conservation Plan and information/ reports received during discussions with the TR authorities.	<p>There are 169 buildings- 10 office buildings, 124 staff quarters and 35 other buildings in BTR.</p> <p>A total length of 1102.855 km roads network available for protection of TR.</p> <p>TR has 25 SUVs/ Jeeps, 16 motor Bikes and a Mini lorry for protection/ patrolling purposes. All staff up to the level of FRO is with a four wheeled vehicle. In addition, for Ecotourism 6 Safari buses and for water supply 2 tractors have been allocated. All of them are in good condition.</p> <p>The Wireless communication network comprises of 23 stationary, 26 mobile and 178 walkie talkies.</p> <p>The TR personnel are armed with 27 nos. of 0.315 Rifles, 78 DBBL Guns, 4 Pistols and 2 Revolvers.</p> <p>Some of other important equipments are: 10 tents, 19 cameras, 56 GPS, 49 Solar power generators and other camping/ patrolling tools.</p> <p>It appears that adequate resources have been allocated to achieve various objectives of TR.</p>
Some resources explicitly allocated for TR management but not systematically linked to management objectives.	Fair			
Some resources explicitly allocated towards achievement of specific TR management objectives.	Good			
Adequate resources explicitly allocated towards achievement of specific TR management objectives.	Very good	✓		

* These form a variety of resources. These may be segregated into immovable (structures) and movable categories and each further may be considered under the essential and desirable categories. It is best to start with what are the minimum needs to attain each objective, what is available and manner of use/deployment. The proportions of the 'essentials' and 'desirables' along the importance gradient of objectives would serve as pointers for score categories. Specific remarks would be vitally important.

3.3 Are financial resources other than those of the State linked to priority actions and are funds adequate, released timely and utilized?

Released timely and utilized.

Assessment criteria*																																									
Condition	Categ ory*	(Tick ✓)	Reference document(s)	Remarks																																					
Resource allocation is adhoc, funds are inadequate and seldom released in time and not utilized.	Poor		Draft Tiger Conservation Plan and information/ reports received during discussions with the TR authorities.	A comprehensive APO is prepared every year planning for attainment of most objectives and submitted to the NTCA. The status of allocation and utilization of funds from NTCA and other central schemes including State share in the last 3 years are as under: <div>(figures in lakh Rs)</div> <table><tr><th>Year</th><th>Scheme</th><th>Total Sanction</th><th>Total Release</th><th>Utilised</th></tr><tr><td rowspan="2">2010-11</td><td>CSSPT</td><td>326.894</td><td>293.321</td><td>293.221</td></tr><tr><td>PE/NBR</td><td>35.783</td><td>35.786</td><td>24.216</td></tr><tr><td rowspan="2">2011-12</td><td>CSSPT</td><td>561.980</td><td>551.697</td><td>529.422</td></tr><tr><td>PE</td><td>4.775</td><td>4.775</td><td>4.775</td></tr><tr><td rowspan="2">2012-13</td><td>CSSPT</td><td>465.067</td><td>442.537</td><td>441.132</td></tr><tr><td>PE</td><td>8.000</td><td>8.000</td><td>8.000</td></tr><tr><td colspan="2">TOTAL</td><td>1402.50</td><td>1336.12</td><td>1300.77</td></tr></table> <div>(PE:Project Elephant/NBR :Nilgiri Biosphere Res)</div> <p>During 2010-11, Rs 11.57 lakhs in NBR scheme and during 2011-12, Rs 22.275 in CSSPT scheme remained unutilized while fund was released in the same year</p>	Year	Scheme	Total Sanction	Total Release	Utilised	2010-11	CSSPT	326.894	293.321	293.221	PE/NBR	35.783	35.786	24.216	2011-12	CSSPT	561.980	551.697	529.422	PE	4.775	4.775	4.775	2012-13	CSSPT	465.067	442.537	441.132	PE	8.000	8.000	8.000	TOTAL		1402.50	1336.12	1300.77
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Some specific allocation for management of priority action. Funds are inadequate and there is some delay in release, partially utilized.	Fair																																								
Comprehensive planning and allocation that meets the most important objectives. Generally funds released with not much delay and mostly utilized.	Good	✓																																							
Comprehensive planning and allocation of resources for attainment of most objectives. Funds generally released on-time and are fully utilized.	Very good																																								

*Obtain details of funds released by NTCA and their utilization by TR in the last 3 years and indicate them under 'Remarks'. Also comment on the problems associated with fund allocations and their utilization.

3.4 Are financial resources from the State linked to priority action and funds adequate, timely released and utilized for the management of Tiger Reserve?

Assessment criteria*																																						
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks																																		
Resource allocation is adhoc, funds are inadequate and seldom released in time and not utilized.	Poor		Draft Tiger Conservation Plan and information/ reports received during discussions with the TR authorities.	The status of allocation and utilization of funds from State Schemes including non-plan (excluding salary of employees) in the last 3 years are as under: (figures in lakh Rs)																																		
Some specific allocation for management of priority action. Funds are inadequate and there is some delay in release, partially utilized.	Fair			<table><tr><th>Year</th><th>Scheme</th><th>Released</th><th>Utilisation</th></tr><tr><td rowspan="3">2010-11</td><td>Plan</td><td>108.615</td><td>108.477</td></tr><tr><td>Non Plan</td><td>388.742</td><td>388.522</td></tr><tr><td>Sub-Total</td><td>497.357</td><td>496.999</td></tr><tr><td rowspan="3">2011-12</td><td>Plan</td><td>347.139</td><td>347.005</td></tr><tr><td>Non Plan</td><td>81.459</td><td>81.306</td></tr><tr><td>Sub-Total</td><td>*428.598</td><td>428.310</td></tr><tr><td rowspan="3">2012-13</td><td>Plan</td><td>223.703</td><td>209.854</td></tr><tr><td>Non Plan</td><td>113.774</td><td>112.606</td></tr><tr><td>Sub-Total</td><td>*337.477</td><td>322.460</td></tr></table>	Year	Scheme	Released	Utilisation	2010-11	Plan	108.615	108.477	Non Plan	388.742	388.522	Sub-Total	497.357	496.999	2011-12	Plan	347.139	347.005	Non Plan	81.459	81.306	Sub-Total	*428.598	428.310	2012-13	Plan	223.703	209.854	Non Plan	113.774	112.606	Sub-Total	*337.477	322.460
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Comprehensive planning and allocation that meets the most important objectives. Generally funds released with not much delay and mostly utilized.	Good																																					
Comprehensive planning and allocation of resources for attainment of most objectives. Funds generally released on-time and are fully utilized.	Very good	✓																																				
				From above it is evident that adequate funds are being allotted.																																		

*Obtain details of funds released by State and their utilization by TR in the last 3 years and indicate them under 'Remarks'. Also comment on the problems associated with fund allocation and their utilization.

3.5 What level of resources are provided by NGOs?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
NGOs contribute nothing for the management of the TR.	Poor		Draft Tiger Conservation Plan and information/ reports received during discussions with the TR authorities.	<p>For providing alternatives and/or reduce fuel wood consumption, about 35,000 subsidised LPG connections have been given with maintenance of supplies to the families residing in the villages of buffer zone. This has been possible due to active support of "Namma Sangha", a co-operative society.</p> <p>Wildlife Conservation Trust, Mumbai has helped to address some of the livelihood issues like the employability of the local educated youths by organising vocational trainings. The trust has also been involved in conducting number of health camps for the frontline staff, the village community and welfare measures for the daily wage staff of the Reserve. In addition, the trust has supplied 6 vehicles being used by STPF.</p> <p>Centre for Wildlife Studies carries out tiger estimation work in the reserve.</p> <p>Some individual organisation carries out Environmental Awareness Programmes.</p>
NGOs make some contribution to management of the TR but opportunities for collaboration are not systematically explored.	Fair			
NGOs contributions are systematically sought and negotiated for the management of some TR level activities.	Good	✓		
NGOs contributions are systematically sought and negotiated for the management of many TR level activities.	Very good			

4. Process

4.1 Does the TR have manpower resources trained in wildlife conservation for effective TR management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No trained officers and frontline staff in the TR.	Poor		Draft Tiger Conservation Plan and information/ reports received during discussions with the TR authorities	Although no officers of TR have wildlife diploma or degree from WII or similar Institutes, they have been trained in the essentials of wildlife conservation/ management during their professional courses in Forestry Colleges. Other front line staffs have also undergone likewise trainings in their Forestry Schools. Some training has been conducted for tiger estimation. A couple of staff has been trained in GPS. Three RFO have been trained for 2 days' short term courses. One ACF and one DCF although had undergone special training courses during their posting in the TR are no more posted in the TR. As proposed in Draft TCP (Para 8.5) Training Need Assessment with training schedules for front line staffs should be done and implemented immediately.
Some trained officers and few trained frontline staff, posted in the TR.	Fair	✓		
All trained officers and fair number of trained frontline staff posted in the TR.	Good			
All trained officers and most of the trained frontline staff is posted in the TR.	Very good			

**Indicate % of trained staff in various categories. The number and thematic areas of the 'Internal Training' programmes organized in the TR in the last 3 years may be taken into account. Has the TR prepared a 'Staff Development Plan'? Is it being implemented?*

4.2 Is TR staff management performance linked to achievement of management objectives?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No linkage between staff management performance and management objectives.	Poor		Draft Tiger Conservation Plan and information/ reports received during discussions with the TR authorities	Performance evaluation at annual interval is being carried out for the front line staff on the basis of objectives achieved and other criteria as per service rule. The promotions are mostly on the basis of seniority subjected to rejection of unfit. Although in Draft TCP Human resource development has been dealt in Para 8.6 with provisions of awards and rewards, they are too generalized and sketchy. A concrete scheme should be formulated and implemented to encourage outstanding performers in specific fields of different management objectives.
Some linkage between staff management performance and management objectives, but not consistently or systematically assessed.	Fair	✓		
Management performance for most staff is directly linked to achievement of relevant management objectives.	Good			
Management performance of all staff is directly linked to achievement of relevant management objectives.	Very good			

4.3 Is there effective public participation in TR management* and does it show in making a difference?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no public participation in TR management.	Poor		Draft Tiger Conservation Plan and information/ reports received during discussions with the TR authorities	Participation of public is ensured in activities like PRA planning in EDC/ VFC activities, various trainings, interactions, feedback, eco-awareness programmes, etc. Under the Karnataka Sustainable Forest Development and Biodiversity Project, 22 Eco development committees have been formed in the buffer areas of Tiger Reserve. It is noteworthy that there are 118 villages in the buffer area. In addition to this the NGOs, students of schools and colleges are involved in propagating awareness messages and Nature camps. Local people/ tribal have been engaged as watchers for Anti Poaching Camp, Anti Depredation Camp and Fire Management works. Proposal suggested in Para 11.4.2 (g) of TCP and in Environmental Education Matrix (Annexure-22 TCP) should be implemented.
Opportunistic public participation in some of the relevant aspects of TR management.	Fair	✓		
Systematic public participation in most of the relevant aspects of TR management.	Good			
Comprehensive and systematic public participation in all important and relevant aspects of TR management.	Very good			

+

The involvement of NGOs/ NGLs in population estimation may be taken into account)

4.4 Is there a responsive system for handling complaints and comments* about TR management?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Ad-hoc approach to handling complaints.	Poor		Draft Tiger Conservation Plan and information/ reports received during discussions with the TR authorities	Suggestion Registers are available. But there is no institutionalized system for regular feed back or their periodic monitoring for redressal / course correction. However RTI registers are maintained and complaints are dealt as per routine procedures of the normal departmental system.
Complaints handling system operational but not responsive to individual issues and with limited follow up.	Fair	✓		
Coordinated system logs and responds effectively to most complaints.	Good			
All complaints systematically logged in coordinated system and timely response provided with minimal repeat complaints.	Very good			

***Does the TR maintains 'Suggestions Register'? What actions are taken to deal with suggestions?**

4.5 Does TR management addresses the livelihood issues* of resource dependent communities, especially of women?

Assessment criteria																
Condition	Categ ory*	(Tick ✓)	Reference document(s)	Remarks												
No livelihood issues are addressed by TR management.	Poor		Draft Tiger Conservation Plan and information/ reports received during discussions with the TR authorities	The year wise no. of person days created through operation of various schemes by TR in the last 3 years as under: <table><tr><th>Year</th><th>Person days</th><th>Woman days</th></tr><tr><td>2010-11</td><td>3,98,107</td><td>360</td></tr><tr><td>2011-12</td><td>3,93,068</td><td>355</td></tr><tr><td>2012-13</td><td>2,76,328</td><td>266</td></tr></table>	Year	Person days	Woman days	2010-11	3,98,107	360	2011-12	3,93,068	355	2012-13	2,76,328	266
Year	Person days	Woman days														
2010-11	3,98,107	360														
2011-12	3,93,068	355														
2012-13	2,76,328	266														
Few livelihood issues are addressed by TR management.	Fair		Under the Karnataka Sustainable Forest Development and Biodiversity Project, 22 Eco Development Committees have been formed in the buffer areas of Tiger Reserve. Under Income Generation Activities Rs. 17.5 lakhs and 0.75 lakhs has been spent. Under Eco Development work to mitigate man animal conflict (crop damage) 178.7 km Solar fence and 118.93 km of Elephant Proof Trench has been created anew in last 3 years in addition to maintenance of 125 km of old Solar Fence and 178 km of old EPT.													
Substantial livelihood issues are addressed by TR management.	Good	✓	For providing alternatives and/or to reduce fuel wood consumption, about 35,000 subsidised LPG connections have been given and maintained with active support of “Namma Sangha”, a co-operative society.													
Livelihood issues of resource dependent communities especially of women are addressed effectively by TR managers.	Very good		With the help of WCT vocational trainings have been carried out for some unemployed youths. In 2010-11, 2011-12 and 2012-13 the no. of cattle immunized in buffer area are 10000, 5000, and 20000 respectively.													

*The number of mandays generated in the last 3 years may be taken into account. Are funds received from District Agencies and other sources? Provide details of funds received in last 3 years.

4.6 Has the TR planned and implemented the voluntary 'Village Relocation' from the Core/ Critical Tiger Habitat (CTH)?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No planning and no implementation	Poor		Draft Tiger Conservation Plan and information/ reports received during discussions with the TR authorities	There is no human habitation in the CTH.
Plans have been made but no implementation	Fair			
Plans have been made and some implementation is in progress	Good			
Plans have been made and are being actively implemented/ no human habitation in the CTH	Very good	✓		

*Assessment will look into the village relocation planning process including availability of manpower, financial resources and NGO support, if any. Is there a mechanism to address the complaints received in respect of relocation process? Effort must be made to assess post-relocation success or otherwise.

5. Output

5.1 Is adequate information on TR management publicly available?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no information on TR management publicly available.	Poor		Draft Tiger Conservation Plan and information/ reports received during discussions with the TR authorities	The TR has a web site- ID: www. bandipurtigerreserve.in. The site provides details about the TR in respect of its general constitution, biodiversity, climate, flora and fauna, buffer zone, eco sensitive zone, brief details about Acts and rules, Activities, Man animal conflict, Tiger Conservation Foundation and contact address. It also provides facilities for on line reservation for Eco Tourism. Tourism brochures have also been printed for distribution. A video film titled as "Bandipur" has been produced for the Karnataka Forest Department (Wildlife Wing).
Publicly available information is general and has limited relevance to management accountability and the condition of public assets.	Fair			
Publicly available information provides detailed insight into major management issues and condition of public assets.	Good	✓		
Comprehensive reports are routinely available in public domain on management and condition of public assets.	Very good			

5.2 Are visitor services and facilities appropriate and adequate?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Visitor services and facilities do not exist.	Poor		Draft Tiger Conservation Plan and information/ reports received during discussions with the TR authorities	<p>Tourism zone covers 82 Sq.km constituting about 9.40% of the total area of the Reserve. The Eco-tourism activity is operated in the two Ranges of Bandipur (64.00 Sq.Km.) and Kundukere (18 Sq.Km.). Of this, an area of about one Sq.Km. abutting the National Highway 67 is used for the administrative facilities and the halting facilities. The Reserve has an advantage in having practically round the year Eco-tourism activities.</p> <p>The main activities of Eco-tourism are in Bandipur. The tourist facilities consist of 9 cottages with 19 suits and 4 dormitories of 43 beds. Common dining hall facility along with installation of Reverse Osmosis process for drinking water supply is available for tourists. Wildlife film show is provided to visitors in the evening. In addition "Jungle Lodges Resorts (JLR)", established by Karnataka Eco Tourism Corporation, has facilities of about 22 rooms for visitors provided on package basis.</p> <p>In addition to Bandipur in Kundukere Range (abutting the villages, viz., Mangala and Chikkayelachetti) some of the Private Tourist Resorts are located.</p> <p>Visits to TR, called as safari trips are conducted by both departmental as well as Private/ Jungle Lodge vehicles. Departmental safari involves 6 buses and 2 Jeep/Gypsy. Private safari involves 12 JLR safari vehicles. No private vehicles are allowed.</p> <p>There is an interpretation centre at Bandipur having elementary details. In TCP it has been suggested to develop and expand the existing one to a one of the best of National/International Standard.</p> <p>Although it was informed that Some Nature Education Programmes are conducted for school children and Nature camps have been done the no. of such camps and details of participants was not readily available.</p> <p>There is need to introduce trained Guide Services in Departmental Safaris.</p>
Visitor services and facilities are very basic.	Fair			
Visitor services and facilities are monitored from time to time and are fairly effective.	Good	✓		
Visitor services and facilities are conscientiously maintained, regularly upgraded and monitored for visitor satisfaction	Very good			

**Include the existence and quality of visitor and interpretation centers, including skills and capabilities of personnel manning these, TR related publications, films, videos; arrangements of stay (including places serving refreshments and food owned and managed by TR), watch towers and hides including safety factors, vehicles assigned for visitors including riding elephants, if any and their deployment, drinking water, rest rooms, garbage disposal, attended and self guided services in the field, visitor feed back on the quality of wilderness experience.*

**Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10*

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5.3 Are research/ monitoring related trends systematically evaluated and routinely reported and used to improve management?

Assessment criteria*				
Condition	Categ ory*	(Tick ✓)	Reference document(s)	Remarks
Little or no systematic evaluation or routine reporting of trends.	Poor		Draft Tiger Conservation Plan and information/ reports received during discussions with the TR authorities	It was only in the mid 1980's some Institutions/ individuals, viz., the Bombay Natural History Society, Indian Institute of Science, Centre for Wildlife Studies, Wildlife Conservation Society and the World Wide Fund for Nature initiated the process of research activities aimed at addressing the basic Research issues and the managerial problems like the Grazing pressure, collection of fuel wood etc., of the Reserve. It has been reported that around 17 research papers were published on various topics pertaining to the Reserve in last 3 decades. The camera trap technique was employed in the TR for identification of individual Tigers from the year 2003 onwards. In Chapter-8 of Draft TCP Research priorities/ areas have been identified. In the same chapter 26 Research Topics have also been suggested for initiation. This needs to be implemented.
Some evaluation and reporting undertaken but neither systematic nor routine.	Fair			
Systematic evaluation and routine reporting of trends undertaken.	Good	✓		
Systematic evaluation and comprehensive reporting of trends undertaken and attempts made at course corrections as relevant.	Very good			

**Not all TRs attract projects and researchers and with exceptions, little research takes place on the TRs own steam because of systemic limitations. However, monitoring of some critical issues is expected e.g. population of tiger, co-predators and prey with insights into their demography and distribution (some opportunistic sampling by sightings, signs and spatial distribution during assessment would be extremely useful in terms of expert impression and as a pulse), monitoring incidence of livestock grazing, fires, weeds, sources of water, a variety of illegal activities typically associated with the reserve, wildlife health (e.g. epidemics, immunization of livestock) regeneration and change in vegetation, visitors and their activities, offence cases, ex-gratia payments etc. Efforts must be made to assess the planning and implementation of Phase-IV monitoring protocols and the success of implementation of M-Stripes (wherever applicable). Are the 'Sykes and Horill' monitoring plots maintained and data analyzed?*

5.4 Is there a systematic maintenance schedule and funds in place for management of infrastructure/assets?

Assessment criteria				
Condition	Categ ory*	(Tick ✓)	Reference document(s)	Remarks
No systematic inventory or maintenance schedule.	Poor		Draft Tiger Conservation Plan and information/ reports received during discussions with the TR authorities	Tiger Reserve maintains inventory of store, building, road and vehicles. Funds allocated for maintenances under different schemes meet essential requirements.
Inventory maintenance is adhoc and so is the maintenance schedule.	Fair			
Systematic inventory provides the basis for maintenance schedule but funds are inadequate.	Good	✓		
Systematic inventory provides the basis for maintenance schedule and adequate funds are made available.	Very good			

6. Outcomes

6.1 Are populations of threatened species declining, stable or increasing?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Populations of key threatened/ endangered species are declining.	Poor		Draft Tiger Conservation Plan and information/ reports received during discussions with the TR authorities	Although many threatened species are found in the TR, systematic and scientific census / estimation of the population of all such species, except for Elephants are not regularly carried out by the TR management. The no. of Elephant s estimated in year 2010 was reported to be 2130. It has been informed by the TR Director that the report of the Elephant census carried out in May, 2012 and December, 2013 is still awaited. Elephant population is said to be either stable or growing in state of Karnataka.. In Chapter-3, the report of leopards and dholes has been reported to be 125-150 and 150-170 respectively. However the report submitted to the MEE Team shows the estimate of dholes to be 181 in 1995 and that of leopard to be 88.
Some threatened/ endangered species populations declining, some are increasing, most others are stable.	Fair			
Several threatened/ endangered species populations increasing, most others are stable.	Good	✓		
All threatened/ endangered species populations either increasing or stable.	Very good			

***This needs to practically relate to the natural ecosystem potential rather than being driven merely by numbers and visibility. The assessment score may be elaborated under remarks.**

6.2 Is the population of tigers showing a declining, stable or increasing trend?

Assessment criteria*																																																	
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks																																													
Population of tiger is showing a declining trend	Poor		Draft Tiger Conservation Plan and information/ reports received during discussions with the TR authorities	The TR has not yet started Phase IV monitoring of Tiger in the TR area. The estimation of Tigers and their Co-predators with prey base seems to have been being carried out by Centre for Wildlife Studies (CWS). Although the organisation is carrying about the estimation since 1999(1999, 2004 and onwards) the TR has neither the relevant data nor have made detailed scientific analysis. The Tiger number estimation by camera traps as available from Chapter-3 of TCP and extract of 2013 reports of CWS (furnished by TR) is as under: <table><tr><th>Year</th><th>Individuals Identified</th><th>Density/ 100km²</th></tr><tr><td>1999</td><td>34</td><td>10-12</td></tr><tr><td>2004</td><td>38</td><td>8.50</td></tr><tr><td>2010</td><td>46</td><td>NA</td></tr><tr><td>2013</td><td>79</td><td>11.10</td></tr></table> The figures for principal prey densities per Sq. km. as per CWS is as under : <table><tr><th>Species</th><th>2009</th><th>2010</th><th>2011</th><th>2013</th></tr><tr><td>Chital</td><td>10</td><td>17.7</td><td>16</td><td>12.32</td></tr><tr><td>Sambar</td><td>6.1</td><td>6.6</td><td>3.6</td><td>6.09</td></tr><tr><td>Muntjac</td><td>1.1</td><td>0.4</td><td>0.8</td><td>0.92</td></tr><tr><td>Gaur</td><td>1.6</td><td>1.9</td><td>5.2</td><td>0.97</td></tr><tr><td>Wild pig</td><td>1.4</td><td>1.7</td><td>1.4</td><td>3.80</td></tr></table> From above it appears that the population of tigers is showing an increasing trend. TR has not developed the capacity to monitor the status of tiger by its own which is a part of long term management strategy. It was intimated by the Director that 100 trap cameras have been purchased for Phase –IV monitoring, which will be soon in place.	Year	Individuals Identified	Density/ 100km ²	1999	34	10-12	2004	38	8.50	2010	46	NA	2013	79	11.10	Species	2009	2010	2011	2013	Chital	10	17.7	16	12.32	Sambar	6.1	6.6	3.6	6.09	Muntjac	1.1	0.4	0.8	0.92	Gaur	1.6	1.9	5.2	0.97	Wild pig	1.4	1.7	1.4	3.80
Year	Individuals Identified	Density/ 100km ²																																															
1999	34	10-12																																															
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Gaur	1.6	1.9	5.2	0.97																																													
Wild pig	1.4	1.7	1.4	3.80																																													
Population of tiger is stable	Fair																																																
Population of tiger is showing an increasing trend	Good	✓																																															
Population of tiger has significantly increased	Very good																																																

***This assessment should be based in the context of available population estimate (2010-11) and the outcomes of the currently ongoing Phase-IV analyses.**

***Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

6.3 Have the threats* to the TR being reduced/ minimized? Or is there an increase?

Assessment criteria																																				
Condition	Categ ory*	(Tick ✓)	Reference document(s)	Remarks																																
Threats to the TR have not abated but have enhanced.	Poor		Draft Tiger Conservation Plan and information/ reports received during discussions with the TR authorities	Poaching, Man animal conflicts, Fuel wood collection, Fire, Invasive species, Existence of two High Ways and Tourism beyond carrying capacity are the main threats to the Tiger Reserve. For protection Anti Poaching Camps have been established for regular patrolling, Intelligence gathering, Fire arm inventories around the reserve, monsoon patrolling , periodical anti snare operations and deployment of STPF are carried out. However, cases of poaching of wild animals have been detected. The number of tiger deaths shown as natural deaths in last 5years is 16, out of which the figure for 2012-13 is 7. In view of large mortality each case of 2012-13 needs a close follow up. The death figures in last 3 years for Tiger, Elephant and leopard are as under:																																
Some threats to the TR have abated, others continue their presence	Fair	✓																																		
Most threats to the TR have abated. The few remaining are vigorously being addressed	Good																																			
All threats to the TR have been effectively contained and an efficient system is in place to deal with any emerging situation	Very good																																			
				<table><tr><th>Year</th><th>Category</th><th>Tiger</th><th>Elephant</th><th>leopard</th></tr><tr><td rowspan="2">2010-11</td><td>Natural</td><td>01</td><td>25</td><td>00</td></tr><tr><td>Unnatural</td><td>03</td><td>03</td><td>00</td></tr><tr><td rowspan="2">2011-12</td><td>Natural</td><td>02</td><td>01</td><td>03</td></tr><tr><td>Unnatural</td><td>00</td><td>03</td><td>00</td></tr><tr><td rowspan="2">2012-13</td><td>Natural</td><td>07</td><td>00</td><td>03</td></tr><tr><td>Unnatural</td><td>00</td><td>00</td><td>02</td></tr></table>	Year	Category	Tiger	Elephant	leopard	2010-11	Natural	01	25	00	Unnatural	03	03	00	2011-12	Natural	02	01	03	Unnatural	00	03	00	2012-13	Natural	07	00	03	Unnatural	00	00	02
Year	Category	Tiger	Elephant	leopard																																
2010-11	Natural	01	25	00																																
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	Unnatural	00	03	00																																
2012-13	Natural	07	00	03																																
	Unnatural	00	00	02																																
				<p>Thus there are many unnatural deaths, which include poaching cases. However not a single conviction has been made so far.</p> <p>By construction of effective ETPs and Solar fence along with establishment of anti depredation camps the man animal conflict has been reduced to a large extent.</p> <p>The fuel wood collection has been effectively controlled by issue of 35,000 LPG connections in buffer villages.</p> <p>Although a lot of fire protection measures are being taken the gregarious flowering of bamboos have made the reserve highly vulnerable to fire. A recent fire has caused a lot of damage.</p> <p>Invasion of lantana is a measure concern for which a study project by an organisation is being taken up.</p> <p>The adverse effects of the two High ways are being mitigated to certain extent by establishment of speed breakers at frequent intervals and closure of night traffic.</p> <p>Eco Sensitive Zone around the Core has been declared which is likely to restrict mush rooming of Resort around the Reserve.</p>																																

***Does the TR has a Disaster Risk Management Plan to deal with existing as well as emerging threats?**

6.4 Are the expectations of visitors* generally met or exceeded?

or
 The are expectations of visitors generally met or exceeded.

Assessment criteria																				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks																
Expectations of visitors generally not met.	Poor		Draft Tiger Conservation Plan and information/ reports received during discussions with the TR authorities	<p>The quantum of visitors and the revenue collected from Eco-tourism in last 3 years are as under:</p> <table> <tr> <th>Year</th> <th>Total Visitors</th> <th>Foreign Visitors</th> <th>Total Amount</th> </tr> <tr> <td>2010-11</td> <td>90,863</td> <td>3079</td> <td>81,53,660</td> </tr> <tr> <td>2011-12</td> <td>50717</td> <td>1024</td> <td>1,61,36,700</td> </tr> <tr> <td>2012-13</td> <td>65483</td> <td>2280</td> <td>2,37,16,294</td> </tr> </table> <p>The above data indicates general satisfaction of expectation of large number of visitors.</p> <p>The Tiger Reserve broadly complies to the eco tourism guidelines of Hon'ble Supreme Court/ NTCA in respect of carrying capacity, tourism zone relating to TCP.</p> <p>Tourism zone covers 82 Sq.km constituting about 9.40% of the total area of the Reserve. This is much below the 20% norm of the guide lines.</p> <p>Although carrying capacity of the vehicles for eco tourism has been determined to be 31 vehicles per day, the three member committee, constituted by Govt. of Karnataka in 2008 under the chairmanship of Sri M.K. Appaiah, has recommended it to be 20-22 per day. This norm is said to be being followed.</p> <p>Other issues of the guide lines relating to providing of livelihood options to Local communities in Eco tourism, creation of Local Advisory Committee, Training of Guides, 50% use of Renewable Energy sources and Temple tourism needs immediate attention.</p> <p>However the following issues of the guide lines need to be addressed immediately:</p> <ul style="list-style-type: none"> • Livelihood Opportunities to be created • Local Advisory committees to be constituted • Curriculum for training of Guides and Drivers • Tourist facilities – 50% energy requirement from Renewable Sources • Temple boards shall share a minimum 10% of its revenue for local community development through Gram Sabha. 	Year	Total Visitors	Foreign Visitors	Total Amount	2010-11	90,863	3079	81,53,660	2011-12	50717	1024	1,61,36,700	2012-13	65483	2280	2,37,16,294
Year	Total Visitors	Foreign Visitors		Total Amount																
2010-11	90,863	3079		81,53,660																
2011-12	50717	1024		1,61,36,700																
2012-13	65483	2280	2,37,16,294																	
Expectations of many visitors are met.	Fair																			
Expectations of most visitors are met.	Good	✓																		
Expectations of all most all visitors are met.	Very good																			

***What is the compliance status on Supreme Court/ NTCA Guidelines on Ecotourism in TRs?**

6.5 Are local communities supportive of TR management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Local communities are hostile.	Poor		Draft Tiger Conservation Plan and information/ reports received during discussions with the TR authorities	<p>To get support of local communities Eco Development works are carried out and 22 EDCs have been formed.</p> <p>About 35,000 LPG connections have been provided in buffering villages by partial subsidization. Man animal conflict resolution measures have been taken by construction of EPT/ Solar fencing and payment of compensation for crop and human loss.</p> <p>Employment has been created by recruiting local personnel in STPF and engagement of protection and fire watchers. Annually about 3-4 lakh man days are generated for works under different schemes Awareness/ Nature camps are conducted involving neighboring schools and colleges. Vaccination of cattle and health camps are also carried out. In view of above works most local people are supportive of TR.</p>
Some are supportive.	Fair			
Most locals are supportive of TR management.	Good	✓		
All local communities supportive of TR management.	Very good			

***There could be many reasons for disenchantment. It could be real because of managerial neglect or the managerial efforts could be appropriate but there could be local elements/organizations who would like to keep the disaffection simmering for their own ulterior motives. Likewise success could be entirely because of the efforts of managers or they might be fortunate in striking partnerships with credible NGOs. Assessment may take the prevailing causes into account.**

***Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

7. MEE Score Card*

Framework Element Number	Framework Element Name	Number of Criteria (a)	Maximum Mark per question (b)	Total (a x b)	Marks obtained for the Element	Overall MEE Score and % age
1.	Context	04	10	40	35	78.23 %
2.	Planning	07	10	70	60	
3.	Inputs	05	10	50	45	
4.	Process	06	10	60	37.5	
5.	Outputs	04	10	40	30	
6.	Outcomes	05	10	50	35	
Total		31		310	242.5	

**Efforts will be made by the NTCA-WII-MEE Team to address the issue of assigning 'differential' weightages to the 30 Assessment Criteria including 'normalization'.*

Assessment Criteria for addressing issues relating to Climate Change & Carbon capture in the Tiger Reserves (TRs)

1. *Additional Criteria on Climate Change: Is the TR being consciously managed to adapt to climate change?*

Condition	Category*	(Tick ✓)	Comment/ Explanation	Next Steps
There have been no efforts to consider adaptation to climate change in management	Poor		In draft TCP Impact of climate change on the floral diversity has been indicated as priority area of Research. However, no plans have been drawn up.	Guide lines should be issued at national level for assessment of impacts and measures for adaptations so as to prepare specific plans and their integration with the TCP.
Some initial thought has taken place about likely impacts of climate change, but this has yet to be translated into management plans	Fair	✓		
Detailed plans have been drawn up about how to adapt management to predicted climate change, but these have yet to be translated into active management.	Good			
Detailed plans have been drawn up about how to adapt management to predicted climate change, and these are already being implemented	Very good			

2. *Additional Criteria on Climate Change: Is the TR being consciously managed to prevent carbon loss and to encourage further carbon capture?*

Condition	Category*	(Tick ✓)	Comment/ Explanation	Next Steps
Carbon storage and carbon dioxide capture have not been considered in management of the TR	Poor		Although by adopting holistic conservation measures the carbon loss is generally prevented, there is no conscious effort by the management for preventing its loss or capturing more carbon.	It is necessary to issue guidelines at National level for adopting various measures in this direction without compromising the primary objectives of Wildlife Habitat/ TR management to preserve the biodiversity of unique habitats/ eco systems.
Carbon storage and carbon dioxide capture have been considered in general terms, but has not yet been significantly reflected in management	Fair	✓		
There are active measures in place to reduce carbon loss from the TR, but no conscious measures to increase carbon dioxide capture	Good			
There are active measures in place both to reduce carbon loss from the TR and to increase carbon dioxide capture	Very good			

Management Effectiveness Evaluation (MEE) of Nagarhole Tiger Reserve

1. Context

1.1 Are the values of the TR well documented, assessed and monitored?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Values not systematically documented, assessed and monitored.	Poor		Draft TCP Chapter-1,2,6, 7 & 14; documents & reports from Director ; Information from discussions and field visits	<p>Nagarhole TIGER Reserve (NTR), situated in the Western ghat landscape, is part of the Nagarhole -Mudumalai- Bandipur- Wayanad –Satyamangalam Tiger Conservation Landscape with tiger occupancy in 21,435 km² containing the single largest population of Tigers in India.</p> <p>This Landscape is home to single largest Asian Elephant population in the world and is part of the Mysore Elephant Reserve (MER) notified on 25-11-2002. The Tiger and the Elephants are the flagship and umbrella species for the conservation of all the Biota that this ecosystem represents.</p> <p>It is also part of the Nilgiri Biosphere Reserve, notified on 01-09-1986 by the Government of India under the Man and Biosphere (MAB) Programme of the IUCN. The Reserve is endowed with rich floral and faunal diversity and is recognized as one of the Mega Biodiversity Areas in the country.</p> <p>The values of TR have been identified, assessed and categorized into- real/ economic, biological, ecological, conceptual, scientific, educational recreational, cultural, religious and historic values. All these values have been scaled into Global, National, Regional, state & Local values. Values are monitored through tiger estimation data, APC patrolling registers, wireless recording documents, tourism statement (visitors & income) from resorts & RFO's.</p> <p>In chapter- 14-“Monitoring & evaluation” of TCP monitoring of various strategies has been prescribed. To record each category a register, named as ‘Tiger Conservation Plan Range Register’ shall be maintained in all ranges. In addition, another register, “Nagarhole tiger conservation plan assessment register” to record deviations and Control forms are also prescribed in chapter 14.</p>
Values generally identified but not systematically assessed and monitored.	Fair			
Most values systematically identified, assessed and monitored.	Good			
All values systematically identified, assessed and monitored.	Very good	✓		

1.2 Are the threats to TR values well documented and assessed*?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Threats not systematically documented or assessed.	Poor		Draft TCP Chapter-6 & 7; documents & reports from Director ; Information from discussions and field visits	Following 16 threats (internal & external threats, physical, biological & anthropogenic threats) have been systematically identified & assessed through SWOT analysis in the Chapter 6 of TCP:
Threats generally identified but not systematically assessed.	Fair			1.Delay in settling rights of tribes under FRA 2. Slow progress in relocating all the tribes 3. Delay in settling the issues associated with earlier relocation (1999 to 2006) 4. Delay in settling the fate of Eksali lease holders living inside the tiger reserve 5. Encroachment 6. Pressure from the surrounding villages for natural resources 7. Changing land use pattern in the surrounding areas 8. Increasing level of human-animal conflict around the tiger reserve 9. Sharing border with large stretch of villages, coffee estates and other states: 10. Forest fire 11. External pressure for tigers poaching: 12. State highways crossing across the TR 13. Passing of high voltage transmission line & Sagging of electric lines running across the tiger reserve 14. NGO's with conflicting interest 15. Increasing tourism pressure to this reserve: 16. Impact of climate change
Most threats systematically identified and assessed.	Good			
All threats systematically identified and assessed.	Very good	✓		Weed remains one of the major threats to the Nagarhole tiger reserve, which is infested with major weed species like <i>Lantana camara</i> , <i>Chromolaena odorata</i> and <i>Parthenium hysteropus</i> etc. Although it has been described in theme plan it should be listed under the threats. Proper assessment of threats and measures to contain it has been prescribed.

***This assessment should be based on number, nature and extent of threats**

1.3 Is the 'Core Area' of TR free from human and biotic interference?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
The 'Core Area' has extensive human and biotic interference.	Poor		Draft TCP 6.5.4 & 7.9; documents & reports from Director ; Information from discussions and field visits	After voluntary relocation of 6 tribal settlements/ hadis, the TR has 33 tribal hadis with 1341 families residing in the core. Rights have been already settled for around 336 families under FRA.
The 'Core Area' has some human and biotic interference.	Fair	✓		Efforts are on for relocation of remaining families within the present TCP period through sequential relocation plan (table 7.9 of TCP).
The 'Core Area' has little human and biotic interference.	Good			In addition there are 96 villages (TCP 6.5.4) on the periphery of Nagarahole tiger reserve. Most of them are marginal farmers and landless labourers depending on the forest of Nagarahole tiger reserve for various resources, posing huge pressure on Nagarahole tiger reserve. They depend on tiger reserve for fire wood and NTFP collection. Since the cattle population of these fringe villages is very high, there is severe pressure for illegal cattle grazing, posing real threat to the wildlife of Nagarahole and their habitat continuously.
The 'Core Area' has no human and biotic interference.	Very good			In the name of Eksali lease land there is large scale encroachment in and around the Eksali lease land of DB Kuppe wildlife range. Further, there are areas like coffee estates and other private holdings bordering the tiger reserve in the Nagarahole, Kallahalla and Anechowkur ranges, where there may be some level of encroachment and which needs to be verified by survey and demarcation as prescribed in the earlier plan (M.K.Appaya, 2000-2010). In view of strong protection measures the biotic interference has been contained to large extent. Out of 200.57 km ² of forest area in the buffer only 49.97 km ² of Sollepura State Forest of the Mysore territorial division has been brought under the unified control of TR. Transfer of other areas of buffer are said to be under process.

***This assessment should be based on existence and the efforts made by TR management to address issues related to human settlements/ villages inside the core area; livestock grazing, cultivation, encroachments etc, resource extraction/ livelihood dependence of local communities and should reflect the overall interference due to all the above factors. The issue of 'Unified Control' of the 'Core' and 'Buffer' zones under the Field Director would also be taken into account.**

1.4 Has the TR complied with the four Statutory* Requirements (SR) along with Tripartite MoU and three Standard Operation Procedures (SOP)?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
None of the four SR, no compliance of Tripartite MoU and three SOPs met	Poor		Copy of relevant notifications; documents & reports from Director ; Information from discussions	<p>1) By Govt. of Karnataka's notification no. FEE 299 FWL 2007, dated 20/12/2007 an area of 643.35 km² of Nagarhole National Park was declared as CTH (core) of Nagarhole Tiger Reserve.</p> <p>Notification no. FEE 145 FWL 2010, dated 14/08/ 2012 has been issued by Govt. of Karnataka notifying 562.41km² area including 200.57 km² forest area and 89 villages as Buffer area of Nagarhole TR.</p> <p>2) Bandipur-Nagarhole conservation foundation has been established vide, Go no. FEE 104 FWL 2007, dated 13-12-2007. In continuation of the notification, vide Go. Of even number dated, 02/03/2009 Governing body of the Tiger conservation Foundation had been notified.</p> <p>3) The draft TCP is in the final stages of approval. It was reported that a meeting had been scheduled on 25-02-14 in NTCA.</p> <p>4) The State Level Steering Committee under the chairmanship of the Chief Minister has been constituted and 3rd meetings had been held on 26-07-2011.</p> <p>It is evident from the compliance report submitted with APO that Tripartite MoU conditions are being complied.</p> <p>SOP for tiger mortality has been followed in cases after it has been issued. However, deep freeze has not been procured so far. It has been reported that though there had not been any case of straying of tiger after issue of SOP, directions had been issued to follow the 3 SOPs.</p>
Two of the four SR, 50% conditions of the Tripartite MoU and SOPs complied	Fair			
Three of the four SR, 75% conditions of the Tri-partite MoU and SOPs complied	Good	✓		
All four SR, 100% conditions of the Tripartite MoU and SOPs complied	Very good			

***Statutory requirements are (1) Legal delineation and notification of Core and Buffer Areas; (2) Establishment of Tiger Conservation Foundation; (3) Development of a Tiger Conservation Plan; and (4) Constitution of a State-level Steering Committee under the Chairmanship of the Chief Minister. TA refers agreement between Field Director, State Government and NTCA. The 3 SOPs are on (i) Straying of Tiger in human dominated landscape, (ii) Tiger Mortality and (iii) Disposal of Carcasses**

2. Planning

2.1 Status of Tiger Conservation Plan (TCP)*?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No TCP in place.	Poor		Copy of relevant documents & reports from Director ; Information from discussions	<p>Draft TCP was submitted to NTCA; vide Reference number B2.WL.CR-13/2011-12, dated 02.04.2013. Final comments received from NTCA Reference No F.No.1-24/2-13-NTCA dated, 28.11.2013.</p> <p>All the comments given by the NTCA & its expert panel were incorporated & ready for final submission to NTCA.</p> <p>It is already circulated to NTCA experts & got their comments. Only final approval has to be given. The meeting is scheduled on 25.02.2014 for final discussion before approval.</p> <p>Stakeholders meetings for the preparation of Nagarhole TCP were held on May 2011 at Sunkadakatte, Veeranahosahalli & Karmad.</p>
TCP is under preparation	Fair			
TR has a relevant TCP	Good	✓		
TR has a comprehensive and relevant TCP, duly approved by the NTCA	Very good			

***The scientific content and the participatory processes used in preparation of the TCP will be taken into account in assessing the quality of TCP.**

2.2 Does the TR safeguards the threatened biodiversity values?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR does not safeguard the threatened biodiversity values.	Poor		Draft TCP; documents & reports from Director ; Information from discussions and field visits	<p>The threats to biodiversity values have been assessed in chapter-6 and 7. In chapter-7 "Management and Strategy" and in chapter-10 "Protection and intelligence gathering" of Nagarhole TCP, analysis of threats including threat to its biological values have been done with Risk zonation map (Figure 57.1). Strategy to safeguard all the values including biological values of Nagarhole through Zone Plans and Theme Plans have been prescribed in detail in chapter 7 & 10.</p> <p>Theme plan for Protection & intelligence gathering, fire protection, addressing human-wildlife interface, wildlife health, habitat management , Weed management and research & monitoring (including tiger population and habitat assessment) have been dealt at length to safeguard the biological diversity.</p> <p>Strategies to prevent Encroachment, Poaching, Illegal Grazing, Illegal collection of Forest Produce, forest fire and developing of communication net work has been prescribed. Anti poaching measure include permanent and temporary anti poaching camps; patrolling by foot, vehicle, boat and elephants; monsoon patrolling and night patrolling. Monitoring protocol as delineated in chapter-8 and 9 for population and habitats are also carried out.</p>
TR safeguards a few threatened biodiversity values.	Fair			
TR safeguards a large number of threatened biodiversity values.	Good			
TR safeguards all threatened biodiversity values.	Very good	✓		

*Remarks need to elaborate on the kind of safeguards and how they work or are intended to work

2.3 Are stakeholders given an opportunity to participate in planning process?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little, if any opportunity for stakeholder participation in planning.	Poor		Draft TCP; documents & reports from Director ; Information from discussions and field visits	<p>For preparing the TCP, Stakeholders meetings for the preparation of Nagarhole TCP were held on May 2011 at Sunkadakatte, Veeranahosahalli & Karmad.</p> <p>Staff meetings, workshops etc. are carried out on management issues.</p> <p>Stakeholders meeting for voluntary relocation. Stakeholders meeting with tour operators of JLR & other resorts etc. Organizing awareness camps involving local people and staffs of forest department. to impart proper education and training about fire control to both staff and local people with the help of NGOs.</p>
Stakeholders participate in some planning.	Fair			
Stakeholders participate in most planning processes.	Good	✓		
Stakeholders routinely and systematically participate in all planning processes.	Very good			

*The result of participation must show in the field and not merely reported as a routine exercise.

2.4 Are habitat management programmes systematically planned, relevant and monitored, and contribute effectively to Tiger and other endangered species conservation?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Habitat management programmes are entirely ad hoc.	Poor		Draft TCP; documents & reports from Director ; Information from discussions and field visits	Detailed management strategies/ programmes have been prescribed in chapter- 7 of draft TCP. To manage the habitat systematically programmes and work plans have been prescribed through following theme plans: 1. Protection (Security plan). 2. Plan for Fire management. 3. Plan for Human-animal conflict management. 4. Plan for Weed management. 5. Plan for Water management 6. Plan for special habitat management (Hadlus, aquatic habitat and den sites of carnivores etc). 7. Plan for fodder management including Bamboo regeneration. 8. Plan for wildlife health management. 9. Plan for climate change adaptation & mitigation. 10. Plan for voluntary tribal relocation and rehabilitation Care has been taken for management of special habitats like "hadlus /vials, aquatic habitats and requirements of elephants, gaurs and other herbivores as well as carnivores. Eco restoration zone with an area of about 31.8% of the TR has been delineated and strategies have been worked out to restore the ecologically degraded areas under Zone Plans. Programmes have been prescribed for studies and management of invasive species. Elaborate monitoring mechanisms for population estimation and habitat changes/ monitoring are in place as provide in Chapter -8 and Chapter -9 of TCP. As reported in the TCP, during the severe drought in the year 2012 many elephants died because of water shortage and its connected complication, arising due to want of proper soil and moisture conservation measures, which include waterhole management.
Limited planning and monitoring programmes are in place for habitat management.	Fair			
Habitat management programmes are generally planned and monitored.	Good	✓		
Habitat management programmes are thoroughly planned and monitored.	Very good			

***This assessment should be primarily based on habitat management programmes in relation to habitats for species that are threatened (IUCN categories), are habitat specialists, subjected to seasonal movements, wide ranging with emphasis on the breeding and rearing habitat and may include factors such as food, water, shelter (all connotations).Habitat structure, composition, unique patches of vegetation and sensitive sites, sources of water and their distribution are integral. Corridors within buffer zone are critically important. For example, all riparian habitats. Have these been addressed? Is their a planning process in place? The management practices dealing with invasive species such as Lantana, Michania etc. would be examined.**

2.5 Does the TR has an effective Protection Strategy (PS)* and Security Plan and Security Audit (SA) in place?

Assessment criteria*																				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks																
TR has little or no PS and SA.	Poor		Draft TCP; documents & reports from Director ; Information from discussions and field visits	<p>The detailed protection strategy for TR has been dealt in the Security Plan/ Protection and Intelligence gathering Plan in chapter – 10 of TCP. Identification of threats & vulnerable areas has been done with preparation of security/ risk zonation maps. Strategies have been provided to deal with encroachment, forest fires and other identified threats. The protection strategy includes 25 permanent Anti poaching camps established in strategic locations. 17 more camps have been proposed to be established in future. Daily patrolling by foot is carried out in each camp with recording of wild animals/ animal signs, illicit activities and wild animal deaths etc. in prescribed format. Patrolling by vehicles and boats are also carried out. Monsoon patrolling and night patrolling have also been prescribed to deal with special threats. Wireless communication system has also been established for passing of data and messages.</p> <p>Under fire protection strategies, fire sensitive area map have been prepared with provision of strategies for fire prevention & fire mitigation. Strategies for intelligence gathering & coordination (special Nagarhole intelligence cell “NIC”), establishment of criminal profile directory & Nagarhole crime data bank NCDB etc. are proposed.</p> <p>The Nagarhole Tiger Cell (NTC) has been proposed to be established in the future to periodically review all the protection effort of tiger reserve. Due to effective protection measures, the wildlife poaching/hunting cases of Nagarhole has been reduced from 23 in 2002-03 to 6 cases in 2011-12 (Table 10.1 of TCP), whereas other forest offence cases have been reduced from 130 (2002-03) to 50 cases in 2011-12 (Figure 57.2).</p> <p>A Special Tiger Protection Force (STPF) of 112 personnel has been established for Bandipur-Nagarhole Tiger Reserve. The sanction was to raise 3 platoons, each consisting of one FRO, 6 Dy. FROs and 30 FGs. However, in place of 30 FGs in a platoon actually 21 FGs and 9 watchers have been recruited. This force is headed by an Assistant Conservator of Forests. STPF has been reorganized and brought under the overall supervision of Director, Nagarhole TR from September 2013.</p> <p>STPF personnel are being deployed effectively for combing operations regularly. In addition they are also some times deployed for capture of straying tiger and containing and driving back of strayed elephant. In emergency situation there help also been taken for fire prevention.</p> <p>The details of forest offence cases in last 3 years are as under:</p> <table><tr><th>Year</th><th>No. of Cases</th><th>Persons arrested</th><th>Convicted</th></tr><tr><td>2010-11</td><td>74</td><td>36</td><td>-</td></tr><tr><td>2011-12</td><td>76</td><td>43</td><td>-</td></tr><tr><td>2012-13</td><td>66</td><td>39</td><td>-</td></tr></table> <p>The poaching/hunting cases of carnivores only are 13, 8 and 6 in year 2009-10, 2010-11 and 2011-12 respectively. There is a declining trend in the no. of cases.</p>	Year	No. of Cases	Persons arrested	Convicted	2010-11	74	36	-	2011-12	76	43	-	2012-13	66	39	-
Year	No. of Cases	Persons arrested			Convicted															
2010-11	74	36			-															
2011-12	76	43			-															
2012-13	66	39	-																	
TR has an adhoc PS and SA.	Fair																			
TR has a generally relevant PS and SA but is not very effective.	Good																			
TR has a comprehensive and very effective PS and SA.	Very good	✓																		

*This assessment takes inter-alia into account the nature of threats, the number and location of patrolling camps and foot and mobile patrolling, needs that relate to available manpower, terrain difficulties, practicability of area coverage, readiness to contain specific threats with necessary support and facilities. The constitution and functioning of Special Tiger Protection Force (STPF), Number of offences reported, arrests made, prosecution initiated and conviction achieved will be taken into account.

*Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

2.6 Has the TR been effective in the mitigation of human-wildlife conflicts?

Assessment criteria*																													
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks																									
Human-wildlife conflicts are significant but poorly addressed.	Poor		Draft TCP; documents & reports from Director ; Information from discussions and field visits	<p>Presently, the problem of human-animal conflict is very acute in the areas of coffee estates (on the western side of the tiger reserve) and agricultural fields (revenue villages on the eastern side of the tiger reserve) sharing border with the tiger reserve i.e. in the social buffer areas.</p> <p>In the last 2 to 3 years conflict mitigation measures have been taken up and Multi-barriers (EPT, Solar fence, service roads & Special structures) have been erected all along the conflict areas of 155 km (84.9 km along the eastern border adjoining the revenue villages and 71.1 km length along the western border adjoining coffee estates) boundary of tiger reserve to mitigate Human-Elephant conflict. The special structures include construction of rubble stone masonry wall with or without pillars, concrete structures and fabricated iron spiked walls etc. to meet the special requirement of certain sites where EPT or SPF alone will not be effective against elephants. About Rs. 5.16 crores have been spent in last 3 years. These efforts have led to stabilization of crop depredation, cattle kill & human injury/death cases in the current year of 2013-14.. The real impact or effect of these mitigation measures will be realized in the forthcoming years. It has also been proposed to use rails of old railway tracks for elephant proof fence in the pattern of Addo National Park of South Africa.</p> <p>Rapid response Teams, awareness programmes, Rescue teams and anti depredation squads from local tribal have been proposed in TCP.</p> <p>There has been no elephant death due to electrocution or gun shot.</p> <p>The details of crop damage, human injury, cattle and human deaths in last 3 years are as under:</p> <table><thead><tr><th>Category</th><th>2010-11</th><th>2011-12</th><th>2012-13</th><th>2013-14*</th></tr></thead><tbody><tr><td>Crop damage</td><td>1637 (57.988)</td><td>1479 (84.945)</td><td>1746 (72.585)</td><td>791 (29.951)</td></tr><tr><td>Human death</td><td>1 (2.000)</td><td>2 (8.500)</td><td>4 (20.000)</td><td>1 (5.000)</td></tr><tr><td>Human injury</td><td>5 (0.384)</td><td>6 (0.835)</td><td>8 (1.100)</td><td>5 (0.466)</td></tr><tr><td>Cattle killings</td><td>41 (1.215)</td><td>84 (2.510)</td><td>163 (4.830)</td><td>60 (1.790)</td></tr></tbody></table> <p>Note: The figure in parenthesis () are Rupees in lakh</p> <p>*--The data is up to January, 2014</p> <p>From above it is indicated that cases have been significantly reduced in current year (2013-14).</p>	Category	2010-11	2011-12	2012-13	2013-14*	Crop damage	1637 (57.988)	1479 (84.945)	1746 (72.585)	791 (29.951)	Human death	1 (2.000)	2 (8.500)	4 (20.000)	1 (5.000)	Human injury	5 (0.384)	6 (0.835)	8 (1.100)	5 (0.466)	Cattle killings	41 (1.215)	84 (2.510)	163 (4.830)	60 (1.790)
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Cattle killings	41 (1.215)	84 (2.510)	163 (4.830)	60 (1.790)																									
TR has been able to mitigate few human-wildlife conflicts.	Fair																												
TR has been able to mitigate many human-wildlife conflicts.	Good																												
TR has been effective in mitigating all human-wildlife conflicts.	Very good	✓																											

*The assessment will take into account the number of incidences reported and payment of compensation made and its timeliness.

2.7 Is the TR integrated into a wider ecological network/ landscape following the principles of the ecosystem approach?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR not integrated into a wider network/ landscape.	Poor		Draft TCP; documents & reports from Director ; Information from discussions and field visits	Nagarahole is located at the "5 B Western Ghats Mountain" biogeographic zone and thus part of Western Ghats landscape complex. Nagarahole is part of Nagarahole-Mudumalai-Bandipur-Wayanad tiger conservation unit sharing gene pool with all other protected areas of Western Ghats.
Some limited attempts to integrate the TR into a network/ landscape.	Fair			The Northern most part of core area of Nagarahole tiger reserve namely Anechowkur wildlife range through forests of buffer area is connected with the Dubare RF of Madikeri territorial forest division ultimately connecting with the Pushpagiri wildlife sanctuary on the North-Western direction. Pushpagiri wildlife sanctuary is linked to Bhadra tiger reserve. This allow Nagarahole tigers to reach Bhadra tiger reserve (part of Bhadra-Kudremukh tiger landscape), another source population of tigers along the Western Ghats landscape.
TR is generally quite well integrated into a network/ landscape.	Good			Following important corridors have been identified around CTH and buffer of NTR: (1).Udboor and Old Kakankote (sub merged since Kabini river project) corridor: A major elephant corridor towards the Southern side of the tiger reserve lies between Udbur and old Kakankote (since submerged by the Kabini river project) which links the Nagarahole and Bandipur populations. This corridor is vital as 200-300 elephants are found in the back waters during summer. Disturbance in the corridor in the form of tourism, boating, etc., has been minimized.
TR is fully integrated into a wider network/ landscape.	Very good	✓		(2)Nalkeri and Brahmagiri corridor (Kutta corridor): This corridor towards the Western and North-western side of the tiger reserve is the one linking Nagarahole, Wayanad Wildlife Sanctuary, with the Brahmagiri Wildlife Sanctuary. The Southern end of Nalkeri R.F forms a corridor with the Brahmagiri R.F via a series of coffee estates. As there was heavy damage to the coffee plantations by elephants, the coffee estates have now been solar fenced and elephant proof trenches dug, obstructing the free movement of elephants (3) Brahmagiri-Thirunelli elephant corridor: The Indian Institute of Science, Bangalore, has identified the Brahmagiri Tirunelli corridor, on the Karnataka Kerala border. The Elephant populations in the Western Ghats along the Brahmagiri are connected to those in the Kodagu plateau only through the northern Wynad region of Kerala. The southern tip of the Brahmagiris extends into Kerala's Wynad North Division, where the Tirunelli Reserve Forest and Kudrakote Reserve Forest provide a narrow connection eastward to the Tholpetty and Kudrokote Wildlife Sanctuary. This is an extremely important corridor to maintain habitat contiguity for elephant populations in the Western Ghats, and is accorded very high priority. At present, the passage is around 6 km long and between 0.5 to 2 km wide along its length. It is contemplated to resettle the villages and ensure strict protection against habitat degradation, so as to protect this area for future elephant movement. Apart from these above mentioned corridors, there are two traditional migratory paths for wild animals which need a mention here. They are: a. Mudumalai- Nagarahole- Brahmagiri- Muttodi migratory path

***Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

				<p>b. Nagarahole- Malambi- Dodabetta- Hemavathi</p> <p>Management strategies have been prescribed in the TCP as "Indicative plan for adjoining areas providing connectivity/ corridors". It has also been reported that while preparing the buffer and corridor plan of TCP, working plans of respective territorial divisions were referred and necessary recommendations were prescribed in the TCP. Further, some of these territorial divisions (Virajpet territorial division) are revising their working plan & discussions have been held with the concern working plan officer to incorporate necessary wildlife mainstreaming activities & measures in their working plan.</p>
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***Assessment needs to consider the scope of opportunities on the landscape scale that exist. Consider whether any attempts have been made and what are these? Have all the important corridors been identified? What actions are planned/implemented for their security? Have the Forest Working Plans and Forest Development Corporation Plans within the identified landscapes taken cognizance of such new requirement? These should have been reflected in TCPs. Is there is any effort to rationalize landuse around TR? Is any effort being made to plan and use 'Smart Green Infrastructure'?**

3. Inputs

3.1 Are personnel adequate, well organized and deployed with access to adequate resources in the Tiger Reserve (TR)*?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Few, personnel explicitly allocated but poorly supported for TR management.	Poor		Draft TCP; documents & reports from Director ; Information from discussions	<p>Administratively, the entire 643.39 sq km core or Critical Tiger Habitat of Nagarahole tiger reserve (Hunsur Wildlife Division) is divided into seven wildlife ranges. For all management purpose, the seven wildlife ranges of Nagarahole tiger reserve were further divided into 17 sections and 63 beats. Re-organization of the Beats and Sections was carried out in 2013, after a series of participatory workshops in the TR. The no. of sections and beats after re organisation are 24 and 68 respectively (Table 13.1 of draft TCP).</p> <p>Out of 236 front line posts 194 (vacancy 18 %) posts have been filled up. The major vacancies are in the level of foresters (12= 32%) and Forest guard (23= 21.7%).</p> <p>The total staff strength is 374 against which 287 posts have been occupied (Vacancy is 23 %).</p> <p>Out of 189 personnel in the cadre of RFO, Forester, FG and Forest watchers 170 (90%) are below 40 years and only 13 persons (7 %) are above 50 years. Most of the staff (150= 79%) is in the age group of below 30 years. Thus it is a young team capable of carrying out arduous nature of works.</p>
Some personnel explicitly allocated for TR management but not adequately supported and systematically linked to management objectives.	Fair			
Some personnel with fair support explicitly allocated towards achievement of specific TR management objectives.	Good			
Adequate personnel appropriately supported and explicitly allocated towards achievement of specific TR management objectives.	Very good	✓		

***This assessment should inter-alia be based on number of personnel allocated for attainment of TR objectives at the Range , Round, Beat and Patrolling camps levels or as relevant to the needs (sanctioned posts vis- a- vis existing personnel and needs beyond the sanctioned strengths. It is possible that posts have last been sanctioned several years back that do not now account for the current needs)**

3.2 Are resources (vehicle, equipment, building etc.) adequate, well organized and managed with desired access?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Few, if any, resources explicitly allocated for TR management.	Poor		Draft TCP; documents & reports from Director ; Information from discussions	There are 289 buildings- 10 office buildings, 239 residential quarters, 26 APC, 7 FRH and 7 guest houses in NTR.
Some resources explicitly allocated for TR management but not systematically linked to management objectives.	Fair			A total length of 953.32 km (metalled=105 km and non metalled 848.2 km) of forest road network available for protection of TR (Table 4.2 of TCP). The length of fire lines is 1790 km
Some resources explicitly allocated towards achievement of specific TR management objectives.	Good			TR has 17 SUVs/ Jeeps, 12 motor Bikes, 3 motor boats, 7 mini buses and a Mini lorry. All staff up to the level of FRO is with a four wheeled vehicle.
Adequate resources explicitly allocated towards achievement of specific TR management objectives	Very good	✓		The Wireless communication network comprises of 26 stationary, 14 mobile and 102 walkie talkies. The TR personnel are armed with 19 Rifles, 67 DBBL Guns, 21 Slide action Guns and 3 Pistols/ Revolvers. There are 55 GPS and other essential equipments available in TR. It appears that adequate resources have been allocated to achieve various objectives of TR.

*** These form a variety of resources. These may be segregated into immovable (structures) and movable categories and each further may be considered under the essential and desirable categories. It is best to start with what are the minimum needs to attain each objective, what is available and manner of use/deployment. The proportions of the 'essentials' and 'desirables' along the importance gradient of objectives would serve as pointers for score categories. Specific remarks would be vitally important.**

3.3 Are financial resources other than those of the State linked to priority actions and are funds adequate, released timely and utilized?

Assessment criteria*																																									
Condition	Categ ory*	(Tick ✓)	Reference document(s)	Remarks																																					
Resource allocation is adhoc, funds are inadequate and seldom released in time and not utilized.	Poor		Documents & reports from Director ; Information from discussions	A comprehensive APO is prepared every year planning for attainment of most objectives and submitted to the NTCA. The status of allocation and utilization of funds from NTCA and other central schemes including State share in the last 3 years are as under:																																					
Some specific allocation for management of priority action. Funds are inadequate and there is some delay in release, partially utilized.	Fair			(figures in lakh Rs)																																					
Comprehensive planning and allocation that meets the most important objectives. Generally funds released with not much delay and mostly utilized.	Good			<table><tr><th>Year</th><th>Scheme</th><th>Total Sanction</th><th>Total Release</th><th>Utilised</th></tr><tr><td rowspan="2">2010 -11</td><td>CSSPT</td><td>293.150</td><td>259.285</td><td>257.414</td></tr><tr><td>PE/NBR</td><td>18.190</td><td>18.190</td><td>18.163</td></tr><tr><td rowspan="2">2011 -12</td><td>CSSPT</td><td>1470.733</td><td>1426.188</td><td>1415.307</td></tr><tr><td>PE</td><td>16.607</td><td>16.607</td><td>16.033</td></tr><tr><td rowspan="2">2012 -13</td><td>CSSPT</td><td>405.387</td><td>405.387</td><td>405.387</td></tr><tr><td>PE</td><td>16.570</td><td>16.570</td><td>16.570</td></tr><tr><td colspan="2">TOTAL</td><td>2220.637</td><td>2142.227</td><td>2128.874</td></tr></table>	Year	Scheme	Total Sanction	Total Release	Utilised	2010 -11	CSSPT	293.150	259.285	257.414	PE/NBR	18.190	18.190	18.163	2011 -12	CSSPT	1470.733	1426.188	1415.307	PE	16.607	16.607	16.033	2012 -13	CSSPT	405.387	405.387	405.387	PE	16.570	16.570	16.570	TOTAL		2220.637	2142.227	2128.874
				Year	Scheme	Total Sanction	Total Release	Utilised																																	
				2010 -11	CSSPT	293.150	259.285	257.414																																	
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2012 -13	CSSPT	405.387	405.387	405.387																																					
	PE	16.570	16.570	16.570																																					
TOTAL		2220.637	2142.227	2128.874																																					
Comprehensive planning and allocation of resources for attainment of most objectives. Funds generally released on-time and are fully utilized.	Very good	✓	(PE: Project Elephant/NBR :Nilgiri Biosphere Res) Funds are released in time. Except a very small amount all released funds have been utilised.																																						

***Obtain details of funds released by NTCA and their utilization by TR in the last 3 years and indicate them under 'Remarks'. Also comment on the problems associated with fund allocations and their utilization.**

***Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

3.4 Are financial resources from the State linked to priority action and funds adequate, timely released and utilized for the management of Tiger Reserve?

Assessment criteria*																																						
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks																																		
Resource allocation is adhoc, funds are inadequate and seldom released in time and not utilized.	Poor		Documents & reports from Director ; Information from discussions	The status of allocation and utilization of funds from State Schemes including non-plan (excluding salary of employees) in the last 3 years are as under: (figures in lakh Rs) <table><tr><td>Year</td><td>Scheme</td><td>Released</td><td>Utisation</td></tr><tr><td rowspan="3">2010-11</td><td>Plan</td><td>31.750</td><td>31.487</td></tr><tr><td>Non Plan</td><td>178.478</td><td>178.453</td></tr><tr><td>Sub-Total</td><td>210.228</td><td>209.94</td></tr><tr><td rowspan="3">2011-12</td><td>Plan</td><td>175.375</td><td>175.375</td></tr><tr><td>Non Plan</td><td>128.129</td><td>128.129</td></tr><tr><td>Sub-Total</td><td>303.504</td><td>303.504</td></tr><tr><td rowspan="3">2012-13</td><td>Plan</td><td>305.610</td><td>305.610</td></tr><tr><td>Non Plan</td><td>290.554</td><td>290.549</td></tr><tr><td>Sub-Total</td><td>596.164</td><td>596.159</td></tr></table>	Year	Scheme	Released	Utisation	2010-11	Plan	31.750	31.487	Non Plan	178.478	178.453	Sub-Total	210.228	209.94	2011-12	Plan	175.375	175.375	Non Plan	128.129	128.129	Sub-Total	303.504	303.504	2012-13	Plan	305.610	305.610	Non Plan	290.554	290.549	Sub-Total	596.164	596.159
Year	Scheme	Released			Utisation																																	
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Some specific allocation for management of priority action. Funds are inadequate and there is some delay in release, partially utilized.	Fair																																					
Comprehensive planning and allocation that meets the most important objectives. Generally funds released with not much delay and mostly utilized.	Good																																					
Comprehensive planning and allocation of resources for attainment of most objectives. Funds generally released on-time and are fully utilized.	Very good	✓																																				

***Obtain details of funds released by State and their utilization by TR in the last 3 years and indicate them under 'Remarks'. Also comment on the problems associated with fund allocation and their utilization.**

3.5 What level of resources are provided by NGOs?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
NGOs contribute nothing for the management of the TR.	Poor		Documents & reports from Director ; Information from discussions	<p>The resources provided by various NGOs have been reported to be as follows:</p> <p>(1) Wildlife Conservation Trust, Mumbai: 8 four wheeler patrolling vehicles (4 Jeeps, 1 Bolero, 2 Thar & 2 Bolero Camper) and 12 Motor Bikes have been provided for protection. In addition financial support was given for 40 health camps and for construction of community hall at tribal rehabilitation area.</p> <p>(2) Centre for Wildlife Studies, Bangalore: Providing information on the straying tigers and / or mortality of tigers in and around the tiger reserve</p> <p>(3) LIFT (Living Inspiration For Tribals), Hunsur: Motivating tribal people for relocation from NTR</p> <p>(4) Wildlife First, Bangalore: Conducting 2 health camps for staff of NTR and Servicing of 107 Fire arms.</p> <p>(5) Vanya, Bangalore: Creating awareness against forest fire and harnessing local support from villagers from fringe villages through screening of wildlife documentaries.</p> <p>(6) CSS Crop, Bangalore: Providing 200 camera traps for Phase-IV Tiger Monitoring.</p> <p>(7) Non-governmental organizations like WWF, Wildlife trust, Coorg wildlife society etc., which assist the department in organizing nature camps duly sponsoring most of them.</p>
NGOs make some contribution to management of the TR but opportunities for collaboration are not systematically explored.	Fair			
NGOs contributions are systematically sought and negotiated for the management of some TR level activities.	Good	✓		
NGOs contributions are systematically sought and negotiated for the management of many TR level activities.	Very good			

***Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

4. Process

4.1 Does the TR have manpower resources trained in wildlife conservation for effective TR management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No trained officers and frontline staff in the TR.	Poor		Draft TCP; documents & reports from Director ; Information from discussions	No officers or subordinate staff of TR has wildlife diploma or special wildlife courses from WII or similar Institutes. Following training/ workshops have been reported to have been conducted in last 3 years: (1) Workshop relating to legal matters on forest conservation for all RFO, Deputy RFO and FG (2) Training and capacity building programme for forest and forest cell officials by Wildlife Crime Control Bureau, Chennai (3) Training Programme on Phase IV Monitoring & Training in Madumalai Tiger Reserve for ACF, RFO's & Foresters. (4) Workshop conducted for all Deputy Range Forest Officers on Prevention of Forest fire. (5) G.P.S. Training conducted for Forest Guards (6) Tiger Census training for all Deputy Range Forest Officers and Forest Guards In chapter 8 (section 8.5 Training Need Assessment), although training on different aspects have been indicated/ suggested for carrying out effective management., it requires to prepare training calendar for systematic training of all officers and staff.
Some trained officers and few trained frontline staff, posted in the TR.	Fair	✓		
All trained officers and fair number of trained frontline staff posted in the TR.	Good			
All trained officers and most of the trained frontline staff is posted in the TR.	Very good			

**Indicate % of trained staff in various categories. The number and thematic areas of the 'Internal Training' programmes organized in the TR in the last 3 years may be taken into account. Has the TR prepared a 'Staff Development Plan'? Is it being implemented?*

4.2 Is TR staff management performance linked to achievement of management objectives?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No linkage between staff management performance and management objectives.	Poor		Draft TCP; documents & reports from Director ; Information from discussions	There is no direct linkage between staff management performance and their promotions. Confidential reports of the staff are used to judge their performance and promotion is linked to performance and fulfillment of the other eligibility criteria for the post, especially the number of years spent in the current post. Although in section 8.6 of draft TCP under heading of "Human Resource development Plan (HRD Plan)" provision for rewards and awards has been prescribed but none of the personnel has been awarded/ rewarded during last 3 years.
Some linkage between staff management performance and management objectives, but not consistently or systematically assessed.	Fair	✓		
Management performance for most staff is directly linked to achievement of relevant management objectives.	Good			
Management performance of all staff is directly linked to achievement of relevant management objectives.	Very good			

4.3 Is there effective public participation in TR management* and does it show in making a difference?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no public participation in TR management.	Poor		Documents & reports from Director ; Information from discussions and field visits	<p>206 volunteers / NGOs were involved recently during December 2013 for line transect surveys and carnivore sign surveys</p> <p>Public participation is elucidated in all spheres of fire protection, awareness campaigns to school children in the fringe villages, co-operation in banning grazing inside the TR, rehabilitation process etc.,</p> <p>TR management must involve more number of local people/ EDCs and other stake holders in more management practices, such as eco-tourism, man-animal conflict resolution, protection, prevention of use of CTH resources (grazing/ fire wood/ timber/ NTFP etc. collection), nature education, relocation and retrofitting measures for safety of wildlife in management of reservoir/ public roads inside.</p> <p>Exercise to systematically identify areas in which and in what manner various stake holders can participate in TR management should be carried out and institutionalized by incorporating them in TCP.</p>
Opportunistic public participation in some of the relevant aspects of TR management.	Fair	✓		
Systematic public participation in most of the relevant aspects of TR management.	Good			
Comprehensive and systematic public participation in all important and relevant aspects of TR management.	Very good			

+ The involvement of NGOs/ NGLs in population estimation may be taken into account)

4.4 Is there a responsive system for handling complaints and comments* about TR management?

Assessment criteria																				
Condition	Categ ory*	(Tick ✓)	Reference document(s)	Remarks																
Ad-hoc approach to handling complaints.	Poor		Documents & reports from Director ; Information from discussions and field visits	<p>Complaints are dealt as per routine procedures of the normal departmental system. As per reports of TR the status of the number of complaints received and disposed off during the last 3 years are as under:</p> <table><tr><th>Year</th><th>Complaint received</th><th>Complaint disposed</th><th>Complaint pending</th></tr><tr><td>2010-11</td><td>2</td><td>2</td><td>-</td></tr><tr><td>2011-12</td><td>2</td><td>1</td><td>1</td></tr><tr><td>2012-13</td><td>5</td><td>4</td><td>2</td></tr></table> <p>RTI applications are disposed off within the time limit prescribed.</p> <p>Suggestion registers/ Visitors note books are available for visitors but no institutionalised system is in place for ensuring regular and timely processing to address and inform.</p>	Year	Complaint received	Complaint disposed	Complaint pending	2010-11	2	2	-	2011-12	2	1	1	2012-13	5	4	2
Year	Complaint received	Complaint disposed			Complaint pending															
2010-11	2	2			-															
2011-12	2	1			1															
2012-13	5	4			2															
Complaints handling system operational but not responsive to individual issues and with limited follow up.	Fair	✓																		
Coordinated system logs and responds effectively to most complaints.	Good																			
All complaints systematically logged in coordinated system and timely response provided with minimal repeat complaints.	Very good																			

*Does the TR maintains 'Suggestions Register'? What actions are taken to deal with suggestions?

4.5 Does TR management addresses the livelihood issues* of resource dependent communities, especially of women?

Women:

Assessment criteria												
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks								
No livelihood issues are addressed by TR management.	Poor		Draft TCP; Documents & reports from Director ; Information from discussions and field visits	<p>The tribals from these villages are being engaged to provide employment as Anti poaching watchers, fire watchers and various works like maintenance of assets and habitat development works etc. The year wise no. of man days created through operation of various schemes by TR in the last 3 years are as under:</p> <table><tr><th>Year</th><th>Man days</th></tr><tr><td>2010-11</td><td>1,44,343</td></tr><tr><td>2011-12</td><td>2,24,493</td></tr><tr><td>2012-13</td><td>1,92,404</td></tr></table> <p>EDC's have been formed in the park under the India Eco-Development Project (1999-2004) and also assistance had been provided to them in taking up some developmental works. But, there has been some stagnation especially after completion of India Eco-Development Project in 2004. Presently, there are around 84 EDC's operating from in and around Nagarhole, but many are under dormant stage and needs to be activated.</p> <p>2459 LPG connections have been given to local communities on subsidised prices.</p> <p>40 health camps have been conducted in and around TR.</p>	Year	Man days	2010-11	1,44,343	2011-12	2,24,493	2012-13	1,92,404
Year	Man days											
2010-11	1,44,343											
2011-12	2,24,493											
2012-13	1,92,404											
Few livelihood issues are addressed by TR management.	Fair	✓										
Substantial livelihood issues are addressed by TR management.	Good											
Livelihood issues of resource dependent communities especially of women are addressed effectively by TR managers.	Very good											

***The number of mandays generated in the last 3 years may be taken into account. Are funds received from District Agencies and other sources? Provide details of funds received in last 3 years.**

4.6 Has the TR planned and implemented the voluntary 'Village Relocation' from the Core/ Critical Tiger Habitat (CTH)?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No planning and no implementation	Poor		Draft TCP; Documents & reports from Director ; Information from discussions and field visits	<p>In the past prior to 2008 (Issue of new guide lines by NTCA for voluntary rehabilitation procedure and package), out of a total of 45 villages in the core, 6 villages (496 families) had been relocated. After the new guide lines another 6 villages (220 families) were relocated in 2010 and January, 2014.</p> <p>In the remaining 33 tribal hadis with 1240 families (1306 individual rights), Forest Rights have been already settled for around 781 individuals under FRA. Efforts are on for relocation of remaining families within the present TCP period through sequential relocation plan (table 7.9 of TCP).</p> <p>Rehabilitation was in progress in two villages with 115 families during the visit of the MEE team. It was reported that survey has been conducted to find out the willingness of tribals for rehabilitation outside the tiger reserve. About 287 families have shown willingness to move out of the tiger reserve. Action is being taken accordingly.</p> <p>The procedures and guidelines are being followed. LIFT is the NGO associated with tribal relocation. There are 2 RFOs posted exclusively for the purpose of tribal relocation to address the post relocation problems of the tribals.</p>
Plans have been made but no implementation	Fair			
Plans have been made and some implementation is in progress	Good			
Plans have been made and are being actively implemented/ no human habitation in the CTH	Very good	✓		

***Assessment will look into the village relocation planning process including availability of manpower, financial resources and NGO support, if any. Is there a mechanism to address the complaints received in respect of relocation process? Effort must be made to assess post-relocation success or otherwise.**

5. Output

5.1 Is adequate information on TR management publicly available?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no information on TR management publicly available.	Poor		Documents & reports from Director ; Information from discussions and field visits	Information has been uploaded in the web site: www.nagarholetigerreserve.in . The website provide information on history, flora & fauna, values, objectives, ecotourism, major threats, human settlements, future plans and travel information. The site also provides information on facilities, location, climate, safaris, Do's and Don'ts along with other standard features, such as: Gallery, FAQs and Contact us etc. Two days work shop was specially conducted in Nagarhole for the press on 19/08/2013 and 20/08/2013 for providing information on management so as to have a wide coverage.
Publicly available information is general and has limited relevance to management accountability and the condition of public assets.	Fair			
Publicly available information provides detailed insight into major management issues and condition of public assets.	Good	✓		
Comprehensive reports are routinely available in public domain on management and condition of public assets.	Very good			

5.2 Are visitor services and facilities appropriate and adequate?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Visitor services and facilities do not exist.	Poor		Draft TCP; Documents & reports from Director ; Information from discussions and field visits	Nagarahole tiger reserve operates two tourism zones (Nagarahole tourism zone and Sunkadakatte tourism zone), consisting of 62.90 Sq Km area, which is around 9.7% of the core of the tiger reserve. This is well within the limit of 20 % envisaged in guideline. Presently, no department accommodation is available at Sunkadakatte tourism zone. At Nagarahole tourism zone, department have two suite in Cauvery Guest House, four rooms in Gangothri Guest House and twelve bedded two dormitories. There are number of private resorts available around the Nagarahole tiger reserve, in order to cater the needs of tourists. Some of the public and private resorts includes, Kabini River Lodge (Jungle Lodge and Resorts), water woods Pvt. Ltd, Kabini lake view resorts, Cicada, Serai and Orange county (all located around the Kabini river) and King Sanctuary and Jungle Inn resort (located near Veeranahosahally check post). Apart from this there are many home stays present in the Kodagu district adjacent to the tiger reserve. The tourism involves vehicle safari and Motor boat safari (in Kabini back water).The elephant safari has been stopped. For Sunkadakatte tourism zone the effective Permissible carrying capacity for on any single day is only 22 vehicles & for Nagarahole tourism zone the effective Permissible carrying capacity for on any single day is only 11 vehicles. Private vehicles are not allowed for vehicle safaris in compliance of Karnataka High Court order. At Sunkadakatte tourism zone, eco-tourism activity is outsourced to Jungle Lodges & Resorts (JLR) and they operates 21 safari vehicles and department operates only one vehicle. At Nagarahole tourism zone department is exclusively operating all the safari vehicles, for which 4 vehicles are available. Jungle lodges and resorts had 3 motor boats with 15 member capacity. Other resorts like Orange county, Bush betta and Serai has 1 boat each. Boat safari by department
Visitor services and facilities are very basic.	Fair			
Visitor services and facilities are monitored from time to time and are fairly effective.	Good	✓		
Visitor services and facilities are conscientiously maintained, regularly upgraded and monitored for visitor satisfaction	Very good			

***Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

				<p>boat was stopped and private boats were also stopped on the line of private safari vehicle due to ban by Karnataka high court order. Maximum three boats are permitted to operate from JLR, each morning and evening.</p> <p>Nagarahole doesn't have any interpretation centre and/or visitor centre. There is inadequacy of other interpretive media like publicity material, guides in departmental safaris, which are important tools for nature education for tourists.</p> <p>The recommendations in the Ecotourism Plan dealt in chapter 11 should be implemented to provide and maintain the visitors' facilities.</p>
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***Include the existence and quality of visitor and interpretation centers, including skills and capabilities of personnel manning these, TR related publications, films, videos; arrangements of stay (including places serving refreshments and food owned and managed by TR), watch towers and hides including safety factors, vehicles assigned for visitors including riding elephants, if any and their deployment, drinking water, rest rooms, garbage disposal, attended and self guided services in the field, visitor feed back on the quality of wilderness experience.**

5.3 Are research/ monitoring related trends systematically evaluated and routinely reported and used to improve management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no systematic evaluation or routine reporting of trends.	Poor		Draft TCP; Documents & reports from Director ; Information from discussions and field visits	<p>NTR has attracted many research scholars and organisation to carry out research and studies on wildlife and their habitat since early seventies. Due to this, Nagarahole tiger reserve now holds the scientific value of "protected area with long-term research base in wildlife, animal ecology and biology". It is one of the protected areas for origin of high-tech tiger population estimation tools and techniques of "camera trap and capture-recapture model".</p> <p>List of projects taken in the past has been made available to MEE team which indicates 23 scholars/ organisations have conducted surveys/ studies/ research in 26 projects.</p> <p>From research gap analysis carried out in section 8.2 of TCP it is seen that about 50 papers have been published. It has become laboratory for field research on prey-predator dynamics. The research areas were species research (tiger, leopard, dhole, sloth bear, deers, elephants, insect and other invertebrates); animal biology, vegetation/ plant ecology; population ecology; wildlife ecology; techniques; social issues and wildlife health.</p> <p>Priority areas of research and studies have been identified after analyzing the earlier findings.</p> <p>For monitoring of biological parameters Phase IV monitoring as per NTCA guide lines has to be carried out by all TRs. However, TR carries out only daily monitoring part of it. The camera trap monitoring and estimation of tigers to be carried out annually are done by CWS. This has deprived the TR management developing in- house capability and availability of vital data for important analysis.</p> <p>The various suggestions in the TCP should be implemented on top priority.</p>
Some evaluation and reporting undertaken but neither systematic nor routine.	Fair			
Systematic evaluation and routine reporting of trends undertaken.	Good	✓		
Systematic evaluation and comprehensive reporting of trends undertaken and attempts made at course corrections as relevant.	Very good			

***Not all TRs attract projects and researchers and with exceptions, little research takes place on the TRs own steam because of systemic limitations. However, monitoring of some critical issues is expected e.g. population of tiger, co-predators and prey with insights into their demography and distribution (some opportunistic sampling by sightings, signs and spatial distribution during assessment would be extremely useful in terms of expert impression and as a pulse), monitoring incidence of livestock grazing, fires, weeds, sources of water, a variety of illegal activities typically associated with the reserve, wildlife health (e.g. epidemics, immunization of livestock) regeneration and change in vegetation, visitors and their activities, offence cases, ex-gratia payments etc. Efforts must be made to assess the planning and implementation of Phase-IV monitoring protocols and the success of implementation of M-Stripes (wherever applicable). Are the 'Sykes and Horill' monitoring plots maintained and data analyzed?**

5.4 Is there a systematic maintenance schedule and funds in place for management of infrastructure/assets?

Assessment criteria							
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks			
No systematic inventory or maintenance schedule.	Poor		Documents & reports from Director ; Information from discussions and field visits	Various registers, such as; Register of Buildings, Register of motor vehicles, Register of Roads, Register of wells & tanks, Register of Check dams and Register of stores etc. are being maintained for inventories and systematic maintenance of assets/ infrastructure. The important maintenance works carried out in last 3 years areas under:			
Inventory maintenance is adhoc and so is the maintenance schedule.	Fair						
Systematic inventory provides the basis for maintenance schedule but funds are inadequate.	Good	✓					
Systematic inventory provides the basis for maintenance schedule and adequate funds are made available	Very good			Maint. Works	2010-11	2011-12	2012-13
				Road	298.4 km	185.5 km	131.1 km
			Buildings	10 no.	46 no.	74 no.	
			Fire lines	1278 km	1714 km	1790km	
			Grass land	-	110.8 ha	80 ha.	

6. Outcomes

6.1 Are populations of threatened species declining, stable or increasing?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Populations of key threatened/ endangered species are declining.	Poor		Draft TCP; Documents & reports from Director ; Information from discussions and field visits	The density of elephants per sq. km. estimated by block count method in 2007, 2010 and 2012 are 0.9, 1.0 and 2.1 respectively. The mean number of elephants estimated in these years is 591, 617 and 1320 respectively. By dung count method the density in 2010 and 2012 was estimated to be 1.60 (mean population of 997) and 1.68 per sq km (mean population of 1078) respectively. This shows increasing trend. Population estimate of many threatened species are not available.
Some threatened/ endangered species populations declining, some are increasing, most others are stable.	Fair			
Several threatened/ endangered species populations increasing, most others are stable.	Good	✓		
All threatened/ endangered species populations either increasing or stable.	Very good			

*This needs to practically relate to the natural ecosystem potential rather than being driven merely by numbers and visibility. The assessment score may be elaborated under remarks.

6.2 Is the population of tigers showing a declining, stable or increasing trend?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Population of tiger is showing a declining trend	Poor		Draft TCP; Documents & reports from Director ; Information from discussions and field visits	The population estimation of tiger and its prey species is being carried out annually by CWS. As per the report provided by TR authorities the status is as under:
Population of tiger is stable	Fair			
Population of tiger is showing an increasing trend	Good			
Population of tiger has significantly increased	Very good	✓		

Species	2010	2011	2013
Tiger / 100 km ²	11.9	8.4	12.08
Prey Specs/ km ²	34.2	37	41.6

The above data shows population of Tiger significantly increased.

*This assessment should be based in the context of available population estimate (2010-11) and the outcomes of the currently ongoing Phase-IV analyses.

6.3 Have the threats* to the TR being reduced/ minimized? Or is there an increase?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Threats to the TR have not abated but have enhanced.	Poor		Draft TCP; Documents & reports from Director ; Information from discussions and field visits	<p>Poaching, Man animal conflicts, Fuel wood collection, Grazing, Fire, Existence of many tribal villages, Encroachment, Invasive species, Existence of High Ways, High voltage Transmission lines and Tourism beyond carrying capacity are the main threats to the Tiger Reserve. For abating these threats various measures are being taken/ planned.</p> <p>The protection measures include effective patrolling, antipoaching camps, maintenance of good communication net work (roads and wireless), fire arms, closure of roads in the night and good interdivision and interstate co-ordination etc.</p> <p>Construction and maintenance of EPT, Elephant proof Special Structures, Solar power fence, Anti depredation squads and compensation measure s are being taken for reducing man animal conflict.</p> <p>Other measures include carrying out voluntary relocation of tribal settlements in the CTH, maintenance of fire lines, engagement of local people as fire watchers, habitat improvement works, conducting nature camps & nature education and effective monitoring.</p> <p>The following issues need attention for fully abating threats:</p> <p>Management authority is really striving hard to control grazing problem and succeeded in some wildlife ranges but other ranges need vigorous effort.</p> <p>Although a lot of fire protection measures are being taken the gregarious flowering of bamboos have made the reserve highly vulnerable to fire and invasive species. Severe fire in recent past has caused a lot of damage.</p> <p>Though carnivore poaching cases and forest cases have decreased the number of wild life cases and forest cases is not low.</p>
Some threats to the TR have abated, others continue their presence	Fair			
Most threats to the TR have abated. The few remaining are vigorously being addressed	Good	✓		
All threats to the TR have been effectively contained and an efficient system is in place to deal with any emerging situation	Very good			

*Does the TR has a Disaster Risk Management Plan to deal with existing as well as emerging threats?

6.4 Are the expectations of visitors* generally met or exceeded?

Assessment criteria																													
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks																									
Expectations of visitors generally not met.	Poor		Draft TCP; Documents & reports from Director ; Information from discussions and field visits	The quantum of visitors and the revenue collected from Eco-tourism in last 3 years are as under:																									
Expectations of many visitors are met.	Fair			<table><tr><th>Year</th><th>Total Visitors</th><th>Indian Visitors</th><th>Foreign Visitors</th><th>Revenue in lakhs</th></tr><tr><td>2010-11</td><td>78814</td><td>71848</td><td>6966</td><td>137.405</td></tr><tr><td>2011-12</td><td>76401</td><td>68593</td><td>7808</td><td>214.859</td></tr><tr><td>2012-13</td><td>65366</td><td>59800</td><td>5566</td><td>264.735</td></tr><tr><td>2013-14*</td><td>67277</td><td>62558</td><td>4719</td><td>267.696</td></tr></table>	Year	Total Visitors	Indian Visitors	Foreign Visitors	Revenue in lakhs	2010-11	78814	71848	6966	137.405	2011-12	76401	68593	7808	214.859	2012-13	65366	59800	5566	264.735	2013-14*	67277	62558	4719	267.696
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Expectations of most visitors are met.	Good	✓																											
Expectations of all most all visitors are met.	Very good																												
				It indicates good level of satisfaction. However, Interpretation and signage need improvement.																									

*What is the compliance status on Supreme Court/ NTCA Guidelines on Ecotourism in TRs?

*Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

6.5 Are local communities supportive of TR management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Local communities are hostile.	Poor		Draft TCP; Documents & reports from Director ; Information from discussions and field visits	<p>There are 84 EDCs around TR. However, most of them are in dormant stage and proactive action including funding support is required for their activation.</p> <p>Following works have been carried out for support from the communities.</p> <p>2459 LPG connections have been given to local communities on subsidised prices.</p> <p>40 health camps have been conducted in and around TR.</p> <p>Awareness/ nature camps are being conducted for locals and school children around the TR.</p> <p>Large scale efforts to mitigate man animal conflicts are being carried out by TR. Although the problem has been minimized it has not been fully mitigated to get full support of locals.</p> <p>Apart from forest department there are certain Non-governmental organizations like WWF, Wildlife trust, Coorg wildlife society etc., which assist the department in organizing nature camps duly sponsoring most of them. At present jungle lodges and resorts conducts safari trip for children from nearby schools and conduct cultural programs and distribute prizes.</p>
Some are supportive.	Fair	✓		
Most locals are supportive of TR management.	Good			
All local communities supportive of TR management.	Very good			

**There could be many reasons for disenchantment. It could be real because of managerial neglect or the managerial efforts could be appropriate but there could be local elements/organizations who would like to keep the disaffection simmering for their own ulterior motives. Likewise success could be entirely because of the efforts of managers or they might be fortunate in striking partnerships with credible NGOs. Assessment may take the prevailing causes into account.*

7. MEE Score Card*

Framework Element Number	Framework Element Name	Number of Criteria (a)	Maximum Mark per question (b)	Total (a x b)	Marks obtained for the Element	Overall MEE Score and % age
1.	Context	04	10	40	32.5	79.03 %
2.	Planning	07	10	70	62.5	
3.	Inputs	05	10	50	47.5	
4.	Process	06	10	60	35	
5.	Outputs	04	10	40	30	
6.	Outcomes	05	10	50	37.5	
Total		31		310	245	

**Efforts will be made by the NTCA-WII-MEE Team to address the issue of assigning 'differential' weightages to the 30 Assessment Criteria including 'normalization'.*

Assessment Criteria for addressing issues relating to Climate Change & Carbon capture in the Tiger Reserves (TRs)

1. *Additional Criteria on Climate Change: Is the TR being consciously managed to adapt to climate change?*

Condition	Category*	(Tick ✓)	Comment/ Explanation	Next Steps
There have been no efforts to consider adaptation to climate change in management	Poor		In draft TCP although a theme plan for climate change-adaptation and mitigation has been provided it is very sketchy and no concrete plans have been drawn up; except some suggesting for study and monitoring in general manner.	Guide lines should be issued at national level for assessment of impacts and measures for adaptations so as to prepare specific plans and their integration with the TCP.
Some initial thought has taken place about likely impacts of climate change, but this has yet to be translated into management plans	Fair	✓		
Detailed plans have been drawn up about how to adapt management to predicted climate change, but these have yet to be translated into active management.	Good			
Detailed plans have been drawn up about how to adapt management to predicted climate change, and these are already being implemented	Very good			

2. *Additional Criteria on Climate Change: Is the TR being consciously managed to prevent carbon loss and to encourage further carbon capture?*

Condition	Category*	(Tick ✓)	Comment/ Explanation	Next Steps
Carbon storage and carbon dioxide capture have not been considered in management of the TR	Poor		Although by adopting holistic conservation measures the carbon loss is generally prevented, there is no conscious effort by the management for preventing its loss or capturing more carbon.	It is necessary to issue guidelines at National level for adopting various measures in this direction without compromising the primary objectives of Wildlife Habitat/ TR management to preserve the biodiversity of unique habitats/ eco systems.
Carbon storage and carbon dioxide capture have been considered in general terms, but has not yet been significantly reflected in management	Fair	✓		
There are active measures in place to reduce carbon loss from the TR, but no conscious measures to increase carbon dioxide capture	Good			
There are active measures in place both to reduce carbon loss from the TR and to increase carbon dioxide capture	Very good			

Management Effectiveness Evaluation (MEE) of Bhadra Tiger Reserve

1. Context

1.1 Are the values of the TR well documented, assessed and monitored?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Values not systematically documented, assessed and monitored.	Poor		Discussion with FD, FD office record, TCP- para 1.3 and field visit.	<p>Bhadra TR, situated in the midst of Western Ghats in Chikmagalur and Shimoga districts of Karnataka, is surrounded by lofty hill ranges and lies under Biogeographic Zone - 05B (Western Ghats-Western Ghats Mountains). The TR is also included in Mysore Elephant Reserve.</p> <p>Under the head "Statement of Significance" in para 1.3 of TCP a short paragraph describes significance of TR. It is mentioned that TR area mainly composed of dry deciduous, moist deciduous and shola forests. River Bhadra and its tributaries are the main sources of water in the Reserve. As a result, the Reserve is home to a diverse range of wildlife such as Tiger, Leopard, Indian Gaur, Sambar, Spotted Deer, Barking Deer, Malabar Pit Viper, Racket Tailed Drongo, Otter, Indian Giant Squirrel and Malabar Trogon. Thousands of River Terns congregate in the islands in the backwaters of Bhadra Reservoir for breeding every year during April-May.</p> <p>The identification of the values has not been carried out in all aspects. The values of Bhadra Tiger Reserve has been little documented and needs more value-specific elaborations and categorization into different headings, such as; economic, Ecological/ biological, Scientific, Cultural, Educational and any other features specific to the TR. Further They should be assessed in detail along with scaling into different levels, such as; Global, National, Regional, State and Local levels.</p> <p>The assessments of some biological values are done periodically through the Annual Reports, routine wildlife census and study reports of different agencies.</p>
Values generally identified but not systematically assessed and monitored.	Fair	✓		
Most values systematically identified, assessed and monitored.	Good			
All values systematically identified, assessed and monitored.	Very good			

1.2 Are the threats to TR values well documented and assessed*?

Assessment criteria ⁺				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Threats not systematically documented or assessed.	Poor		Discussion with CWLW & FD, TCP- Para- 3.4, 6.4.1, 6.4.2, 6.5, FD office records and field.	<p>Threats to Tiger reserve are well documented and assessed in TCP which are based on SWOT analysis in paras 6.5 as well as problems described in paras 6.4. The major threats categorized are poaching, Timber Smuggling & Illegal entry, grazing, forest fire; public roads passing through TR, mining, tourism, invasive species and disease out-break. However, threats to some of values need more quantitative assessment.</p> <p>Teak and rose wood are the target species for illicit feller. There are 19 cases of poaching, 20 cases of illicit felling and one case of illicit fire in the TR in last 3 years.</p> <p>Grazing is one of the threats. There are around 710 cattle in the 6 villages, which are still within the Reserve and about 13,000 cattle in the periphery of the Reserve. However, no grazing case has been reported in last 3 years.</p> <p>In theme plan in chapter-7 of TCP, Forest fire has been</p>
Threats generally identified but not systematically assessed.	Fair			
Most threats systematically identified and assessed.	Good	✓		
All threats systematically identified and assessed.	Very good			

				<p>dealt. Only one illicit fire incidence has been reported in last 3 years.</p> <p>About 18 % of the area of TR is invaded by weeds (lantana, eupatorium, Parthenium etc) which reduce the grazing land for ungulates. 165 ha (Eupatorium-150 ha and lantana-15 ha) has got cleared off weeds during 2011-12.</p> <p>In 1989, gaurs in the Reserve were struck by rinder pest disease, an epidemic that reduced their populations by more than half.</p> <p>Every year thousands of tourists visit Kemmanugundi, Bababudangiri and Mullianagiri areas, which lead to extensive vehicular traffic and plastic littering within TR.</p> <p>Leased area to SAIL for iron ore mining, stopped due to court order, is still not closed.</p> <p>Presence of large number of licensed and unlicensed guns with people living around TR.</p> <p>Proposal to increase the height of Bhadra Reservoir, which may submerge a significant part of the Reserve.</p>
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***This assessment should be based on number, nature and extent of threats**

1.3 Is the 'Core Area' of TR free from human and biotic interference?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
The 'Core Area' has extensive human and biotic interference.	Poor		Discussion with CWLW & FD, TCP Para: 4.6, 5.4; FD office records and field visit.	<p>There are 6 villages consisting of 82 families in the core area of TR. 50 families belonging to 5 villages are not ready to be relocated. Out of rest 32 families belonging to 1 village, 17 families were given land and housing sites, but they denied going out unless entire village is given land and housing altogether. Further, land for 15 families has been identified, but category of land is deemed forest and hence needs clearance under FC Act 1980. Proposal for the diversion of the land under Section 2 of FCA 1980 has been sent to higher ups dated 04-09-2013 and approval is awaited.</p> <p>There are around 710 cattle in the 6 villages, which are still within the Reserve and about 13,000 cattle in the periphery of the Reserve.</p> <p>In addition to that there are many human settlements all around the Reserve and the villagers along the periphery of the Reserve depend on the forests for NTFP, firewood, bamboos, poles etc and hence there is a zone of interference around the Reserve. 28 cases of encroachment (107.69 acres) have been noticed and eviction order in 25 cases has been passed & 3 cases are in Court. However, the level of the human and biotic interference is said to have reduced due to functioning of Eco-development Committees.</p> <p>The buffer area is notified and is yet to be brought under unified command of the Director of Tiger Reserve. Thus the core area has some human and biotic interference.</p>
The 'Core Area' has some human and biotic interference.	Fair	✓		
The 'Core Area' has little human and biotic interference.	Good			
The 'Core Area' has no human and biotic interference.	Very good			

***This assessment should be based on existence and the efforts made by TR management to address issues related to human settlements/ villages inside the core area; livestock grazing, cultivation, encroachments etc, resource extraction/ livelihood dependence of local communities and should reflect the overall interference due to all the above factors. The issue of 'Unified Control' of the 'Core' and 'Buffer' zones under the Field Director would also be taken into account.**

1.4 Has the TR complied with the four Statutory* Requirements (SR) along with Tripartite MoU and three Standard Operation Procedures (SOP)?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
None of the four SR, no compliance of Tripartite MoU and three SOPs met	Poor		Discussion with CWLW & FD, FD office records and field visit.	<p>Notification for Legal delineation of the Core (492.46 km²) and Buffer (571.83 km²) were issued on dated 20-12-2007 and 29-01-2011 respectively.</p> <p>Bhadra Tiger Conservation Foundation was constituted vide GO No: FEE 104 FWL 2007/P1, Bangalore, Dated 02-03-2009 and is functional. Tiger Conservation Indicative Plan for Core and Buffer has already been prepared and submitted to NTCA through PCCF (WL), Karnataka. Certain comments have been issued by the NTCA to be incorporated into the indicative plan by letter no F.No.1-1/2012-NTCA dated 28th November 2013. Indicative plan is under final preparation.</p> <p>A State Level Steering Committee under the Chairmanship of Chief minister has already been constituted and 3rd meeting has been held on 26-07-2011.</p> <p>Record maintenance related to the execution of works under CSS-PT needs improvement.</p> <p>There is no straying of Tiger. However, guidance to executive staff and field staff has been circulated for compliance. Deep freeze is not available in TR.</p>
Two of the four SR, 50% conditions of the Tripartite MoU and SOPs complied	Fair			
Three of the four SR, 75% conditions of the Tri-partite MoU and SOPs complied	Good	✓		
All four SR, 100% conditions of the Tripartite MoU and SOPs complied	Very good			

***Statutory requirements are (1) Legal delineation and notification of Core and Buffer Areas; (2) Establishment of Tiger Conservation Foundation; (3) Development of a Tiger Conservation Plan; and (4) Constitution of a State-level Steering Committee under the Chairmanship of the Chief Minister. TA refers agreement between Field Director, State Government and NTCA. The 3 SOPs are on (i) Straying of Tiger in human dominated landscape, (ii) Tiger Mortality and (iii) Disposal of Carcasses**

2. Planning

2.1 Status of Tiger Conservation Plan (TCP)*?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No TCP in place.	Poor		Discussion with CWLW & FD, FD office records and Indicative TCP.	<p>Tiger Conservation plan was submitted through proper channel to NTCA for approval. Certain comments have been issued by the NTCA by letter no F. No 1-1/2012-NTCA dated 28th November 2013 to incorporate in the plan.</p> <p>It was reported that Tiger conservation plan has been prepared for Core and Buffer by using the researches data. However, no information from FD office was made available about the involvement of people and other stakeholders in the planning processes while preparing the TCP.</p>
TCP is under preparation	Fair	✓		
TR has a relevant TCP	Good			
TR has a comprehensive and relevant TCP, duly approved by the NTCA	Very good			

***The scientific content and the participatory processes used in preparation of the TCP will be taken into account in assessing the quality of TCP.**

2.2 Does the TR safeguards the threatened biodiversity values?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR does not safeguard the threatened biodiversity values.	Poor		Discussion with CWLW& FD,FD office records, TCP Para- 7.2.2.3, 7.3,9.1.1, &10.2, Current year M STriPE Report, TCP Buffer Para- 8.2 and field visit.	<p>In chapter -7 of draft TCP strategy for protection against various threats to bio-diversity, Theme plan for Forest Fire, Water shed management for augmenting water resources, Weed management, Special habitat management plan for- Elephants and Indian river tern, Eco Development, Environment education protection, prophylactic immunisation and monitoring protocols has been spelt out. However, some of these plans are very sketchy and needs detail prescription with preparation of work schedules. In chapter -10 Protection measures including daily patrolling and monsoon patrolling has been provided.</p> <p>Some of the measures, the TR management is taking to safeguard the threatened biodiversity values are as under:</p> <p>36 antipoaching camps are established at strategic places and at each camp one FG / Forest Watcher, 4 anti-poaching watchers are deployed, and wireless network is established for sending/receiving information. Movement and information are recorded in movement register & wireless register. Solar light are kept for lighting and charging wireless batteries/ mobiles. To protect the illicit activities in reservoir, motor boat are arranged for patrolling.</p> <p>99 waterholes are maintained /desilted to provide water to animals. Fire lines are maintained to save the flora & fauna from fire.</p> <p>M-STriPES protocol is operative in Bhadra TR to monitor the patrolling pattern, patrolling intensity and various other parameters of Reserve management, which is monitored annually by WII.</p> <p>Efforts to eradicate Invasive species have been carried out in some areas to regenerate palatable grasses for ungulates. In last 3 years removal of Parthenium from 150 ha. and Lantana from 15 ha. area (all removal in 2011-12 only) has been done.</p> <p>Draft Corridor plan has been prepared to connect the Kudremukh NP. No separate security plan has been prepared. Through eco development activities in 18 EDCs, efforts are made to reduce pressure on forests. To involve the local people in TR management, 84.90 km EPT and 60.30 km solar energised fence have been created to reduce the man animal conflict. Thus the TR safeguards large no of threatened biodiversity values.</p>
TR safeguards a few threatened biodiversity values.	Fair			
TR safeguards a large number of threatened biodiversity values.	Good	✓		
TR safeguards all threatened biodiversity values.	Very good			

**Remarks need to elaborate on the kind of safeguards and how they work or are intended to work*

2.3 Are stakeholders given an opportunity to participate in planning process?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little, if any opportunity for stakeholder participation in planning.	Poor		Discussion with CWLW & FD, FD office records and field visit.	It has been reported by the FD that EDC Meetings were conducted on dated 20-12-2013, 30-12-2013, 15-1-2014, 29-1-2014, 7-3-2014, 15-3-2014, 20-3-2014 and 25-3-2014 during fire season and distribution of gas connections. It was also reported that some EDC members were taken for exposure trip to other Reserves to learn the good management practices. They are involved to some extent in the management and planning of fire prevention during fire season. Although it was reported that strategies are drawn based on the suggestion and views of the stakeholders no recorded minutes are available.
Stakeholders participate in some planning.	Fair	✓		
Stakeholders participate in most planning processes.	Good			
Stakeholders routinely and systematically participate in all planning processes.	Very good			

*The result of participation must show in the field and not merely reported as a routine exercise.

2.4 Are habitat management programmes systematically planned, relevant and monitored, and contribute effectively to Tiger and other endangered species conservation?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Habitat management programmes are entirely adhoc.	Poor		Discussion with CWLW & FD, FD office records, TCP Para- 7.2.1. and field visit.	Habitat management programmes include conducting eco-development activities in peripheral villages, supplementing water and other requirements of wild animals. On the basis of the calculation of existing carrying capacity of the reserve and taking the consideration of maximum number of tigers to be retained on the principle of 20 breeding tigresses/800-1200 sq km inviolate area, habitat intervention in the grassland and eradication of obnoxious weeds like <i>Eupatorium</i> , <i>Lantana</i> and <i>Parthenium</i> etc. has been proposed to be taken up to that extent only. In last 3 years removal of <i>Parthenium</i> from 150 ha. and <i>Lantana</i> from 15 ha. area (all removal in 2011-12 only) has been done. In addition to that, community based fire management plan, bamboo regeneration plan, water-shed / reservoir management plan, river tern bird habitat plan, fish conservation plan, village relocation plan, special habitat/corridor plan for elephant etc have been incorporated in the TCP to improve habitat to contribute effectively to Tiger and other endangered species conservation. Further, M-STrIPES monitoring for tiger and other species for intensive protection and ecological status is operative in Bhadra TR to know the status of effective contribution of habitat management in conservation of tiger and other endangered species has been taken up. However, full utilization of the protocol/ software has not been done. Remote Sensing technique and GIS has been proposed to be also used to monitor the changes in habitat in relation to endangered species requirement. Although, the Centre for Wild life Studies, an NGO, is continuously doing research in Bhadra Tiger Reserve regarding long term monitoring of Tiger and its habitat, not much details are available with the TR authorities.
Limited planning and monitoring programmes are in place for habitat management.	Fair			
Habitat management programmes are generally planned and monitored.	Good	✓		
Habitat management programmes are thoroughly planned and monitored.	Very good			

*This assessment should be primarily based on habitat management programmes in relation to habitats for species that are threatened (IUCN categories), are habitat specialists, subjected to seasonal movements, wide ranging with emphasis on the breeding and rearing habitat and may include factors such as food, water, shelter (all connotations).Habitat structure, composition, unique patches of vegetation and sensitive sites, sources of water

and their distribution are integral. Corridors within buffer zone are critically important. For example, all riparian habitats. Have these been addressed? Is their a planning process in place? The management practices dealing with invasive species such as Lantana, Michania etc. would be examined.

2.5 Does the TR has an effective Protection Strategy (PS)* and Security Plan and Security Audit (SA) in place?

Assessment criteria⁺				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR has little or no PS and SA.	Poor		Para 6.4.1,6.4.2,7.2.2.10, 7.2.2.12 and 7.3 of TCP for core & Chapt-10	For effective protection 36 anti-poaching camps and 6 fire watch towers with GPS locations have been established in sensitive areas. Anti-poaching camps are equipped with wireless net work and solar light. 1FG& 4 anti-poaching watchers are deployed at each anti-poaching camp. In difficult terrain of TR, foot patrolling (minimum 7-8 km/day) and in areas surrounded by water, motor boat patrolling is carried out. TR has adequate no of vehicles and arms. Community based fire management strategy through EDCs is being adopted. Although occasionally, Secret information is received from EDC member/NGOs etc but intelligence gathering system is not institutionalized. STPF is not constituted for Bhadra TR. In last 3 years 19 poaching cases- 6 cases in 2011-12, 3 cases in 2012-13 and 10 cases in 2013-14 were detected in peripheral core area. 2 cases have been dropped due to untraced accused. In the same period 20 cases of timber smuggling and illegal entry were recorded, out of which, 4 cases were dropped due to untraced offenders, 4 cases are in enquiry at RFO level, 11 cases have been sent to Court and in 1 case accused convicted for 6 months. There is one case related to fire, which was dropped due to non tracing of accused. Thus out of total 40 cases 7 cases have been dropped due to non tracing of accused. Increasing trend in poaching cases and dropping of 17.5% cases is a matter of worry and needs special attention. No separate Security plan has been prepared but security measures have been prescribed in Capter-10 of draft TCP under heading of "Protection and Intelligence gathering". Although it has been prescribed in draft TCP in para -7.2.2.10 that Security auditing will be done once in every three months as per the generic guidelines of NTCA, they are not being carried out.
TR has an adhoc PS and SA.	Fair			
TR has a generally relevant PS and SA but is not very effective.	Good	✓		
TR has a comprehensive and very effective PS and SA.	Very good			

⁺This assessment takes inter-alia into account the nature of threats, the number and location of patrolling camps and foot and mobile patrolling, needs that relate to available manpower, terrain difficulties, practicability of area coverage, readiness to contain specific threats with necessary support and facilities. The constitution and functioning of Special Tiger Protection Force (STPF), Number of offences reported, arrests made, prosecution initiated and conviction achieved will be taken into account.

2.6 Has the TR been effective in the mitigation of human-wildlife conflicts?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Human-wildlife conflicts are significant but poorly addressed.	Poor		Discussion with FD, FD office records, and field visit.	In human inhabited areas along the TR along boundary, 84.90 km EPT and 60.30 km solar fence have been created in certain parts of the sensitive areas to prevent elephants from crossing over to farmlands. It also prevents encroachment as well as the entrance of cattle and people into the reserve. Local people of the adjoining areas have been involved in maintenance of EPT & Solar Fence. Compensation worth Rs 38.86 lakh for 535 acre crop damage, Rs 26,500 for 10 cattle killing and Rs 5.00 lakh for 1 human death were paid in last 3 years. No record has been made available whether all compensation is paid and whether these are paid timely. No human casualty has taken place in last 2 years.
TR has been able to mitigate few human-wildlife conflicts.	Fair	✓		
TR has been able to mitigate many human-wildlife conflicts.	Good			
TR has been effective in mitigating all human-wildlife conflicts.	Very good			

*The assessment will take into account the number of incidences reported and payment of compensation made and its timeliness.

2.7 Is the TR integrated into a wider ecological network/ landscape following the principles of the ecosystem approach?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR not integrated into a wider network/ landscape.	Poor		Discussion with CWLW & FD, TCP(Buffer)Para-7.2&7.3 , Corridor plan – Management strategy (theme plan for co-ordination) and field visit.	Bhadra Tiger Reserve is integrated into wider landscape with (1) Kudremuka NP in south –west and (2) Shettihalli Wildlife Sanctuary in the north through the two potential corridors, identified as (1) Bhadra-Kudremukh National park corridor and (2) Bhadra-Shettihalli corridor, respectively. In the former case, TR is connected by various categories of lands, such as; Reserve Forest, Plantations, agricultural fields and villages while in the latter case it is connected by a RF, plantations, agricultural fields and reservoirs. Although draft TCP for Buffer has been prepared it has not been approved yet. While preparing the TCP for buffer areas, care had been taken to see that the wildlife values in the buffer area are protected especially in light of the fact that the buffer areas are part of corridor that connects Bhadra Tiger Reserve with other protected areas to ensure that there must be exchange of genetic material over a greater area. Prescriptions have been made regarding the amendments that have to be made to the working plans of the territorial divisions in which the buffer exists so that they are brought under protection circle so that the area becomes ecologically sustainable and ecosystem approach may be followed for conserving biodiversity. It is evident from the documents that workshops were conducted to impart training to officers of adjoining forest divisions like Shimoga, Bhadravati and Chikmagalur regarding methodology of All India Tiger estimation. Corridor Plan (not yet approved) has been said to have been prepared in consultation with all stake holders to rationalize the land-use so as to facilitate the free movement of animals in entire landscape. Thus, TR is generally quite well integrated into a network/landscape.
Some limited attempts to integrate the TR into a network/ landscape.	Fair			
TR is generally quite well integrated into a network/ landscape.	Good	✓		
TR is fully integrated into a wider network/ landscape.	Very good			

*Assessment needs to consider the scope of opportunities on the landscape scale that exist. Consider whether any attempts have been made and what are these? Have all the important corridors been identified? What actions are planned/implemented for their security? Have the Forest Working Plans and Forest Development Corporation Plans within the identified landscapes taken cognizance of such new requirement? These should have been reflected in TCPs. Is there is any effort to rationalize landuse around TR? Is any effort being made to plan and use 'Smart Green Infrastructure'?

3. Inputs

3.1 Are personnel adequate, well organized and deployed with access to adequate resources in the Tiger Reserve (TR)*?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Few, personnel explicitly allocated but poorly supported for TR management.	Poor		Discussion with FD, FD office reports/ records and field visit.	Out of 129 sanctioned posts in TR, 103 is filled and 26 are vacant & out of vacant posts, 24 belongs to front line staff which include Dy RFO(7 out of 17), FG(4 out of 38), Forest watcher(9 out of 52), Driver(3 out of 3) and care-taker(1 out of 2). No post is demanded beyond sanctioned posts. Persistent efforts should be made to get the vacant posts filled. Seeing the staff strength it is felt that a detail exercise need to be carried out to determine if the existing strength in front line cadres are sufficient to manage all activities related to stringent protection, monitoring, man animal conflict resolution, habitat management, eco development, eco-tourism and other works. The existing personnel are deployed for TR management to attain the TR objectives.
Some personnel explicitly allocated for TR management but not adequately supported and systematically linked to management objectives.	Fair			
Some personnel with fair support explicitly allocated towards achievement of specific TR management objectives.	Good	✓		
Adequate personnel appropriately supported and explicitly allocated towards achievement of specific TR management objectives.	Very good			

***This assessment should inter-alia be based on number of personnel allocated for attainment of TR objectives at the Range, Round, Beat and Patrolling camps levels or as relevant to the needs (sanctioned posts vis- a- vis existing personnel and needs beyond the sanctioned strengths. It is possible that posts have last been sanctioned several years back that do not now account for the current needs)**

3.2 Are resources (vehicle, equipment, building etc.) adequate, well organized and managed with desired access?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Few, if any, resources explicitly allocated for TR management.	Poor		Discussion with FD, FD office records and field visit.	The reserve 108 buildings, 27 vehicles, 2 Bus/mini lorry, 59 arms and ammunitions, 3 motor boats, 80 camera traps and 40 cameras, 88 GPS, 20 binoculars, 42 compass, 40 range finders. Most of the buildings are for the front line staff and anti-poaching watchers. Different categories of buildings are as under: 1)Office building—6, 2)FRH- 4 3)Dormitory /cottage-3, 4)Nature camp-1 5)Res buildings—57, 6)APC camps-36 7)Interpretation centre-1 The no of vehicles/bus/lorry reported in the TR are:- Four-wheeler-14, Bus/mini lorry 2, bikes-12 and 1 chavarlite. Most of the arms (DBBL-22, 315 Rifle-6, Slide action gun-30 and 0.22 Revolver-1) are handy and easy to keep while patrolling. GPS are used for patrolling purposes and motor boats for patrolling in Bhadra reservoir. In addition to these, adequate number of Tranquilizing guns, Tents, Night vision equipments etc. are available in TR for capturing / monitoring the animals.
Some resources explicitly allocated for TR management but not systematically linked to management objectives.	Fair			
Some resources explicitly allocated towards achievement of specific TR management objectives.	Good			
Adequate resources explicitly allocated towards achievement of specific TR management objectives.	Very good	✓		

*** These form a variety of resources. These may be segregated into immovable (structures) and movable categories and each further may be considered under the essential and desirable categories. It is best to start with what are the minimum needs to attain each objective, what is available and manner of use/deployment. The proportions of the 'essentials' and 'desirables' along the importance gradient of objectives would serve as pointers for score categories. Specific remarks would be vitally important.**

3.3 Are financial resources other than those of the State linked to priority actions and are funds adequate, released timely and utilized?

Released timely and utilized.

Assessment criteria*																																																															
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks																																																											
Resource allocation is adhoc, funds are inadequate and seldom released in time and not utilized.	Poor		Discussion with FD &FD office records.	<div>The TR received funds from two schemes of Central Government i.e., Project Tiger and Project Elephant. Details about the fund released/utlized in the last 3 years are given below:<div>(in lakhs rupees)</div><table><tr><th>Name of Scheme</th><th>Amt. Sanction/ date</th><th>Amt. Release/ date</th><th>Amt. Utilized</th><th>Balance</th></tr><tr><td colspan="5">Year 2011-12</td></tr><tr><td>PT</td><td>215.882 12.9.11</td><td>215.882 23.9.11</td><td>215.868</td><td>0.014</td></tr><tr><td>EP</td><td>6.695</td><td>6.695</td><td>6.676</td><td>0.019</td></tr><tr><td colspan="5">Year 2012-13</td></tr><tr><td rowspan="3">PT</td><td>1- 158.608 23.8.12</td><td>158.608 4.9.12</td><td rowspan="3"></td><td rowspan="3"></td></tr><tr><td>2- 36.660 18.1.13</td><td>2-36.660 16.3.13</td></tr><tr><td>3- 2.992 4.3.13</td><td>-----</td></tr><tr><td></td><td>198.260</td><td>195.268</td><td>193.767</td><td>1.501</td></tr><tr><td>EP</td><td>7.50</td><td>7.50</td><td>7.481</td><td>0.019</td></tr><tr><td colspan="5">Year 2013-14</td></tr><tr><td>PT</td><td>311.478</td><td>311.478</td><td>311.476</td><td>0.002</td></tr><tr><td>EP</td><td>10.426</td><td>10.426</td><td>7.884</td><td>2.542</td></tr></table></div>	Name of Scheme	Amt. Sanction/ date	Amt. Release/ date	Amt. Utilized	Balance	Year 2011-12					PT	215.882 12.9.11	215.882 23.9.11	215.868	0.014	EP	6.695	6.695	6.676	0.019	Year 2012-13					PT	1- 158.608 23.8.12	158.608 4.9.12			2- 36.660 18.1.13	2-36.660 16.3.13	3- 2.992 4.3.13	-----		198.260	195.268	193.767	1.501	EP	7.50	7.50	7.481	0.019	Year 2013-14					PT	311.478	311.478	311.476	0.002	EP	10.426	10.426	7.884	2.542
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Funds were released by NTCA according to Approved WP and these were utilized by TR. Rs.2.992 lakh released by NTCA in 2012-13 under PT scheme, did not get released in that year by the State Govt. of Karanataka (probably due to operation of code of conduct).

*Obtain details of funds released by NTCA and their utilization by TR in the last 3 years and indicate them under 'Remarks'. Also comment on the problems associated with fund allocations and their utilization.

3.4 Are financial resources from the State linked to priority action and funds adequate, timely released and utilized for the management of Tiger Reserve?

utilized for the management of Tiger Reserves.

Assessment criteria*																																																																
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks																																																												
Resource allocation is adhoc, funds are inadequate and seldom released in time and not utilized.	Poor		Discussion with FD, FD office records and field visit.	Details of State level fund released/utlized in last 3 years are given below (in lakh): <table><tr><th>Scheme</th><th>Fund released</th><th>Fund utilized</th><th>Balance</th></tr><tr><td colspan="4">Year 2011-12</td></tr><tr><td>PT(Sta. share)</td><td>173.888</td><td>153.061</td><td>20.827</td></tr><tr><td>CAMPA</td><td>5.10</td><td>5.059</td><td>0.041</td></tr><tr><td>D.P.A.</td><td>24.00</td><td>23.647</td><td>0.353</td></tr><tr><td>M.P.C.A</td><td>3.00</td><td>2.998</td><td>0.002</td></tr><tr><td>Others</td><td>8.00</td><td>7.848</td><td>0.152</td></tr><tr><td colspan="4">Year 2012-13</td></tr><tr><td>PT(sta.share)</td><td>116.281</td><td>116.272</td><td>0.009</td></tr><tr><td>M.P.C.A</td><td>2.00</td><td>2.00</td><td>0.00</td></tr><tr><td>CAMPA</td><td>30.540</td><td>30.538</td><td>0.002</td></tr><tr><td>13THFin.com</td><td>37.50</td><td>37.50</td><td>0.00</td></tr><tr><td>Res.quarts</td><td>35.40</td><td>35.40</td><td>0.00</td></tr><tr><td>Others</td><td>49.270</td><td>49.256</td><td>0.014</td></tr><tr><td colspan="4"></td></tr></table>	Scheme	Fund released	Fund utilized	Balance	Year 2011-12				PT(Sta. share)	173.888	153.061	20.827	CAMPA	5.10	5.059	0.041	D.P.A.	24.00	23.647	0.353	M.P.C.A	3.00	2.998	0.002	Others	8.00	7.848	0.152	Year 2012-13				PT(sta.share)	116.281	116.272	0.009	M.P.C.A	2.00	2.00	0.00	CAMPA	30.540	30.538	0.002	13 TH Fin.com	37.50	37.50	0.00	Res.quarts	35.40	35.40	0.00	Others	49.270	49.256	0.014				
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***Obtain details of funds released by State and their utilization by TR in the last 3 years and indicate them under 'Remarks'. Also comment on the problems associated with fund allocation and their utilization.**

3.5 What level of resources are provided by NGOs?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
NGOs contribute nothing for the management of the TR.	Poor		Discussion with FD& FD office records and field visit.	<p>NGOs have been reported to have assisted TR management in following ways:</p> <p>1-Wildcat-c, an NGO, has been instrumental in imparting nature education, celebrating wild-life week and bringing awareness in public regarding the importance of nature and wildlife.</p> <p>2-Wildlife conservation trust, a Mumbai based NGO, has provided followings to the TR:</p> <p>Mahindra Thar /camper jeep(3 no), Splendor bike(3 no), Cup-boards(23 no), Rapid response unit(1 unit), Tiger/leopard cages(4 no), walkie talkie(6 no), Shoes(144 no), Water bottle(128 no), Back-packs(144 no),Rain coats(144 no), Carry mats(144 no), Winter jackets(144 no),Blankets(144 no),Cots(140 no), Mosquito nets(144 no),Torches(144 no), First aid kits(36 no), Nikon digital camera/camera(36 no), Chair(144 no), Table(36 no), Solar integrated systems(18 no) and Utencils(36 sets) to facilitate patrolling with required equipments and to augment office facility complemented with welfare material to the staff.</p> <p>3-Centre for wildlife studies, an NGO headed by Dr Ullas Karanth, has been doing research in Bhadra Tiger Reserve regarding monitoring of Tiger and its habitat.</p>
NGOs make some contribution to management of the TR but opportunities for collaboration are not systematically explored.	Fair			
NGOs contributions are systematically sought and negotiated for the management of some TR level activities.	Good	✓		
NGOs contributions are systematically sought and negotiated for the management of many TR level activities.	Very good			

4. Process

4.1 Does the TR have manpower resources trained in wildlife conservation for effective TR management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No trained officers and frontline staff in the TR.	Poor		Discussion with FD, FD office records, TCP para 8.4 and 8.5 and field visit.	Except professional training in forestry and related subjects after selection/ joining the department, no staff has undergone any specialized wild life training/ courses in WII or similar ones. Some need based trainings have been imparted from time to time in subjects, such as; regarding the eight day protocol for All India Tiger Estimation, Camera trapping, implementing MSTRIPES protocol, using GPS for various purposes and relating to other capacity building activities. None of the officers was found to be trained in wildlife management courses conducted by WII. For future training courses, detailed planning has been incorporated in TCP and accordingly preparation of Staff Development Plan with expeditious implementation is desirable.
Some trained officers and few trained frontline staff, posted in the TR.	Fair	✓		
All trained officers and fair number of trained frontline staff posted in the TR.	Good			
All trained officers and most of the trained frontline staff is posted in the TR.	Very good			

***Indicate % of trained staff in various categories. The number and thematic areas of the 'Internal Training' programmes organized in the TR in the last 3 years may be taken into account. Has the TR prepared a 'Staff Development Plan'? Is it being implemented?**

4.2 Is TR staff management performance linked to achievement of management objectives?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No linkage between staff management performance and management objectives.	Poor		Discussion with FD, FD office records, TCP para 8.5.1, 8.5.2 and field visit.	There is no direct linkage between staff management performance and their promotions. Confidential reports of the staff are used to judge their performance and promotion is linked to performance and fulfillment of the other eligibility criteria for the post, especially the number of years spent in the current post. Regarding rewards and awards, although provision has been discussed in TCP, but so far none of the personnel has been awarded during last 3 years.
Some linkage between staff management performance and management objectives, but not consistently or systematically assessed.	Fair	✓		
Management performance for most staff is directly linked to achievement of relevant management objectives.	Good			
Management performance of all staff is directly linked to achievement of relevant management objectives.	Very good			

4.3 Is there effective public participation in TR management* and does it show in making a difference?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no public participation in TR management.	Poor		Discussion with FD, FD office records and documentation prepared and field visit.	Wildcat-C, a local NGO, participate in celebrating wildlife week, imparting nature education and organizing awareness programme regarding biodiversity conservation. During the All India Tiger estimation exercise, large numbers of volunteers were involved to maintain transparency in the exercise. During Fire season local people, especially members of the EDC are employed as fire watchers to provide a source of income for the people and to ensure community participation in TR management. It is evident from the records that no fire incidence has taken place in last 2 years, cases of illicit felling has gone down from 8 in 12-13 to 5 in 13-14. TR management must involve more number of local people/ EDCs and other stake holders in more management practices, such as eco-tourism, man-animal conflict resolution, nature education, relocation and in intelligence gathering operation etc.
Opportunistic public participation in some of the relevant aspects of TR management.	Fair	✓		
Systematic public participation in most of the relevant aspects of TR management.	Good			
Comprehensive and systematic public participation in all important and relevant aspects of TR management.	Very good			

The involvement of NGOs/ NGLs in population estimation may be taken into account)

4.4 Is there a responsive system for handling complaints and comments* about TR management?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Ad-hoc approach to handling complaints.	Poor		Discussion with FD, FD office records and field visit.	All complaints are registered in a register maintained in FD office and prompt/ timely action is taken. In addition to that Suggestion/visitor registers are maintained at Muthodi nature camp and at Lakkvalli main gate. The valuable suggestions given by the public is taken very seriously and relevant suggestions are incorporated into management activities. It is evident from the records that other complaints regarding TR management are discussed at Range Level Coordination Committee Meetings and remedial measures are taken without delay. Visitor notebook and complaint /feed back book are also kept in Forest IB.
Complaints handling system operational but not responsive to individual issues and with limited follow up.	Fair			
Coordinated system logs and responds effectively to most complaints.	Good	✓		
All complaints systematically logged in coordinated system and timely response provided with minimal repeat complaints.	Very good			

**Does the TR maintains 'Suggestions Register'? What actions are taken to deal with suggestions?*

4.5 Does TR management addresses the livelihood issues* of resource dependent communities, especially of women?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No livelihood issues are addressed by TR management.	Poor		Discussion with FD & FD office records, Micro plans of EDC and field visit.	<p>Presently, there are 6 villages consisting of 82 families in the core area of TR. In addition, there are 123 villages in the proposed eco sensitive zone. There are no traditional tribes in and around TR.</p> <p>Only 18EDCs have been established so far.</p> <p>In last 3 years, 292 families had been given LPG connections with assets at subsidized rates to ensure reduction in dependence of these families on forests. Few selected families from the fringe villages had been given seedlings of silver oak, mangoes etc so that their economic sustainability is improved and also resource dependency is reduced. Monitoring of success of the schemes is required. Fire watchers have been engaged from the 18 EDCs and are given their livelihood opportunity. No funds are received from District Agencies.</p> <p>Eco development activities need strengthening.</p>
Few livelihood issues are addressed by TR management.	Fair	✓		
Substantial livelihood issues are addressed by TR management.	Good			
Livelihood issues of resource dependent communities especially of women are addressed effectively by TR managers.	Very good			

***The number of mandays generated in the last 3 years may be taken into account. Are funds received from District Agencies and other sources? Provide details of funds received in last 3 years.**

4.6 Has the TR planned and implemented the voluntary 'Village Relocation' from the Core/ Critical Tiger Habitat (CTH)?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No planning and no implementation	Poor		Discussion with CWLW&FD, FD office record, TCP para - 4.6,5.4 and field visit.	<p>Initially there were 16 villages comprising 736 families inside Bhadra WLS to be relocated. In the past, 10 villages comprising 429 families were rehabilitated with the help of revenue administration by acquiring the land through Land Acquisition Act. All these villages have been successfully relocated at a distance more than 25 kilometers away from the reserve. Relocation of these villages is said to be a success story.</p> <p>Presently, there are 6 villages consisting of 82 families in the core area of TR. 50 families belonging to 5 villages are not ready to be relocated. Out of rest 32 families belonging to 1 village, 17 families were given land and housing sites, but they have denied moving out unless entire village is given land and housing altogether. Additional land has been identified for the 15 families but category of land is deemed forest. Proposal for the diversion of the forestland under Section 2 of FCA 1980 has been sent to higher ups on dated 04-09-2013 and approval is awaited. A district level committee headed by the Deputy commissioner deliberates on these issues.</p>
Plans have been made but no implementation	Fair			
Plans have been made and some implementation is in progress	Good	✓		
Plans have been made and are being actively implemented/ no human habitation in the CTH	Very good			

***Assessment will look into the village relocation planning process including availability of manpower, financial resources and NGO support, if any. Is there a mechanism to address the complaints received in respect of relocation process? Effort must be made to assess post-relocation success or otherwise.**

5. Output

5.1 *Is adequate information on TR management publicly available?*

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no information on TR management publicly available.	Poor		Discussion with FD, FD office records, Bhadra Face Book, Brochures and field visit.	The TR is in the “face book”, a social net work site. Any concerned citizen can offer suggestions for improvement of TR management and can comment on any shortcomings. At Dr. Salim Ali interpretation center, information regarding the Reserve and flora and fauna are displayed. Some brochures, booklets and hoardings disseminate information about various aspects of the Reserve. TR management information are also shared in EDC meetings. However, more efforts are necessary to open the website and update the site at regular intervals.
Publicly available information is general and has limited relevance to management accountability and the condition of public assets.	Fair	✓		
Publicly available information provides detailed insight into major management issues and condition of public assets.	Good			
Comprehensive reports are routinely available in public domain on management and condition of public assets.	Very good			

5.2 *Are visitor services and facilities appropriate and adequate?*

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Visitor services and facilities do not exist.	Poor		Discussion with CWLW & FD, FD office records & documentation, TCP Chapter 11, Brochures of TR & Jungle Lodges and field visit.	Visitor facility includes two cottages, 2 dormitories (8 bed each), two tents and 2 pergolas complemented with kitchen and rest rooms facility at Muthodi; 2 cottages at Sahyadri and 3 suits in IB at Lakkavalli. For nature education, Dr Salim Ali interpretation centre is established at Muthodi with appropriate depictions of nature. Drinking water and garbage bin are available at Muthodi. Wildlife safari (2 vehicles) is provided in the tourist zones of Muthodi and Lakkavalli ranges. Park related brochures are available at both these places. The “River Tern” Jungle lodges and resorts at Lakkavalli, a Karnataka Govt. undertaking for Eco Tourism, also provide lodging and safari services to the visitors. Jungle Lodges also provide motor boat safari and facility of water sports by out-sourcing in Bhadra Reservoir. They have employed naturalists to work as guides. Jungle Lodge has developed institutionalized monitoring system for the services rendered to the visitors and is fairly effective.
Visitor services and facilities are very basic.	Fair			
Visitor services and facilities are monitored from time to time and are fairly effective.	Good	✓		
Visitor services and facilities are conscientiously maintained, regularly upgraded and monitored for visitor satisfaction	Very good			

**Include the existence and quality of visitor and interpretation centers, including skills and capabilities of personnel manning these, TR related publications, films, videos; arrangements of stay (including places serving refreshments and food owned and managed by TR), watch towers and hides including safety factors, vehicles assigned for visitors including riding elephants, if any and their deployment, drinking water, rest rooms, garbage disposal, attended and self guided services in the field, visitor feed back on the quality of wilderness experience.*

5.3 Are research/ monitoring related trends systematically evaluated and routinely reported and used to improve management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no systematic evaluation or routine reporting of trends.	Poor		Discussion with FD, FD office records, TCP para- 7.2.2.12 , 7.3 and 8 and field visit.	<p>In the last 5 years there have been several projects that have taken place in Bhadra Tiger Reserve out of which two important projects have been:</p> <ol style="list-style-type: none"> 1. Distribution and Dynamics of Tiger and Prey Populations in Karnataka: The project was conducted during November 2003 to June 2007 by the CWS in collaboration with the Karnataka State Forest Department and WCS. 2. Meta-Population Dynamics of Tigers in the Malenad-Mysore Landscape. a collaborative project between Centre for Wildlife Studies (CWS), National Centre for Biological Sciences (NCBS) and Karnataka Forest Department for 10 years, and was initiated in January 2008. <p>The management related trends are evaluated to some extent through annual reports; census reports etc and is routinely reported to higher authorities. Following 8- day protocol, All India Tiger census has been carried out through camera trap by an independent NGO (WCS) which reveal the dynamic population of tiger and other co-predators.</p> <p>According to Annual Report (January 2013 – December 2013) published by CWS (Centre for Wildlife Studies) in the project "Meta-Population Dynamics of Tigers in the Malenad-Mysore Landscape of Karnataka ; density of tiger and main prey species are as under: tiger/100 sq km - 2.21, chital/sq km-4.5, sambar/sq km- 4.37, muntjac/sq km(3.74), gaur/sq km(1.47), and wild pig/sq km-1.51.</p> <p>However, detailed data pertaining to this study, other than the report of CWS, is not available with TR Authority.</p> <p>Phase IV monitoring protocol has not been implemented systematically in TR. Implementation of MSTRIPES is being carried out in TR and its monthly progress report, prepared by WII is sent to higher authority and conclusions drawn is utilized for fine tuning of management activities. However, the implementation needs improvement.</p> <p>In chapter-8 of draft TCP important subjects for carrying out research and studies have been identified.</p>
Some evaluation and reporting undertaken but neither systematic nor routine.	Fair			
Systematic evaluation and routine reporting of trends undertaken.	Good	✓		
Systematic evaluation and comprehensive reporting of trends undertaken and attempts made at course corrections as relevant.	Very good			

**Not all TRs attract projects and researchers and with exceptions, little research takes place on the TRs own steam because of systemic limitations. However, monitoring of some critical issues is expected e.g. population of tiger, co-predators and prey with insights into their demography and distribution (some opportunistic sampling by sightings, signs and spatial distribution during assessment would be extremely useful in terms of expert impression and as a pulse), monitoring incidence of livestock grazing, fires, weeds, sources of water, a variety of illegal activities typically associated with the reserve, wildlife health (e.g. epidemics, immunization of livestock) regeneration and change in vegetation, visitors and their activities, offence cases, ex-gratia payments etc. Efforts must be made to assess the planning and implementation of Phase-IV monitoring protocols and the success of implementation of M-Stripes (wherever applicable). Are the 'Sykes and Horill' monitoring plots maintained and data analyzed?*

5.4 Is there a systematic maintenance schedule and funds in place for management of infrastructure/assets?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No systematic inventory or maintenance schedule.	Poor		List of Table in TCP 1) Table 1 2) Table 13 3) Table 14 Annexure-2a Annexure-2b Annexure-10f	Following registers are being maintained for systematic inventory of assets/ infrastructure. 1. Register of Buildings. 2. Register of motor vehicles. 3. Register of Roads. 4. Register of wells & tanks 5. Register of Check dams 6. Register of stores. 7. Register of assets. Based on the entries in these registers a detailed maintenance of schedule is prepared by the Forest Range Officers. Adequate funds are available for maintenance of essential assets in State Govt. Schemes and NTCA scheme.
Inventory maintenance is adhoc and so is the maintenance schedule.	Fair			
Systematic inventory provides the basis for maintenance schedule but funds are inadequate.	Good	✓		
Systematic inventory provides the basis for maintenance schedule and adequate funds are made available.	Very good			

6. Outcomes

6.1 Are populations of threatened species declining, stable or increasing?

Assessment criteria*								
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks				
Populations of key threatened/ endangered species are declining.	Poor		Discussion with FD, FD office records, TCP Para:3.3 and field visit.	During censuses carried out in different years , prey density were found as below:				
Some threatened/ endangered species populations declining, some are increasing, most others are stable.	Fair	✓		Year	2010	2011	2012	2013
				Chital	9.1	10.2	4.4	4.5
				Sambar	3.0	4.2	2.5	4.37
				Muntjac	2.7	2.3	2.7	3.74
				Gaur	1.2	1.0	2.4	1.47
				W.pig	2.5	1.2	1.2	1.51
Total	18.5	18.9		13.2	15.59			
Several threatened/ endangered species populations increasing, most others are stable.	Good		It is evident from the data that prey density for tiger has decreased in 2013 in comparison to 2011, but increased in comparison to 2012. It is to be noted that 2013 data is a preliminary data and detailed data analysis is still underway. Census data for the other endangered species were not made available to the MEE Team. However, it has been stated that Phase-IV monitoring data has been sent to WII, D.Dun for analysis. The analysed data has not been communicated to the Bhadra TR till the visit of MEE team. Thus, based on data of 2010, 2011 and 2013, it appears that the population density of prey species including all endangered species in Bhadra TR to be stable.					
All threatened/ endangered species populations either increasing or stable.	Very good							

*This needs to practically relate to the natural ecosystem potential rather than being driven merely by numbers and visibility. The assessment score may be elaborated under remarks.

6.2 Is the population of tigers showing a declining, stable or increasing trend?

Assessment criteria*									
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks					
Population of tiger is showing a declining trend	Poor		Discussion with FD, FD office records, TCP para:3.2 and field visit.	During censuses carried out in different years, tiger density and number were found as below:					
Population of tiger is stable	Fair	✓		Year	2009	2010	2011	2012	2013
Population of tiger is showing an increasing trend	Good			Number	20	----	-----	-----	20
Population of tiger has significantly increased	Very good			Density	2.82	2.3	3.8	3.1	2.21
				Note: ---- Not available It is evident from the above data that the tiger density has decreased in 2013 in comparison to 2011 and 2012, but it is to be noted that 2013 data is preliminary one and detailed analysis is underway. Data collected for Phase IV monitoring has been sent to WII, D.Dun for analysis. The analysis report is still awaited. From above tiger population in Bhadra TR appears to be stable.					

***This assessment should be based in the context of available population estimate (2010-11) and the outcomes of the currently ongoing Phase-IV analyses.**

6.3 Have the threats* to the TR being reduced/ minimized? Or is there an increase?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Threats to the TR have not abated but have enhanced.	Poor		Discussion with FD, FD office records, TCP Para: 3.4 and field visit.	<p>It is evident from the records that fire incidences reduced drastically during last 3 years. Only one case was registered in 2011-12 for 1.00ha ground fire.</p> <p>No new encroachment is noticed after the declaration of Tiger reserve in 2007. Regarding illicit felling, 7 cases in 2011-12, 8 cases in 2012-13 and 5 cases in 2013-14 were issued showing downward trend, but poaching cases registered were 6, 3 & 13 in respective years depicting upward trend.</p> <p>TR management has established 36 anti-poaching camps. The movement & patrolling of staff are being watched through movement register and M STRIPES to check the poaching cases.</p> <p>During pinch period, water is supplied to the animals through 99 water holes. To check the disease outbreak, 45,855 cattle has been vaccinated in last 3 years and no epidemic/ disease out-break was noticed in this period.</p> <p>6 villages consisting 82 families are still inside the TR and their dependency on forest is still continuing, but TR management is trying to resolve the issue with the help of district administration.</p> <p>Invasive weeds like Lantana and <i>Cassia Spectabilis</i> may affect habitat.</p> <p>Lot many resorts and home stays are coming up in and around tiger reserves which are hardly regulated, which may pose threat to tiger reserve in near future.</p>
Some threats to the TR have abated, others continue their presence	Fair			
Most threats to the TR have abated. The few remaining are vigorously being addressed	Good	✓		
All threats to the TR have been effectively contained and an efficient system is in place to deal with any emerging situation	Very good			

***Does the TR has a Disaster Risk Management Plan to deal with existing as well as emerging threats?**

6.4 Are the expectations of visitors* generally met or exceeded?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Expectations of visitors generally not met.	Poor		Discussion with FD, FD office record, visit to JLR centre and field visit.	Visitors generally come in groups at Muthodi tourist centre and stay in dormitories. Elephant ride is not available. Bus safari is provided by the department that too without nature guide. Dr Salim Ali Interpretation centre also does not contain adequate displays. Because of these reasons, visitors' expectations are partly met. JLR provides excellent facilities for staying, fooding, swimming etc and bus safari / boat safari are provided to the visitors with naturalist as guide for every vehicle. They have fixed package tour, which is acceptable to visitors.
Expectations of many visitors are met.	Fair	✓		
Expectations of most visitors are met.	Good			
Expectations of all most all visitors are met.	Very good			

*What is the compliance status on Supreme Court/ NTCA Guidelines on Ecotourism in TRs

6.5 Are local communities supportive of TR management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Local communities are hostile.	Poor		Discussions with FD, FD office records, draft TCP and field visit.	18 EDCs have been established in Bhadra TR and entry point activities have been completed in these villages, but few efforts on behalf of TR management have been made for income generating activities of local communities. A few people have been engaged in the reserve as anti-poaching watchers but it is not enough to address the issues. However, EDC members are helping the TR management in fire extinguishing operation due to which only one fire incidence occurred in the periphery of the core in the last 3 years. In last 3 years, 292 families had been given LPG connections with assets at subsidized rates to ensure reduction in dependence of these families on forests. Few selected families from the fringe villages had been given seedlings of silver oak, mangoes etc so that their economic sustainability is improved and also resource dependency is reduced. Thus it is evident that some local communities are supportive in TR management.
Some are supportive.	Fair	✓		
Most locals are supportive of TR management.	Good			
All local communities supportive of TR management.	Very good			

*There could be many reasons for disenchantment. It could be real because of managerial neglect or the managerial efforts could be appropriate but there could be local elements/organizations who would like to keep the disaffection simmering for their own ulterior motives. Likewise success could be entirely because of the efforts of managers or they might be fortunate in striking partnerships with credible NGOs. Assessment may take the prevailing causes into account.

7. MEE Score Card*

Framework Element Number	Framework Element Name	Number of Criteria (a)	Maximum Mark per question (b)	Total (a x b)	Marks obtained for the Element	Overall MEE Score and % age
1.	Context	04	10	40	25	66.13 %
2.	Planning	07	10	70	45	
3.	Inputs	05	10	50	45	
4.	Process	06	10	60	35	
5.	Outputs	04	10	40	27.5	
6.	Outcomes	05	10	50	27.5	
Total		31		310	205	

*Efforts will be made by the NTCA-WII-MEE Team to address the issue of assigning 'differential' weightages to the 30 Assessment Criteria including 'normalization'.

Assessment Criteria for addressing issues relating to Climate Change & Carbon capture in the Tiger Reserves (TRs)

1. *Additional Criteria on Climate Change: Is the TR being consciously managed to adapt to climate change?*

Condition	Category*	(Tick ✓)	Comment/ Explanation	Next Steps
There have been no efforts to consider adaptation to climate change in management	Poor		Some initial thought has taken place about likely impacts of climate change but this has yet to be translated into Management plans.	Guide lines should be issued at National Level for assessment of impacts and measures for adaptations so as to prepare specific plans and their integration with the TR Management plans.
Some initial thought has taken place about likely impacts of climate change, but this has yet to be translated into management plans	Fair	✓		
Detailed plans have been drawn up about how to adapt management to predicted climate change, but these have yet to be translated into active management.	Good			
Detailed plans have been drawn up about how to adapt management to predicted climate change, and these are already being implemented	Very good			

2. *Additional Criteria on Climate Change: Is the TR being consciously managed to prevent carbon loss and to encourage further carbon capture?*

Condition	Category*	(Tick ✓)	Comment/ Explanation	Next Steps
Carbon storage and carbon dioxide capture have not been considered in management of the TR	Poor		Firelines are maintained to control the wild fire during hot season to prevent carbon loss. After fire occurrence, it is extinguished with the help of staff and local people, which also help in preventing the carbon loss. Natural regeneration is coming up in areas which was vacated by relocated villages and this newly regenerated forests encourage further carbon capture.	Guide lines should be issued at National Level for assessment of impacts and measures for adaptations so as to prepare specific plans and their integration with the TR management plans.
Carbon storage and carbon dioxide capture have been considered in general terms, but has not yet been significantly reflected in management	Fair	✓		
There are active measures in place to reduce carbon loss from the TR, but no conscious measures to increase carbon dioxide capture	Good			
There are active measures in place both to reduce carbon loss from the TR and to increase carbon dioxide capture	Very good			

Management Effectiveness Evaluation (MEE) of Dandeli-Anshi Tiger Reserve

1. Context

1.1 Are the values of the TR well documented, assessed and monitored?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Values not systematically documented, assessed and monitored.	Poor		Draft TCP; documents & reports from Director ; Information from discussions and field visits	<p>Dandeli-Anshi Tiger Reserve (DATR) comprises of two important protected areas of the region viz., Dandeli Wildlife Sanctuary (475.018 sq km) and Anshi National Park (339.866 sq km) contiguous to each other.</p> <p>DATR is part of ~8,800 sq km of tiger conservation landscape of WL protected areas and reserved forests. It is one of the richest biodiversity landscapes of flora and fauna. It is part of the Biological hotspots in the Western Ghats known for its geo-physical and geo-morphological features. The Reserve falls in the catchment area of river Kali and its tributaries such as Nagazari and Kaneri.</p> <p>According to the revised survey of the forest types of India by Champion and Seth (1968), forest types are:-South Indian Moist Deciduous Teak Forests (3B/C1); Southern Moist Mixed Deciduous Forests (3B/C2); West Coast Semi-evergreen Forests (2A/C2); Moist Bamboo Brakes (2B/E3) and Cane Brakes (2B/E1).</p> <p>TR is home to rare endemic flora and fauna. The largest Indian butterfly-Southern Birdwing to the endemic Malabar Tree Nymph are found in good population in these woods. The important fauna includes Tiger, Leopard, Dhole, Jackal, Elephant, Gaur, Sambar Deer, Spotted Deer, Barking deer, Mouse Deer, Sloth Bear, Hanumaan Langur, Bonnet Macaque, Indian Giant Squirrel, Flying Squirrel, Pangolin, etc.</p> <p>At least 272 bird species belonging to 45 families of which 19 species are endemic are found in TR. Interesting birds include Common Grey Hornbill, Malabar Grey Hornbill, Malabar Pied Hornbill, Great Indian Pied Hornbill and Ceylon Frogmouth.</p> <p>The values of TR have been identified under the head "Statement of Significance" in Draft TCP in chapter 1. Values have been scaled as Global, National and Regional values. Some values are reported to have been described elsewhere.</p> <p>However, Values need to be clearly listed and described under themes, such as; Biological value, Scientific value, Ecological process and functions, Educational Value, Recreational value, Economical value, Historical value and Religious and Cultural value etc. in the TCP with assessment and criteria for monitoring.</p>
Values generally identified but not systematically assessed and monitored.	Fair			
Most values systematically identified, assessed and monitored.	Good	✓		
All values systematically identified, assessed and monitored.	Very good			

1.2 Are the threats to TR values well documented and assessed*?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Threats not systematically documented or assessed.	Poor		Draft TCP Chapter-6 & 7; documents & reports from Director ; Information from discussions and field visits	<p>In Draft TCP following threats have been identified as threats in SWOT analysis in Chapter 6 and Ch 7.</p> <ul style="list-style-type: none"> • Large no. of villages (55) inside the core area. • Long dry spells coupled with deciduous nature of forests posing the threat of forest fires. • TR is having large grasslands, teak and bamboo forests. Gregarious flowering of bamboo in the reserve is a major threat of Forest Fire. • Presence of large number of licensed as well as unlicensed guns with the people living inside and around the reserve. • Mushrooming of resorts around the reserve. • About 60 km high way passes through core Area. • Ambikanagar township in side core Area. • Outbreak of diseases like HS (Hemorrhagic septicaemia) and FMD due to presence of cattle in revenue enclosures. • Presence of large dams and atomic energy station at a distance of less than 10 kms. • Ulavi & Kavala temple Pilgrimage: During Festive season, over 2 lakhs and 25000 people visit them respectively. • Changing lifestyle of the traditional forest dwellers. • Increased developmental requirement of people living in revenue enclosures. • The possibility of backwaters acting as easy access to smugglers and poachers in the inaccessible areas. • Long inter-State border with Goa. <p>Although the threats have been well documented, some of them need detailed assessment regarding their extent for proper abatement.</p>
Threats generally identified but not systematically assessed.	Fair			
Most threats systematically identified and assessed.	Good	✓		
All threats systematically identified and assessed.	Very good			

*This assessment should be based on number, nature and extent of threats

1.3 Is the 'Core Area' of TR free from human and biotic interference?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
The 'Core Area' has extensive human and biotic interference.	Poor		Draft TCP; documents & reports from Director ; Information from discussions and field visits	<p>The core of the TR has 55 villages. The demography of these villages (including 7 villages in the buffer area of Kumbharwada Range) comprises of 5,133 families having population of 23,041. Many enclosures are small agrarian non-tribal hamlets which do not depend on forests for livelihood. But the tribal and non agrarian families for livelihood are dependent on collection of NTFP. A major area of 9708.70 ha. has been covered by local villagers by growing agricultural crops. Relocation plan has been prepared and the process has been initiated. An extent of 15.812 ha. of encroachment in reserve forest has been evicted in DATR. Buffer area notified under DATR has been handed over to TR and there is unified control.</p>
The 'Core Area' has some human and biotic interference.	Fair	✓		
The 'Core Area' has little human and biotic interference.	Good			
The 'Core Area' has no human and biotic interference.	Very good			

*This assessment should be based on existence and the efforts made by TR management to address issues related to human settlements/ villages inside the core area; livestock grazing, cultivation, encroachments etc, resource extraction/ livelihood dependence of local communities and should reflect the overall interference due to all the above factors. The issue of 'Unified Control' of the 'Core' and 'Buffer' zones under the Field Director would also be taken into account.

1.4 Has the TR complied with the four Statutory* Requirements (SR) along with Tripartite MoU and three Standard Operation Procedures (SOP)?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
None of the four SR, no compliance of Tripartite MoU and three SOPs met	Poor		Copy of relevant notifications; documents & reports from Director ; Information from discussions	<p>1. An area of 814.884 km², comprising of 475.018 km² of Dandeli Wildlife Sanctuary and 339.866 km² of Anshi National Park, has been notified as Critical tiger habitat of Dandeli-Anshi Tiger Reserve vide, Karnataka Govt. G.O No. FEE 299 FWL 2007 dt: 20-12-2007.</p> <p>Subsequently an area of 282.63 sq. Kms has been declared as buffer areas of the Tiger Reserve vide notification no. FEE 123 FWL 2009 dated: 1-9-2010. An additional area of 248.0661 sq. kms has been added to Dandeli Wild life Sanctuary Tinaighat range of Haliyal Division, vide Notification No. FEE-302-FWL-2011-(I) dated: 27-12-2011. However, this area has not yet been legally made part of the TR. The core is without any buffer in a long stretch, particularly southern and south eastern side.</p> <p>2. Tiger Conservation Foundation has been established by registering the DATR Foundation Karnataka as a trust on 06-12-2007.</p> <p>3. A revised Plan as per the guideline of National Tiger Conservation Authority, New Delhi has been prepared in final shape and submitted to the PCCF & CWLW.</p> <p>4. A state level steering committee under the Chairmanship of Honorable Chief Minister has been constituted vide notification No. B/CR-61/2006-07, Dated: 27/05/2009 and 3rd meetings had been held on 26-07-2011.</p> <p>5. Some of the conditions of MOU are yet to be complied. Record maintenance related to the execution of works under CSS-PT needs improvement</p> <p>6. There is no incident of straying or death of Tiger in DATR in the period.</p>
Two of the four SR, 50% conditions of the Tripartite MoU and SOPs complied	Fair			
Three of the four SR, 75% conditions of the Tri-partite MoU and SOPs complied	Good	✓		
All four SR, 100% conditions of the Tripartite MoU and SOPs complied	Very good			

***Statutory requirements are (1) Legal delineation and notification of Core and Buffer Areas; (2) Establishment of Tiger Conservation Foundation; (3) Development of a Tiger Conservation Plan; and (4) Constitution of a State-level Steering Committee under the Chairmanship of the Chief Minister. TA refers agreement between Field Director, State Government and NTCA. The 3 SOPs are on (i) Straying of Tiger in human dominated landscape, (ii) Tiger Mortality and (iii) Disposal of Carcasses**

2. Planning

2.1 Status of Tiger Conservation Plan (TCP)*?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No TCP in place.	Poor		Draft TCP; Copy of relevant documents & reports from Director ; Information from discussions	<p>The comments/ suggestions sent by Additional Director General of Forests (Project Tiger) and Member Secretary, NTCA on 4th July 2013 on the draft Tiger Conservation Plan of DATR was supposed to be addressed in the revised draft and submitted to NTCA by 16/07/2013.</p> <p>It was reported that a revised Plan has been presented before the PCCF/CWLW, Karnataka on 21/05/2014 for submission to NTCA.</p> <p>On perusal of the soft copy of Draft Plan, submitted to MEE Team, it appears that the prescriptions at places devoid of essential detailing.</p>
TCP is under preparation	Fair	✓		
TR has a relevant TCP	Good			
TR has a comprehensive and relevant TCP, duly approved by the NTCA	Very good			

***The scientific content and the participatory processes used in preparation of the TCP will be taken into account in assessing the quality of TCP.**

2.2 Does the TR safeguards the threatened biodiversity values?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR does not safeguard the threatened biodiversity values.	Poor		Draft TCP; documents & reports from Director ; Information from discussions and field visits	<p>In chapter -7 of draft TCP strategy for Zone Plan has been prescribed through management of following Zones:</p> <p>Bio-Diversity Conservation Zone</p> <p>Habitat consolidation zone</p> <p>Tourism and Nature Interpretation Zone</p> <p>Biodiversity conservation Zone safeguards the threats by providing strategies for management interventions. Protection of the existing vegetation is carried out by the help of CPT (Cattle Proof Trenches). The strategies for management interventions, such as; protecting the existing vegetation with the help of CPT (Cattle Proof Trenches), measures for Soil and Moisture Conservation, Water Management, Management of Waterholes, Management of grassy and blank patches, Flowering Bamboo Management, Fire Protection/ Management, Weed management (on experimental basis), Management of Riparian Zones, Special Habitat Identification and Management, Ficus and other important trees and Endemic and Endangered Taxa Identification and Conservation have been provided.</p> <p>Management of Habitat Consolidation zone prescribes for voluntary relocation in a time bound manner, besides monitoring the changes in vegetation at the relocated sites, and ensuring rehabilitation of relocated people with inter sectoral integration at the new sites as per NTCA guidelines. Regular training, awareness programs, workshops, exposure trips, etc., for these people have also been suggested.</p> <p>In chapter -10 Theme plan for security has been dealt in. Protection measures include 43 Anti Poaching Camps, check posts, foot patrols, daily patrolling and monsoon patrolling.</p> <p>Night traffic between Potoli cross to Marada Checking gate is banned to provide inviolate habitat to animals.</p> <p>Apart from this, as a preventive measure, village level awareness programs through street plays and distribution of publicity material are carried out. Awareness programmes conducted in villages and schools not to hunt and eat species like Hornbill, Malabar Giant Squirrel, Pangolin, Wild Boar, etc.</p> <p>However, some of these plans are sketchy and needs spatial and temporal detailing with clear cut prescription.</p>
TR safeguards a few threatened biodiversity values.	Fair			
TR safeguards a large number of threatened biodiversity values.	Good	✓		
TR safeguards all threatened biodiversity values.	Very good			

*Remarks need to elaborate on the kind of safeguards and how they work or are intended to work

2.3 Are stakeholders given an opportunity to participate in planning process?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little, if any opportunity for stakeholder participation in planning.	Poor		Draft TCP; documents & reports from Director ; Information from discussions and field visits	<p>Stakeholders participate in some planning process.</p> <p>Workshop with various stake holders (researchers, biologists, general public, wildlife experts and other organisations working in the field of conservation were held in 2008 for preparing TCP.</p> <p>Inputs were reported to be taken for planning processes from 27 EDC's in side TR.</p> <p>Phansoli and Avurli EDC's have been consulted in Eco-tourism planning and implementation there by involving them in planning participation.</p> <p>NGO's and Home stay resort owners are involved in the advisory committee to regulate the eco-tourism.</p> <p>Technical inputs and suggestions are taken from professional institutions such as Forestry Colleges, CWS, ATREE, local Naturalists and others while planning conservation activities.</p>
Stakeholders participate in some planning.	Fair			
Stakeholders participate in most planning processes.	Good	✓		
Stakeholders routinely and systematically participate in all planning processes.	Very good			

*The result of participation must show in the field and not merely reported as a routine exercise.

2.4 Are habitat management programmes systematically planned, relevant and monitored, and contribute effectively to Tiger and other endangered species conservation?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Habitat management programmes are entirely ad hoc.	Poor		Draft TCP; documents & reports from Director ; Information from discussions and field visits	<p>In the draft TCP habitat management strategies have been delineated in Zone Plans under "Biodiversity conservation Zone". Following habitat management practices have been incorporated.</p> <ul style="list-style-type: none"> • To conserve valuable wet evergreen shola, grassland, moist deciduous eco system. • Protect and maintain the rare, endemic, endangered and wild plant species in their own habitat. • Fire Protection and management measures have been detailed out in the plan. • Intensive fire protection measures have been prescribed in bamboo flower areas and sowing of bamboo seeds in open areas has been suggested to provide fodder and soil stability. • Control burning/ early burning is proposed in grasslands and bamboo flowered areas. • Soil conservation works like creation of waterholes and check dams are constructed at strategic places in the reserve to provide water facilities during pinch period and for moisture conservation. • Special instructions have been given to the staff to protect Ficus species as they are very vital for sustenance of Great Indian Hornbills and other creatures since it act as a keystone species. • Weeds like Lantana camara, <i>Eupatorium odoratissimum</i> and <i>Strobilanthus species</i> will be removed to encourage local grass species on experimental basis. <p>Efforts should be made to maintain the existing grasslands/ open areas in TR instead of taking plantation in such areas, as noticed in places. The Management of habitat in respect of many IUCN threatened Categories need more attention.</p>
Limited planning and monitoring programmes are in place for habitat management.	Fair			
Habitat management programmes are generally planned and monitored.	Good	✓		
Habitat management programmes are thoroughly planned and monitored.	Very good			

*This assessment should be primarily based on habitat management programmes in relation to habitats for species that are threatened (IUCN categories), are habitat specialists, subjected to seasonal movements, wide ranging with emphasis on the breeding and rearing habitat and may include factors such as food, water, shelter (all connotations).Habitat structure, composition, unique patches of vegetation and sensitive sites, sources of water and their distribution are integral. Corridors within buffer zone are critically important. For example, all riparian habitats. Have these been addressed? Is their a planning process in place? The management practices dealing with invasive species such as Lantana, Michania etc. would be examined.

2.5 Does the TR has an effective Protection Strategy (PS)* and Security Plan and Security Audit (SA) in place?

Assessment criteria*																																											
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks																																							
TR has little or no PS and SA.	Poor		Draft TCP; documents & reports from Director ; Information from discussions and field visits	<p>In chapter -10 "Theme plan for Security" has been dealt in. Protection measures include Anti Poaching Camps, check posts, foot patrols, daily patrolling and monsoon patrolling. The beat perambulations and vehicular patrols also assist in the protection of the wildlife and forest produce. Local People / tribals have been given jobs in anti-poaching camps. The strategy suggests for creation of Tiger cell, Creation of Two Strike forces and establishment of good communication and Info Tech in Wildlife Protection and Crime Risk Management. The following protection measures are undertaken to protect the habitat, Tiger including its co-predators and other wild animals.</p> <ul style="list-style-type: none">• Comprehensive management map showing different layers such as topo sheet, village boundary, cadastral map, section beat boundaries, road network, APC & Checking gates are prepared range wise and made available to management officials for better protection.• Strategically there are 43 Anti-poaching camps spread over, in 6 Ranges with 215 APC watchers, who are equipped with weapons, Binoculars, Cell Phones, Walkie Talkies, Torches etc. Supervision through GPS tracks, wireless and other reporting systems along with their reviews are done for effective patrolling.• Surprise raids are organized in vulnerable areas of the Tiger Reserve to monitor the movement of poachers.• Steps are taken by frontline staff to prevent entry of poachers from outside the state like Goa.• Daily monitoring is carried out by the field staff and APC watchers with GPS tracking through regular patrolling for the movement of Tiger and its co-Predators.• Monsoon patrolling has been intensified in the vulnerable areas.• Camera traps are being setup at vantage points to monitor the movement of Tiger and other animals and also movement of the offenders.• Prohibited Night traffic between Potoli to Marada• 16 Nos of chek posts are operating in the vulnerable places <p>Status of offence case are as under:</p> <table><tr><th rowspan="2">Year</th><th colspan="2">WL Cases</th><th colspan="2">Other cases</th></tr><tr><th>Booked</th><th>Disposed</th><th>Booked</th><th>Disposed</th></tr><tr><td>Prior 11-12</td><td>14</td><td>NA</td><td>11</td><td>NA</td></tr><tr><td>2011-12</td><td>4</td><td>-</td><td>38</td><td>21</td></tr><tr><td>2012-13</td><td>8</td><td>2</td><td>41</td><td>30</td></tr><tr><td>2013-14</td><td>3</td><td>1</td><td>21</td><td>7</td></tr><tr><td>3 yr. Total</td><td>15</td><td>3</td><td>100</td><td>58</td></tr><tr><td>G. Total</td><td>29</td><td>3</td><td>111</td><td>58</td></tr></table> <p>From above it is clear that 26 cases of wildlife and 53 other cases are pending. About 12 cases of wildlife prior to 2011-12 are pending even more than 3 years. This is a serious concern to attend with.</p> <p>There is no systematic intelligence gathering mechanism in place. It is done quite informally during the visits to villages or at times by the locals themselves.</p>	Year	WL Cases		Other cases		Booked	Disposed	Booked	Disposed	Prior 11-12	14	NA	11	NA	2011-12	4	-	38	21	2012-13	8	2	41	30	2013-14	3	1	21	7	3 yr. Total	15	3	100	58	G. Total	29	3	111	58
Year	WL Cases					Other cases																																					
	Booked	Disposed			Booked	Disposed																																					
Prior 11-12	14	NA			11	NA																																					
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2013-14	3	1	21	7																																							
3 yr. Total	15	3	100	58																																							
G. Total	29	3	111	58																																							
TR has an adhoc PS and SA.	Fair																																										
TR has a generally relevant PS and SA but is not very effective.	Good	✓																																									
TR has a comprehensive and very effective PS and SA.	Very good																																										

**This assessment takes inter-alia into account the nature of threats, the number and location of patrolling camps and foot and mobile patrolling, needs that relate to available manpower, terrain difficulties, practicability of area coverage, readiness to contain specific threats with necessary support and facilities. The constitution and functioning of Special Tiger Protection Force (STPF), Number of offences reported, arrests made, prosecution initiated and conviction achieved will be taken into account.*

2.6 Has the TR been effective in the mitigation of human-wildlife conflicts?

2.6 Has the TR been effective in the mitigation of human-wildlife conflicts?

Assessment criteria*																								
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks																				
Human-wildlife conflicts are significant but poorly addressed.	Poor		Draft TCP; documents & reports from Director ; Information from discussions and field visits	<p>It has been reported by the TR authorities that to tackle man animal conflict the following measures have been undertaken:</p> <ul style="list-style-type: none">• During the last 3 years 10 km Elephant proof Trenches and 37 km of solar fencing work has been carried out.• Staff has been trained in mitigating man-animal conflict situation like driving strayed animals safely into the forest areas, tranquilizing equipment's and relocating the problematic animals.• Tranquilizing equipment's, rescue equipment's, animal trap, sluice cage and Drugs have been kept readily available and tracking force in a rapid response vehicle for use with staff along with a rapid response vehicle..• The Police and local administration and local people have been greatly aiding in the measures to control man-animal conflicts.• Anti-depredation camps have been established at vulnerable places.• Many king cobras and Pythons have been rescued and released in DATR.• Problematic and rouge elephant is tranquilized and relocated• Compensation for affected people is given as early as possible in accordance with the eligibility prescribed by the Government. The details of compensation paid in last 3 years are as under: <table><tr><th>Category</th><th>2010-11</th><th>2011-12</th><th>2012-</th></tr><tr><td>Crop damage</td><td>64 cases 2.05 lac</td><td>128 cases 3.25 lac</td><td>110 case 3.03 lac</td></tr><tr><td>Human death /injury</td><td>-</td><td>-</td><td>1 inj. Cas 0.20 lac</td></tr><tr><td>Cattle killings</td><td>69 cases 2.13 lac</td><td>75 cases 2.36 lac</td><td>102 case 5.05 lac</td></tr><tr><td>Total Comp--ensation</td><td>133 cases 4.18 lac</td><td>203 cases 5.71 lac</td><td>213 case 8.28 lac</td></tr></table> <p>From above it is evident that there are man wildlife conflicts in the TR. Further there had been death of 3 elephants by electrocution in the past. Although the above measures are said to be being taken, plan prescription provided in chapter 5 of draft TCP for Man Wildlife Conflict is much generalized and needs detailed plan of actions as a theme plan.</p>	Category	2010-11	2011-12	2012-	Crop damage	64 cases 2.05 lac	128 cases 3.25 lac	110 case 3.03 lac	Human death /injury	-	-	1 inj. Cas 0.20 lac	Cattle killings	69 cases 2.13 lac	75 cases 2.36 lac	102 case 5.05 lac	Total Comp--ensation	133 cases 4.18 lac	203 cases 5.71 lac	213 case 8.28 lac
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Total Comp--ensation	133 cases 4.18 lac	203 cases 5.71 lac	213 case 8.28 lac																					
TR has been able to mitigate few human-wildlife conflicts.	Fair																							
TR has been able to mitigate many human-wildlife conflicts.	Good	✓																						
TR has been effective in mitigating all human-wildlife conflicts.	Very good																							

*The assessment will take into account the number of incidences reported and payment of compensation made and its timeliness.

2.7 Is the TR integrated into a wider ecological network/ landscape following the principles of the ecosystem approach?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR not integrated into a wider network/ landscape.	Poor		Draft TCP; documents & reports from Director ; Information from discussions.	<p>Dandeli-Anshi Tiger Reserve is part of ~8,800 sq km of tiger conservation landscape of protected areas and reserved forests. Anshi-Dandeli-Sharavathi Valley complex consists of the protected areas of Mollem-Netravali, Anshi-Dandeli, Sharavathi Valley-Mookambika along with Reserved Forests of Haliyal and Yellapur. To the north, this complex is connected to the forests of Goa which continue to the Sahayadri Tiger Reserve in Maharashtra with sporadic records of tiger occupancy. While the forest connectivity between this complex and the southern Kudremukh-Bhadra complex is weak, interspersed by plantation and agricultural mosaics, evidence exists through camera trapped pictures to confirm movement of tigers between the two areas.</p> <p>The corridor connectivity within Anshi-Dandeli-Sharavathi Valley is long and traverses through plantations and agriculture mosaics. Two corridors, one from Anshi and another from Dandeli, emerge from either side of the Kodalalli Reservoir and meet north of the Benne Hole falls. The bottlenecks for this corridor were at Jog Falls where a narrow strip of forest (1.5 km) remains as connectivity. This connectivity, if formally established and restored would promote gene flow across major populations of the Western Ghats from Pune to Palghat.</p> <p>Elephant Corridors has been said to be identified.</p> <p>However, in chapter 16 dealing with peripheral areas only one page plan and in chapter 18 a plan of only 3 pages for corridor have been incorporated in TCP. Thus the plans for corridor and peripheral areas are too sketchy.</p>
Some limited attempts to integrate the TR into a network/ landscape.	Fair			
TR is generally quite well integrated into a network/ landscape.	Good	✓		
TR is fully integrated into a wider network/ landscape.	Very good			

***Assessment needs to consider the scope of opportunities on the landscape scale that exist. Consider whether any attempts have been made and what are these? Have all the important corridors been identified? What actions are planned/implemented for their security? Have the Forest Working Plans and Forest Development Corporation Plans within the identified landscapes taken cognizance of such new requirement? These should have been reflected in TCPs. Is there is any effort to rationalize land use around TR? Is any effort being made to plan and use 'Smart Green Infrastructure'?**

3. Inputs

3.1 Are personnel adequate, well organized and deployed with access to adequate resources in the Tiger Reserve (TR)*?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Few, personnel explicitly allocated but poorly supported for TR management.	Poor		Draft TCP; documents & reports from Director ; Information from discussions	<p>The total staff strength of TR is 164; against which 123 persons are in position (vacancy 25%).</p> <p>The field cadre of RFO, Dy. RFO, FG and Forest Watchers comprises 142 posts against which 107 posts are occupied (vacancy 25%). There is a vacancy of 29 (34 %) in Forest Guards Cadre.</p> <p>About 22 (18%) personnel are above 50 years of age and 16 persons (13 %) are between 40-50 years.</p> <p>Recruitment in vacant posts, especially Forest Guards is of urgent need.</p>
Some personnel explicitly allocated for TR management but not adequately supported and systematically linked to management objectives.	Fair			
Some personnel with fair support explicitly allocated towards achievement of specific TR management objectives.	Good	✓		
Adequate personnel appropriately supported and explicitly allocated towards achievement of specific TR management objectives.	Very good			

***This assessment should inter-alia be based on number of personnel allocated for attainment of TR objectives at the Range , Round, Beat and Patrolling camps levels or as relevant to the needs (sanctioned posts vis- a- vis existing personnel and needs beyond the sanctioned strengths. It is possible that posts have last been sanctioned several years back that do not now account for the current needs)**

3.2 Are resources (vehicle, equipment, building etc.) adequate, well organized and managed with desired access?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Few, if any, resources explicitly allocated for TR management.	Poor		Draft TCP; documents & reports from Director ; Information from discussions	<p>DATR has 2 Scorpio, one Toyota Quail, 3 Mahindra Camper, 6 Mahindra Bolero/ Mahindra Max Jeep, Swarjamazda Minibus and 12 bikes.</p> <p>Weapons in the TR include 9 DBBL guns, 3 Rifles and 13 slide action guns. Ammunition is available for DBBLs and Rifles.</p> <p>There are 123 buildings including both residential and non residential.</p> <p>Wireless net work comprises of 3 Repeaters, 26 static sets, 10 mobiles and 97 walkie Talkies. However only one repeater is operational.</p> <p>The TR has 19 computers, 3 lap tops, 64 GPS, 23 binoculars and 27 camera.</p>
Some resources explicitly allocated for TR management but not systematically linked to management objectives.	Fair			
Some resources explicitly allocated towards achievement of specific TR management objectives.	Good	✓		
Adequate resources explicitly allocated towards achievement of specific TR management objectives	Very good			

*** These form a variety of resources. These may be segregated into immovable (structures) and movable categories and each further may be considered under the essential and desirable categories. It is best to start with what are the minimum needs to attain each objective, what is available and manner of use/deployment. The proportions of the 'essentials' and 'desirables' along the importance gradient of objectives would serve as pointers for score categories. Specific remarks would be vitally important.**

3.3 Are financial resources other than those of the State linked to priority actions and are funds adequate, released timely and utilized?

Released timely and utilized.

Assessment criteria*																																																
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks																																												
Resource allocation is adhoc, funds are inadequate and seldom released in time and not utilized.	Poor		Documents & reports from Director ; Information from discussions	The status of funding in CSSPT (Project Tiger) in last 3 years are as under: (Rupees in lakhs) <table><tr><th>Year</th><th>Shares</th><th>Sanction</th><th>Release</th><th>Utilised</th></tr><tr><td rowspan="3">2011-12</td><td>Central</td><td>299.115</td><td>204.210</td><td>204.210</td></tr><tr><td>State</td><td>178.755</td><td>178.755</td><td>178.755</td></tr><tr><td>Total</td><td>477.870</td><td>382.965</td><td>382.965</td></tr><tr><td rowspan="3">2012-13</td><td>Central</td><td>146.110</td><td>136.180</td><td>136.180</td></tr><tr><td>State</td><td>102.360</td><td>102.360</td><td>102.360</td></tr><tr><td>Total</td><td>248.470</td><td>238.540</td><td>238.540</td></tr><tr><td rowspan="3">2013-14</td><td>Central</td><td>555.595</td><td>444.676</td><td>444.676</td></tr><tr><td>State</td><td>186.070</td><td>130.000</td><td>129.000</td></tr><tr><td>Total</td><td>741.665</td><td>574.676</td><td>573.676</td></tr></table>	Year	Shares	Sanction	Release	Utilised	2011-12	Central	299.115	204.210	204.210	State	178.755	178.755	178.755	Total	477.870	382.965	382.965	2012-13	Central	146.110	136.180	136.180	State	102.360	102.360	102.360	Total	248.470	238.540	238.540	2013-14	Central	555.595	444.676	444.676	State	186.070	130.000	129.000	Total	741.665	574.676	573.676
Year	Shares	Sanction			Release	Utilised																																										
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	State	186.070	130.000	129.000																																												
	Total	741.665	574.676	573.676																																												
Some specific allocation for management of priority action. Funds are inadequate and there is some delay in release, partially utilized.	Fair																																															
Comprehensive planning and allocation that meets the most important objectives. Generally funds released with not much delay and mostly utilized.	Good		Although the utilization is 100% of release, the entire sanctioned amount of central assistance had not been released. The reasons need to be ascertained and rectified. The Assistance in Project Elephant is as follows: <table><tr><th>Status</th><th>2011-12</th><th>2012-13</th><th>2013-14</th></tr><tr><td>Released</td><td>1.81 lakh</td><td>11.95 lakh</td><td>5.56 lakh</td></tr><tr><td>Utilised</td><td>1.81 lakh</td><td>11.95 lakh</td><td>5.55 lakh</td></tr></table>	Status	2011-12	2012-13	2013-14	Released	1.81 lakh	11.95 lakh	5.56 lakh	Utilised	1.81 lakh	11.95 lakh	5.55 lakh																																	
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Utilised	1.81 lakh	11.95 lakh	5.55 lakh																																													
Comprehensive planning and allocation of resources for attainment of most objectives. Funds generally released on-time and are fully utilized.	Very good	✓	The utilization is 100%.																																													

*Obtain details of funds released by NTCA and their utilization by TR in the last 3 years and indicate them under 'Remarks'. Also comment on the problems associated with fund allocations and their utilization.

3.4 Are financial resources from the State linked to priority action and funds adequate, timely released and utilized for the management of Tiger Reserve?

Authorized for the management of Tiger Reserves:

Assessment criteria*																		
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks														
Resource allocation is adhoc, funds are inadequate and seldom released in time and not utilized.	Poor		Documents & reports from Director ; Information from discussions	The details of funds released and utilized under different schemes of the State Government is as below: (Rupees in lakhs) <table><tr><th>Year</th><th>Name of the scheme</th><th>Released Amount</th><th>Utilised Amount</th></tr><tr><td>2011-12</td><td rowspan="3">Around 16 schemes including FDA, CAMPA, Forest Protection & Bamboo Mission</td><td>361.892</td><td>359.312</td></tr><tr><td>2012-13</td><td>447.850</td><td>447.850</td></tr><tr><td>2013-14</td><td>1074.240</td><td>1061.370</td></tr></table>	Year	Name of the scheme	Released Amount	Utilised Amount	2011-12	Around 16 schemes including FDA, CAMPA, Forest Protection & Bamboo Mission	361.892	359.312	2012-13	447.850	447.850	2013-14	1074.240	1061.370
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2012-13		447.850			447.850													
2013-14		1074.240			1061.370													
Some specific allocation for management of priority action. Funds are inadequate and there is some delay in release, partially utilized.	Fair																	
Comprehensive planning and allocation that meets the most important objectives. Generally funds released with not much delay and mostly utilized.	Good																	
Comprehensive planning and allocation of resources for attainment of most objectives. Funds generally released on-time and are fully utilized.	Very good	✓																

*Obtain details of funds released by State and their utilization by TR in the last 3 years and indicate them under 'Remarks'. Also comment on the problems associated with fund allocation and their utilization.

3.5 What level of resources are provided by NGOs?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
NGOs contribute nothing for the management of the TR.	Poor		Documents & reports from Director ; Information from discussions	<p>The details of NGO's working in DATR and the support they provide are as follows:</p> <p>Wildlife conservation society (WCS), Bangalore conducts various research activities in the reserve and undertakes camera tracking studies. Several local youth volunteer helps in their studies thus capacity build the locals on the need for protection of forest and wildlife.</p> <p>Nature Conservation Foundation, Mysore provide their technical inputs on the research activities to be undertaken at the DATR. They also conduct research activities in the reserve, thus providing inputs on the management of the reserve.</p> <p>Asoka Trust for Research in Environment and Ecology (ATREE) has been helping to prepare communication material on man elephant conflicts and other research based activities.</p> <p>Asian Nature Conservation Foundation (ANCF) pioneer in elephant conservation studies provides technical inputs on the mapping of elephants in the reserve and guide in the habitat management for elephants.</p> <p>Centre for Environmental Education CEE): All the environmental education activities of the tiger reserve is taken up by CEE which is one of the Centre's of Excellence under the Ministry of Environment and Forests, Govt of India. It has been conducting educational programs since 2006.</p> <p>Other organizations who help in the DATR activities are :</p> <ul style="list-style-type: none"> Sahayadri Parisara Vardhane : help in controlling forest fire, create awareness through street plays and assist the department as and when required by providing human resource. PANTHERA : in advocacy and outreach activities Centre for Green Earth and Green Umbrella : they run eco club activities in schools and create awareness programs on conservation among children and general public.
NGOs make some contribution to management of the TR but opportunities for collaboration are not systematically explored.	Fair			
NGOs contributions are systematically sought and negotiated for the management of some TR level activities.	Good	✓		
NGOs contributions are systematically sought and negotiated for the management of many TR level activities.	Very good			

4. Process

4.1 Does the TR have manpower resources trained in wildlife conservation for effective TR management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No trained officers and frontline staff in the TR.	Poor		Draft TCP; documents & reports from Director ; Information from discussions	No officers or subordinate staff of TR has wildlife diploma or special wildlife courses from WII or similar Institutes. As per the list provided by TR Authorities in last 2 years 30 front
Some trained officers and few trained frontline staff, posted in the TR.	Fair	✓		
All trained officers and and fair number of trained frontline staff posted in the TR.	Good			

All trained officers and most of the trained frontline staff is posted in the TR.	Very good			<p>line staff including officers have been trained in different subjects in different places; out of which wildlife management related trainings are done only by 8 officials. Others have done training in HRMS, Data entry software, Weapon training, Field functionaries cultivation management and utilization of bamboos, Audit and Income Tax etc.</p> <p>In addition it has been reported that DATR staff is given in house training in different aspects, such as;</p> <p>Phase – IV Monitoring, Legal Training, Man-Animal Conflict Training, Guide Training, and GPS Training.</p> <p>In chapter 8 of Draft TCP, there is a section for "Training Need Assessment", no analysis of training needs and gaps has been carried out. The detailed Training Need Assessment with preparation of a Staff development plan is urgently required.</p>
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***Indicate % of trained staff in various categories. The number and thematic areas of the 'Internal Training' programmes organized in the TR in the last 3 years may be taken into account. Has the TR prepared a 'Staff Development Plan'? Is it being implemented?**

4.2 Is TR staff management performance linked to achievement of management objectives?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No linkage between staff management performance and management objectives.	Poor		Draft TCP; documents & reports from Director ; Information from discussions	<p>There is no direct linkage between staff management performance and their promotions.</p> <p>Confidential reports of the subordinate staff are used to judge their fitness for promotion and are linked to fulfillment of the other eligibility criteria, especially the number of years spent in the current post.</p> <p>Although in section 8.6 of draft TCP under heading of "Human Resource development Plan (HRD Plan)" provision for rewards and awards has been prescribed but none of the personnel has been awarded/ rewarded during last 3 years.</p>
Some linkage between staff management performance and management objectives, but not consistently or systematically assessed.	Fair	✓		
Management performance for most staff is directly linked to achievement of relevant management objectives.	Good			
Management performance of all staff is directly linked to achievement of relevant management objectives.	Very good			

4.3 Is there effective public participation in TR management* and does it show in making a difference?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no public participation in TR management.	Poor		<i>Documents & reports from Director ; Information from discussions and field visits</i>	<p>In DATR there are about 29 EDCs. Among them two EDCs, i.e., Pansoli and Avarli EDCs are involved in the Ecotourism activities. Local people, tour operators, naturalists, press and media and others are taken into consideration in the effective management of tiger reserve.</p> <p>The tiger conservation foundation has representation of these people.</p> <p>Participation of public is ensured in activities like eco-awareness programme, Wildlife Week Celebration, World Environment Day and World Earth day celebrations. In addition to this the NGOs, students of schools and colleges are involved in creating awareness messages time to time.</p> <p>During 2013-14 the estimation of Wildlife population have been carried out transparently by involving volunteers from various strata, such as; Doctors, Engineers, Teachers, Students and NGOs, etc.</p>
Opportunistic public participation in some of the relevant aspects of TR management.	Fair	✓		
Systematic public participation in most of the relevant aspects of TR management.	Good			
Comprehensive and systematic public participation in all important and relevant aspects of TR management.	Very good			

+The involvement of NGOs/ NGIs in population estimation may be taken into account)

4.4 Is there a responsive system for handling complaints and comments* about TR management?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Ad-hoc approach to handling complaints.	Poor		<i>Documents & reports from Director ; Information from discussions and field visits</i>	<p>The following process have been reported to be in place by the TR Authorities:</p> <ul style="list-style-type: none"> Complaint Register, Feedback Register are maintained at Kulgi and Anshi nature camp and also at DATR office. Grievances and complaints of the staff are enquired and discussed in monthly meetings. Sub-Division level officers are entrusted with the job of enquiring into allegations, petitions, complaints etc., Most of the grievances of the staff are settled expeditiously. Registers having receipt of the compliance are maintained. <p>Institutionalised responsive system should be in place for ensuring regular logging and timely processing of all grievances/ complaints/ feed backs to address the issues and taking corrective steps and inform the party. A suitable mechanism for getting regular feed backs including through websites should be introduced.</p>
Complaints handling system operational but not responsive to individual issues and with limited follow up.	Fair	✓		
Coordinated system logs and responds effectively to most complaints.	Good			
All complaints systematically logged in coordinated system and timely response provided with minimal repeat complaints.	Very good			

*Does the TR maintains 'Suggestions Register'? What actions are taken to deal with suggestions?

4.5 Does TR management addresses the livelihood issues* of resource dependent communities, especially of women?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No livelihood issues are addressed by TR management.	Poor		Draft TCP; Documents & reports from Director ; Information from discussions and field visits	<ul style="list-style-type: none"> In DATR 29 EDCs have been formed in order to have effective participation of the public in the management of the reserve and also helping to uplift their economic conditions to reduce dependency on forest . Two EDCs, i.e., Pansoli and Avarli EDCs are involved in the Ecotourism activities. Pansoli EDC members are running the safari by engaging ten local vehicles with local drivers, thus providing employment. Local people are employed as cook. However Eco-development works needs to be planned systematically in many EDC's. Able tribal youths have been employed watchers in 43 APC camps functioning in different ranges. Local villagers were trained as guides and naturalists for safaris and trekking routes. Livelihood issues relating to Kunbi and Gowli's are said to be given utmost attention by the Tiger Reserve Administration. Their urgent needs are attended. Following facilities have been provided to improve their life standard: They are mainly agrarian society and efforts are made to strengthen their agriculture livelihood by reducing conflicts with wild life Solar lights, solar lanterns were provided to the local villagers. Free medical checkup has been carried out in Bazarkunang of Castlerock Wildlife Range for the local villagers. During the last 3 years large number of man days were generated among the tribals/locals giving them livelihood, which is as under:
Few livelihood issues are addressed by TR management.	Fair			
Substantial livelihood issues are addressed by TR management.	Good	✓		
Livelihood issues of resource dependent communities especially of women are addressed effectively by TR managers.	Very good			

***The number of mandays generated in the last 3 years may be taken into account. Are funds received from District Agencies and other sources? Provide details of funds received in last 3 years.**

4.6 Has the TR planned and implemented the voluntary 'Village Relocation' from the Core/ Critical Tiger Habitat (CTH)?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No planning and no implementation	Poor		Draft TCP; Documents & reports from Director ; Information from discussions and field visits	<p>Dandeli-Anshi Tiger Reserve has identified 3910 no. of families residing in side the reserve. Out of which 542 families have been identified during the year 2013-14 for the rehabilitation purpose.</p> <p>District level rehabilitation committee constituted on 24-01-2014.</p> <p>Rehabilitation process has been initiated in Anshi and Kulgi ranges. 96 families in Anshi range has got approval for rehabilitation by the district level committee.</p> <p>30 families have already been given partial money for the rehabilitation purpose in option-I</p> <p>Rupees 5.3 cores have been released to DATR for the rehabilitation purpose during the year 2013-14.</p> <p>The relocation activity needs to be expedited.</p>
Plans have been made but no implementation	Fair			
Plans have been made and some implementation is in progress	Good	✓		
Plans have been made and are being actively implemented/ no human habitation in the CTH	Very good			

***Assessment will look into the village relocation planning process including availability of manpower, financial resources and NGO support, if any. Is there a mechanism to address the complaints received in respect of relocation process? Effort must be made to assess post-relocation success or otherwise.**

5. Output

5.1 Is adequate information on TR management publicly available?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no information on TR management publicly available.	Poor		Documents & reports from Director ; Information from discussions and field visits	<p>As per the information provided by the TR Authorities followings have been done for providing information to Public on TR management.</p> <p>1. A website- "www.dandelitigerreserve.com" has been created providing some information, such as; History, Flora Fauna, Status of tiger, Tiger foundation, Tourism facilities etc.,</p> <p>2. Workshops on Hornbill, King Cobra were conducted and publicized for public.</p> <p>3. Wildlife week celebrations and other activities are reported in local/state newspapers.</p> <p>4. Brochures and leaflets with information on TR are distributed to the visitors.</p>
Publicly available information is general and has limited relevance to management accountability and the condition of public assets.	Fair	✓		
Publicly available information provides detailed insight into major management issues and condition of public assets.	Good			
Comprehensive reports are routinely available in public domain on management and condition of public assets.	Very good			

5.2 Are visitor services and facilities appropriate and adequate?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Visitor services and facilities do not exist.	Poor		Draft TCP; Documents & reports from Director ; Information from discussions and field visits	<ul style="list-style-type: none"> Services such as wilderness camp, Safari, bird watching, river rafting, trekking, interpretation hall are available in the reserve. Trekking service is main attraction with number of trekking routes such as Barpali to Kadra, Anshi to Nesarthamb, Bargadda to Kamargaon, S.R.Bhagwath point, Sykes point & Kavala caves. Kadra view point, Ulavi Chenna Basaveshwara temple, Basava Falls, and evergreen forest all along the Vakinala are attractions of Anshi Nature Camp. Doodhsagar falls and trekking path to Doodhsagar top are attractions of Castlerock Adventure Camp. Accommodations for Tourist visiting DATR are available in Kulgi Nature Education Camp, Anshi Evergreen Camp, and also in Adventure Camps of Castlerock wildlife range. 14 Log houses, 18 deluxe tents, 2 bed rooms, 4 double bedrooms, and 4 dormitories are available for visitors. One safari bus and ten safari jeeps are provided to the visitors in the morning and evening hours at Kulgi Nature Camp. Advance and current booking facilities over phone is available in the reception center at Dandeli division HQ Most of the Log houses, tents and rooms have been renovated and drinking water as well as hot water for bathing purpose is provided. 2 interpretation center in Kulgi & Anshi Nature camp which gives the tourism map of in and around DATR and a self-description of the insects, birds and amphibians presence in the DATR. Tiger reserve related publications, films, videos, books and brochures are publication kept in the interpretation center for visitors. Educated disciplined local youth were selected from among interior hamlets of the tiger reserve and trained as naturalist in interpretation, art of communication, manners and etiquettes. These locals are engaged as guide accompanying the visitors during wilderness trail, timber trail, bird trail, trekking etc., Watch towers are constructed in many important places of the TR to watch the wild animals in their wilderness. There are many paragolas constructed in near view points and also in nature camp for the visitor's facility. Vehicle parking is provided in Anshi & Kulgi NC and near Phansoli wilderness tour entry point, Syntherirock entry point. Two safari vehicles & one mini bus are available for the wilderness tour. One big size water purifier is installed in Kulgi NC for drinking water. Visitor's feedbacks registers are maintained in Kulgi & Anshi NC, one at Interpretation center, one at Phansoli wilderness tour entry point and it will be made available for the tourist to write the feedback. Centralized canteen is available for serving refreshment and food to the visitors in Kulgi and Anshi NC. One well-built Nagazari hall is constructed in Kulgi NC used for showing Nature education Films, Conducting seminars, and nature education programmes, etc.
Visitor services and facilities are very basic.	Fair			
Visitor services and facilities are monitored from time to time and are fairly effective.	Good			
Visitor services and facilities are conscientiously maintained, regularly upgraded and monitored for visitor satisfaction	Very good	✓		

*Include the existence and quality of visitor and interpretation centers, including skills and capabilities of personnel manning these, TR related publications, films, videos; arrangements of stay (including places serving refreshments and food owned and managed by TR), watch towers and hides including safety factors, vehicles assigned for visitors including riding elephants, if any and their deployment, drinking water, rest rooms, garbage disposal, attended and self guided services in the field, visitor feed back on the quality of wilderness experience.

5.3 Are research/ monitoring related trends systematically evaluated and routinely reported and used to improve management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no systematic evaluation or routine reporting of trends.	Poor		Draft TCP; Documents & reports from Director ; Information from discussions and field visits	Various research institutes like BNHS, IISC, CWS, WCS, WWF, CEE & many more organizations have conducted extensive research whose outputs are used in park management. A list of 61 permissions for 71 projects of Research/ Survey/ Studies conducted by various institutions/ scientists has been provided by TR Authorities.
Some evaluation and reporting undertaken but neither systematic nor routine.	Fair			
Systematic evaluation and routine reporting of trends undertaken.	Good	✓		
Systematic evaluation and comprehensive reporting of trends undertaken and attempts made at course corrections as relevant.	Very good			

**Not all TRs attract projects and researchers and with exceptions, little research takes place on the TRs own steam because of systemic limitations. However, monitoring of some critical issues is expected e.g. population of tiger, co-predators and prey with insights into their demography and distribution (some opportunistic sampling by sightings, signs and spatial distribution during assessment would be extremely useful in terms of expert impression and as a pulse), monitoring incidence of livestock grazing, fires, weeds, sources of water, a variety of illegal activities typically associated with the reserve, wildlife health (e.g. epidemics, immunization of livestock) regeneration and change in vegetation, visitors and their activities, offence cases, ex-gratia payments etc. Efforts must be made to assess the planning and implementation of Phase-IV monitoring protocols and the success of implementation of M-Stripes (wherever applicable). Are the 'Sykes and Horill' monitoring plots maintained and data analyzed?*

5.4 Is there a systematic maintenance schedule and funds in place for management of infrastructure/assets?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No systematic inventory or maintenance schedule.	Poor		Documents & reports from Director ; Information from discussions and field visits	<p>Every year Annual proposal has been forwarded to the competent authority under State and Centrally sponsored scheme for the maintenance and management of infrastructure / Assets.</p> <p>After receipt of the fund works are carried out and inventory is maintained in the Registers like, Stores, Roads, Buildings, Wells, etc. This helps to carry out the annual maintenance properly.. Infrastructures like, Roads, Buildings, Check Dams, Percolation Pond, etc., have been entered up to 2013-14.</p> <p>In addition, separate Assets registers are also maintained.</p>
Inventory maintenance is adhoc and so is the maintenance schedule.	Fair			
Systematic inventory provides the basis for maintenance schedule but funds are inadequate.	Good	✓		
Systematic inventory provides the basis for maintenance schedule and adequate funds are made available.	Very good			

6. Outcomes

6.1 Are populations of threatened species declining, stable or increasing?

Assessment criteria*																																							
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks																																			
Populations of key threatened/ endangered species are declining.	Poor		Draft TCP; Documents & reports from	During censuses carried out in different years , principal prey density per 100 km ² were found as below: <table><tr><td>Year</td><td>2010</td><td>2011</td><td>2012</td><td>2013</td></tr><tr><td>Chital</td><td>120</td><td>60</td><td>NA</td><td>70</td></tr><tr><td>Sambar</td><td>80</td><td>50</td><td>NA</td><td>105</td></tr><tr><td>Muntjac</td><td>70</td><td>50</td><td>NA</td><td>88</td></tr><tr><td>Gaur</td><td>190</td><td>40</td><td>NA</td><td>69</td></tr><tr><td>W.pig</td><td>100</td><td>130</td><td>NA</td><td>133</td></tr><tr><td>Total</td><td>560</td><td>330</td><td>NA</td><td>465</td></tr></table>	Year	2010	2011	2012	2013	Chital	120	60	NA	70	Sambar	80	50	NA	105	Muntjac	70	50	NA	88	Gaur	190	40	NA	69	W.pig	100	130	NA	133	Total	560	330	NA	465
Year	2010	2011	2012		2013																																		
Chital	120	60	NA		70																																		
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Muntjac	70	50	NA		88																																		
Gaur	190	40	NA	69																																			
W.pig	100	130	NA	133																																			
Total	560	330	NA	465																																			
Some threatened/ endangered species populations declining, some are increasing, most others are stable.	Fair	✓	Director ; Information from																																				
Several threatened/ endangered species populations increasing, most others are stable.	Good		discussions and field visits																																				
All threatened/ endangered species populations either increasing or stable.	Very good																																						

***This needs to practically relate to the natural ecosystem potential rather than being driven merely by numbers and visibility. The assessment score may be elaborated under remarks.**

6.2 Is the population of tigers showing a declining, stable or increasing trend?

Assessment criteria*																			
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks															
Population of tiger is showing a declining trend	Poor		Draft TCP; Documents & reports from Director ; Information from discussions and field visits	During censuses carried out in different years, tiger density per 100 km ² and number were found as below:															
Population of tiger is stable	Fair	✓		<table><tr><td>Year</td><td>2010</td><td>2011</td><td>2012</td><td>2013</td></tr><tr><td>Number</td><td>3</td><td>6</td><td>NA</td><td>3</td></tr><tr><td>Density</td><td>0.3</td><td>0.9</td><td>NA</td><td>0.2</td></tr></table>	Year	2010	2011	2012	2013	Number	3	6	NA	3	Density	0.3	0.9	NA	0.2
Year	2010	2011		2012	2013														
Number	3	6		NA	3														
Density	0.3	0.9	NA	0.2															
Population of tiger is showing an increasing trend	Good		NA -- Not available																
Population of tiger has significantly increased	Very good		No Census data for 2012 and 2013 could be made available to the MEE Team. The data pertaining to year 2013 has been taken from "Meta-Population Dynamics of Tiger in the Malenad-Mysore Landscape of Karnataka" Annual Report (January 2013-December, 2013), prepared by CWS. It is evident from the above data that the tiger density has decreased in 2013 in comparison to 2010 and 2011. However, the number for the year 2010 and 2013 are same. Hence the number may be assumed to be stable.																

**This assessment should be based in the context of available population estimate (2010-11) and the outcomes of the currently ongoing Phase-IV analyses.*

6.3 Have the threats* to the TR being reduced/ minimized? Or is there an increase?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Threats to the TR have not abated but have enhanced.	Poor		Draft TCP; Documents & reports from Director ; Information from discussions and field visits	The threats like Man-animal conflict, Forest Fire, Poaching, illicit cutting of trees, interferences of human and cattle into the tiger reserve have reduced.
Some threats to the TR have abated, others continue their presence	Fair			Protection measures include establishment of 43 Anti Poaching Camps, check posts, foot patrols, daily patrolling and monsoon patrolling. The beat perambulations and vehicular patrols also assist in the protection of the wildlife and forest produce. Local People / tribals have been given jobs in anti-poaching camps.
Most threats to the TR have abated. The few remaining are vigorously being addressed	Good	✓		The rescue and Disaster management center along with the rapid response vehicle have been setup in Dandeli to tackle the emergency situation like human animal conflict, Fire disaster and disasters due to natural calamities.
All threats to the TR have been effectively contained and an efficient system is in place to deal with any emerging situation	Very good			For Fire protection, strategies drawn out in theme plan for fire management in chapter 7 are being implemented. On the basis of the intensity of forest fires, fire map has been prepared showing high, medium and low fire prone areas. Maintenance of Permanent Fire Lines, Machans and Watch Towers, Community Campaigns and Involvement of Youth, Special Fire Extinguishing Task Force, fire watchers and Combative Steps to extinguish fires are taken. Rescue teams have been setup at range level during peak summer to control fire hazard. Process for Voluntary Relocation of villages inside the core has been initiated. Lot of Home stays have come out in the revenue enclaves and periphery of the TR. Home stay facilities in and around the TR need to be regulated. No disaster Risk Management Plan has been prepared so far.

**Does the TR has a Disaster Risk Management Plan to deal with existing as well as emerging threats?*

6.4 Are the expectations of visitors* generally met or exceeded?

are the expectations of visitors generally met or exceeded?

Assessment criteria																																
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks																												
Expectations of visitors generally not met.	Poor		Draft TCP; Documents & reports from Director ; Information from discussions and field visits	<p>A tourist facility in the TR is good. Feedback Registers are maintained at Kulgi and Anshi nature camp and also at DATR office. The feedbacks recorded by visitors show that expectation of most of the visitors are met.</p> <p>This is further evident from no. of tourists visiting the TR. The no. of tourists visiting two sanctuaries within TR in last 3 years are as under:</p> <table> <tr> <th>Year</th> <th>Kulgi</th> <th>Anshi</th> <th>Total</th> </tr> <tr> <td>2011-11</td> <td>25111</td> <td>958</td> <td>26069</td> </tr> <tr> <td>2011-12</td> <td>16067</td> <td>1592</td> <td>17659</td> </tr> <tr> <td>2012-13</td> <td>5853</td> <td>1292</td> <td>7145</td> </tr> </table> <p>However, tourists also visit to other areas in large numbers. One such example is Syntheri Rock site managed by Aurli EDC. The tourist inflow in last 3 years is as follows:</p> <table> <tr> <th>Year</th> <th>Tourists</th> <th>Revenue</th> </tr> <tr> <td>2010-11</td> <td>41625</td> <td>431562</td> </tr> <tr> <td>2011-12</td> <td>45416</td> <td>72091</td> </tr> <tr> <td>2012-13</td> <td>31651</td> <td>258928</td> </tr> </table>	Year	Kulgi	Anshi	Total	2011-11	25111	958	26069	2011-12	16067	1592	17659	2012-13	5853	1292	7145	Year	Tourists	Revenue	2010-11	41625	431562	2011-12	45416	72091	2012-13	31651	258928
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2011-12	45416	72091																														
2012-13	31651	258928																														
Expectations of many visitors are met.	Fair																															
Expectations of most visitors are met.	Good	✓																														
Expectations of all most all visitors are met.	Very good																															

*What is the compliance status on Supreme Court/ NTCA Guidelines on Ecotourism in TRs?

6.5 Are local communities supportive of TR management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Local communities are hostile.	Poor		Draft TCP; Documents & reports from Director ; Information from discussions and field visits	<p>Generally local communities are supporting of DATR management as TR management have been able to gain some of their confidence through human animal conflict resolution, involving them in ecotourism activities, providing employment in TR works and other such programmes</p> <ul style="list-style-type: none"> • There are 29 EDC's in the TR. Good examples are seen in EDC's, viz., Aurli EDC, Phansoli EDC, Bargadda EDC, Matgaon EDC, Kegdal EDC etc., where stake holders utilized the benefits. • Phansoli EDC is entrusted the task of providing safari service to visitors and the village is benefited and the people are very supportive. • Aurli EDC is entrusted with the task of managing Syntheri rock tourism area, the village receives revenue and people are supportive. • Many Eco-Development Committee, local NGO's and stakeholders like Homestay owners and resorts have taken into confidence for the effective management of the reserve.
Some are supportive.	Fair			
Most locals are supportive of TR management.	Good	✓		
All local communities supportive of TR management.	Very good			

*There could be many reasons for disenchantment. It could be real because of managerial neglect or the managerial efforts could be appropriate but there could be local elements/organizations who would like to keep the disaffection simmering for their own ulterior motives. Likewise success could be entirely because of the efforts of managers or they might be fortunate in striking partnerships with credible NGOs. Assessment may take the prevailing causes into account.

7. MEE Score Card⁺

Framework Element Number	Framework Element Name	Number of Criteria (a)	Maximum Mark per question (b)	Total (a x b)	Marks obtained for the Element	Overall MEE Score and % age
1.	Context	04	10	40	27.5	70.16%
2.	Planning	07	10	70	50	
3.	Inputs	05	10	50	42.5	
4.	Process	06	10	60	35	
5.	Outputs	04	10	40	30	
6.	Outcomes	05	10	50	32.5	
Total		31		310	217.5	

⁺*Efforts will be made by the NTCA-WII-MEE Team to address the issue of assigning 'differential' weightages to the 30 Assessment Criteria including 'normalization'.*

Assessment Criteria for addressing issues relating to Climate Change & Carbon capture in the Tiger Reserves (TRs)

1. *Additional Criteria on Climate Change: Is the TR being consciously managed to adapt to climate change?*

Condition	Category*	(Tick ✓)	Comment/ Explanation	Next Steps
There have been no efforts to consider adaptation to climate change in management	Poor		Some initial thought has taken place about likely impacts of climate change but this has yet to be translated into Management plans	Guide lines should be issued at national level for assessment of impacts and measures for adaptations so as to prepare specific plans and their integration with the TCP.
Some initial thought has taken place about likely impacts of climate change, but this has yet to be translated into management plans	Fair	✓		
Detailed plans have been drawn up about how to adapt management to predicted climate change, but these have yet to be translated into active management.	Good			
Detailed plans have been drawn up about how to adapt management to predicted climate change, and these are already being implemented	Very good			

2. *Additional Criteria on Climate Change: Is the TR being consciously managed to prevent carbon loss and to encourage further carbon capture?*

Condition	Category*	(Tick ✓)	Comment/ Explanation	Next Steps
Carbon storage and carbon dioxide capture have not been considered in management of the TR	Poor		Although by adopting holistic conservation measures the carbon loss is generally prevented, there is no conscious effort by the management for preventing its loss or capturing more carbon.	It is necessary to issue guidelines at National level for adopting various measures in this direction without compromising the primary objectives of Wildlife Habitat/ TR management to preserve the biodiversity of unique habitats/ eco systems.
Carbon storage and carbon dioxide capture have been considered in general terms, but has not yet been significantly reflected in management	Fair	✓		
There are active measures in place to reduce carbon loss from the TR, but no conscious measures to increase carbon dioxide capture	Good			
There are active measures in place both to reduce carbon loss from the TR and to increase carbon dioxide capture	Very good			

Management Effectiveness Evaluation (MEE) of Biligiri Ranganatha Swamy Temple Tiger Reserve

1. Context

1.1 Are the values of the TR well documented, assessed and monitored?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Values not systematically documented, assessed and monitored.	Poor		Draft TCP; Discussion with Director;	<p>BRT tiger reserve is part of the Westernghat tiger landscape. It connects the wider landscape of Bandipur and Nagarhole tiger reserve. Entire protected area along with adjoining areas of Sathyamangalam, Madumalai tiger reserve, Kollegal Division, Cauvery Wildlife Division forms a unique chunk of Biogeographical zone which acts as a live bridge between westernghats and easternghats. Tiger reserve is also part of Nilagiri Bio-sphere Reserve. The seven major Forest types found in the TR are:</p> <p>(1) Southern Tropical Evergreen forests, (2) Southern Tropical Semi-evergreen forests, (3) Southern Tropical Moist deciduous forests, (4) Southern Tropical dry deciduous forests, (5) Shola forests, (6) Shola forests and (7) Grass lands.</p> <p>About 890 species of plants, 28 mammal, 280 bird, 23 reptile, 115 butterfly and 15 amphibian species are found in TR.</p> <p>In addition to Tigers, Leopards, Wild dogs, Lesser cats, Civet cats, Elephants, Gaurs other endangered species like four-horned antelope, slender loris (<i>Loris lydekkerianus</i>), Indian Giant Flying Squirrel (<i>Petaurista philippensis</i>) and newly discovered species- kollegal ground gecko and <i>Microhyla sholagiri</i> are part of its fauna.</p> <p>All the values of BRTTR have been identified, assessed and categorized into various categories such as biological, ecological processes and functions, cultural, religious, historical, recreational, educational, scientific, and economic. The global, national, regional, state and local values have also been identified. Although the values such as biological, scientific and recreational values etc. are monitored specific parameters, intervals and methodology need to be predetermined for monitoring all of them.</p>
Values generally identified but not systematically assessed and monitored.	Fair			
Most values systematically identified, assessed and monitored.	Good	✓		
All values systematically identified, assessed and monitored.	Very good			

1.2 Are the threats to TR values well documented and assessed*?

Assessment criteria⁺				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Threats not systematically documented or assessed.	Poor		Draft TCP; Discussion with Director;	Most of the threats, such as poaching, human-wildlife conflict (HWC), fires, existence of pilgrimage centers, mining and quarrying, invasive alien species (IAS), diseases and epidemics, timber and fire wood smuggling, fragmentation of the BRTTR and large scale collection of NTFP have been identified and assessed. However some threats although have been identified in chapter-6 of draft TCP, the extent and nature of their severity needs to be spelt out clearly so as to properly monitor and deal with them.
Threats generally identified but not systematically assessed.	Fair			
Most threats systematically identified and assessed.	Good	✓		
All threats systematically identified and assessed.	Very good			

***This assessment should be based on number, nature and extent of threats**

1.3 Is the 'Core Area' of TR free from human and biotic interference?

Assessment criteria⁺				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
The 'Core Area' has extensive human and biotic interference.	Poor		Documents provided by the Director; Discussion with Director	10 Soliga settlements with 396 families (population-2247), BR Hills Enclosure and 5 Coffee Estates are inside the core area. Apart from these inside settlements, there are 53 villages in the buffer area with 2504 families (population-14186). The human and cattle population of these villages also exert various degrees of the biotic pressure on the adjoining core area of BRTTR. The core and buffer areas are under the unified control of the Field Director.
The 'Core Area' has some human and biotic interference.	Fair	✓		
The 'Core Area' has little human and biotic interference.	Good			
The 'Core Area' has no human and biotic interference.	Very good			

***This assessment should be based on existence and the efforts made by TR management to address issues related to human settlements/ villages inside the core area; livestock grazing, cultivation, encroachments etc, resource extraction/ livelihood dependence of local communities and should reflect the overall interference due to all the above factors. The issue of 'Unified Control' of the 'Core' and 'Buffer' zones under the Field Director would also be taken into account.**

1.4 Has the TR complied with the four Statutory* Requirements (SR) along with Tripartite MoU and three Standard Operation Procedures (SoP)?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
None of the four SR, no compliance of Tripartite MoU and three SOPs met	Poor		Documents provided by the Director; Discussion with Director	Vide GO No. FEE 133 FWL 2008 dated 24.01.2011; an area of 359.10 sq. km. of Biligiri Ranganathaswamy Temple (BRT) Wildlife Sanctuary has been notified as core and an area of 215.72 sq. km. as buffer area. The BRTTR Foundation has been constituted and is functional. The draft TCP has been submitted to
Two of the four SR, 50% conditions of the Tripartite MoU and SOPs complied	Fair			
Three of the four SR, 75% conditions of the Tripartite MoU and SOPs complied	Good	✓		

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
All four SR, 100% conditions of the Tripartite MoU and SOPs complied	Very good			NTCA on 17/06/2014. The compliance report on Tripartite MoU has been submitted to NTCA for 2013-14. A State level Steering Committee under the Chairmanship of Chief Minister has been constituted and 3 rd meeting has been held on 26-07-2011 No incident of straying of tiger in human settlements occurred. The postmortem and disposal of carcasses of three tigers were carried out as per SOPs issued by the NTCA but deep freeze is not in place in TR.

***Statutory requirements are (1) Legal delineation and notification of Core and Buffer Areas; (2) Establishment of Tiger Conservation Foundation; (3) Development of a Tiger Conservation Plan; and (4) Constitution of a State-level Steering Committee under the Chairmanship of the Chief Minister. TA refers agreement between Field Director, State Government and NTCA. The 3 SOPs are on (i) Straying of Tiger in human dominated landscape, (ii) Tiger Mortality and (iii) Disposal of Carcasses**

2. Planning

2.1 Status of Tiger Conservation Plan (TCP)?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No TCP in place.	Poor		Draft TCP; Discussion with Director	The draft TCP has been prepared and submitted to NTCA on 17/06/2014. However, there is an approved Management Plan of the BRT Wildlife Sanctuary for period from 1-4-2008 to 31-3-2018
TCP is under preparation	Fair	✓		
TR has a relevant TCP	Good			
TR has a comprehensive and relevant TCP	Very good			

***The scientific content and the participatory processes used in preparation of the TCP will be taken into account in assessing the quality of TCP.**

2.2 Does the TR safeguards the threatened biodiversity values?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR does not safeguard the threatened biodiversity values.	Poor		Draft TCP; Discussion with Director	As per draft TCP, the area supports a wide variety of plants and animals including endemics and endangered. The Reserve also form part of a larger landscape comprising PAS and Reserved Forests across Karnataka and Tamilnadu states. This is also part of Nilgiri Biosphere Reserve. Well established protection mechanism of BRTTR is able to safeguard all biodiversity values. The details are provided in remarks column of the Frame work element item no. 2.5 below.
TR safeguards a few threatened biodiversity values.	Fair			
TR safeguards a large number of threatened biodiversity values.	Good			
TR safeguards all threatened biodiversity values.	Very good	✓		

***Remarks need to elaborate on the kind of safeguards and how they work or are intended to work**

2.3 Are stakeholders given an opportunity to participate in planning process?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little, if any opportunity for stakeholder participation in planning.	Poor		Documents provided by Director; Discussion with Director	Stakeholders have been identified and were provided enough opportunities to participate in planning process.
Stakeholders participate in some planning.	Fair			During planning process consultative meetings were held with different stakeholder groups such as local communities, staff members, Manager of Jungle Lodges & Resorts, ATREE and Research Wing of Forest Department on dates as under:
Stakeholders participate in most planning processes.	Good	✓		
Stakeholders routinely and systematically participate in all planning processes.	Very good			
				There are 37 EDCs and 5 VFCs in the villages in and around the reserve. They are also involved in planning Eco development and Protection activities.

*The result of participation must show in the field and not merely reported as a routine exercise.

2.4 Are habitat management programmes systematically planned, relevant and monitored, and contribute effectively to Tiger and other endangered species conservation?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Habitat management programmes are entirely adhoc.	Poor		Draft TCP; Documents provided by Director; Discussion with Director	The draft TCP includes details of various habitat management programmes which are required to safeguard different values of BRTTR. The programmes include:
Limited planning and monitoring programmes are in place for habitat management.	Fair			Habitat preservation is being planned for Four-horned Antelope as a theme plan in the draft TCP.
Habitat management programmes are generally planned and monitored.	Good	✓		Plan for Shola forest management Plan for Bamboo and Cane management. Plan for Forest Fire Management
Habitat management programmes are thoroughly planned and monitored.	Very good			Water hole management, especially desilting, is focused upon more. The need assessment for new water holes was done by overlaying grids on 5 km X 5 km on the tiger reserve map. New water holes will be planned in the grids not having any water holes. Plan for Weed management. Experimental plot has been laid for lantana removal. The habitat management practices as per the approved management plan of the Sanctuary are being followed.

*This assessment should be primarily based on habitat management programmes in relation to habitats for species that are threatened (IUCN categories), are habitat specialists, subjected to seasonal movements, wide ranging with emphasis on the breeding and rearing habitat and may include factors such as food, water, shelter (all connotations). Habitat structure, composition, unique patches of vegetation and sensitive sites, sources of water and their distribution are integral. Corridors within buffer zone are critically important. For example, all riparian habitats. Have these been addressed? Is there a planning process in place? The management practices dealing with invasive species such as Lantana, Michania etc. would be examined.

2.5 Does the TR has an effective Protection Strategy (PS)* and Security Plan and Security Audit (SA) in place?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR has little or no PS and SA.	Poor		Draft TCP; Documents provided by Director; Discussion with Director; Field Observations	In draft TCP, a very detailed security plan has been incorporated covering almost every possible aspect related to the security of BRTTR. At present, ATR has a well developed system of protection based on proactive informer network and regular field patrolling through a well-knit web of anti-poaching camps. This result in timely detection of offences as well as prosecution of offenders. Some of the highlights of this system are: Strategies against encroachment Strategies against illegal hunting/poaching Strategies against illegal removal of timber and NTFP Strategies against illegal grazing of cattle Strategies against forest fire incidents 27 strategically located APCs and check posts at each entry/ exit point
TR has an adhoc PS and SA.	Fair			
TR has a generally relevant PS and SA but is not very effective.	Good			
TR has a comprehensive and very effective PS and SA.	Very good	✓		



Assessment criteria*

Condition	Category*	(Tick ✓)	Reference document(s)	Remarks																																																											
				<p>All APCs are provided with a static wireless set, GPS, walkie talkies, gun and ammunition, solar lighting and recharge facility for wireless equipment, drinking water facility or regular supply of water, regular supply of food items including vegetables and grains at no cost, EPT/ solar fence around the camp, Samsung Galaxy Tab and internet connection setup to upload the data collected daily, uniform, shoes, jackets, sleeping mats, raincoats, tiffin box, water bottles, torches etc. Almost entire boundary of core of BRTTR is surrounded by EPT with solar fencing. At every 6 km, a solar shed has been built and 3-5 staff members, usually Forest Guard and Watchers, are deployed in these sheds. They patrol the boundary of the Reserve and also check the solar fence at the boundaries. A path is maintained all along the periphery so as to ease the patrolling in these areas by vehicle. HULI software has been developed indigenously to provide a comprehensive solution for digitization of Phase IV monitoring protocol of NTCA with the best available proven technologies. After analyzing the requirements of the BRT Tiger Reserve, a turn-key solution involving windows based application, mobile signal amplifier setup, and power bank for laptops was developed. The current software runs on android based tablets, which have replaced the laptops. The details of number of offences reported, arrests made, prosecution initiated and conviction achieved are as follows:</p> <table><tr><th>Type of offence</th><th>2011-12</th><th>2012-13</th><th>2013-14</th></tr><tr><td>Wildlife</td><td>5</td><td>8</td><td>10</td></tr><tr><td>Others</td><td>48</td><td>43</td><td>21</td></tr><tr><td>Sandal</td><td>1</td><td>3</td><td>0</td></tr><tr><td>71A</td><td>2</td><td>3</td><td>2</td></tr><tr><td>TOTAL</td><td>56</td><td>57</td><td>33</td></tr></table> <table><tr><th>Case Detail/ Status</th><th>2011-12</th><th>2012-13</th><th>2013-14</th><th>Total</th></tr><tr><td>Poaching cases</td><td>3</td><td>8</td><td>6</td><td>17</td></tr><tr><td>Persons arrested</td><td>6</td><td>31</td><td>35</td><td>72</td></tr><tr><td>Complaint filed in Court</td><td>3</td><td>8</td><td>6</td><td>17</td></tr><tr><td>Cases disposed in court</td><td>0</td><td>2</td><td>0</td><td>2</td></tr><tr><td>Punishment</td><td>0</td><td>2</td><td>0</td><td>2</td></tr><tr><td>Cases pending</td><td>3</td><td>6</td><td>6</td><td>15</td></tr></table>	Type of offence	2011-12	2012-13	2013-14	Wildlife	5	8	10	Others	48	43	21	Sandal	1	3	0	71A	2	3	2	TOTAL	56	57	33	Case Detail/ Status	2011-12	2012-13	2013-14	Total	Poaching cases	3	8	6	17	Persons arrested	6	31	35	72	Complaint filed in Court	3	8	6	17	Cases disposed in court	0	2	0	2	Punishment	0	2	0	2	Cases pending	3	6	6	15
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**This assessment takes inter-alia into account the nature of threats, the number and location of patrolling camps and foot and mobile patrolling, needs that relate to available manpower, terrain difficulties, practicability of area coverage, readiness to contain specific threats with necessary support and facilities. The constitution and functioning of Special Tiger Protection Force (STPF), Number of offences reported, arrests made, prosecution initiated and conviction achieved will be taken into account.*

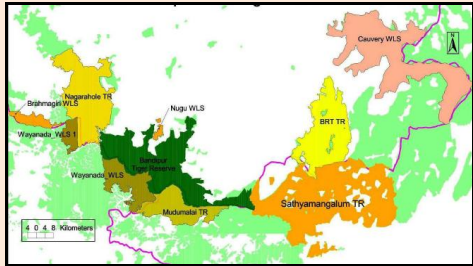
2.6 Has the TR been effective in the mitigation of human-wildlife conflicts?

Assessment criteria*																															
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks																											
Human-wildlife conflicts are significant but poorly addressed.	Poor		Documents provided by Director; Discussion with Director; Field Observations	<p>BRTTR has been effective in mitigating HWC to a reasonable extent. The salient management actions taken by the BRTTR Authorities are as follows:</p> <p>Elephant barriers in the form of EPT, solar fence and a combination of both are being maintained properly. At present there is around 128 km long EPT and 137 km of solar fence on core area boundary.</p> <p>AANEY is an elephant alert system and a system for controlling crop damage by decreasing the response time. This system helps in detecting the place of breakage of fence the moment it happens. It also helps in controlling injuries and deaths by timely sending alerts to the nearby villagers.</p> <p>A device is used to measure the voltage of the fence 24*7 and 365 days. This device sends an alert when the elephant breaks the fence, with an accuracy of 200 m to the nearest forest officers. The data of elephant breaks also gets stored in a central server with its GPS location and time for later analysis of conflict patterns.</p> <p>The amount for crop compensation is paid within 1 month of the incident, as in Karnataka Sakala Services Act.</p> <p>Crop Damage Assessment is done through locally developed Android Application in a scientific way. The location of the damage is geo-tagged, and the photos of the damage are also taken through this app. Apart from that, the important information like survey number, details of the farmer, bank account details are also recorded. This makes the process of compensation convenient for famers and for Forest Department personnel, and also makes it more credible.</p> <p>It not only helps in providing compensation to genuinely affected people, but also helps in detecting bogus claims. The time period between receiving complaint from the public and giving away the compensation to genuinely affected people has been greatly reduced.</p> <p>As evident in the table below, the BRTTR Authorities have managed to pay compensation to the kin of the deceased mostly on the next day of death. The amount is paid through the foundation, and is reimbursed later.</p> <table><tr><th>SI No</th><th>Year</th><th>Date of death</th><th>Date of Payment of Compensation</th></tr><tr><td>1</td><td rowspan="6">2012-13</td><td>04-04-2012</td><td>05-04-2012</td></tr><tr><td>2</td><td>11-10-2012</td><td>12-10-2012</td></tr><tr><td>3</td><td>25-11-2012</td><td>26-11-2012</td></tr><tr><td>4</td><td>15-01-2012</td><td>21-01-2013</td></tr><tr><td>5</td><td>14-02-2013</td><td>14-02-2013</td></tr><tr><td>6</td><td>23-03-2013</td><td>23-03-2013</td></tr><tr><td>7</td><td>2013-14</td><td>13-06-2013</td><td>13-06-2013</td></tr></table> <p>The following table shows the deatails of HWC cases during last three years:</p>	SI No	Year	Date of death	Date of Payment of Compensation	1	2012-13	04-04-2012	05-04-2012	2	11-10-2012	12-10-2012	3	25-11-2012	26-11-2012	4	15-01-2012	21-01-2013	5	14-02-2013	14-02-2013	6	23-03-2013	23-03-2013	7	2013-14	13-06-2013	13-06-2013
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5		14-02-2013	14-02-2013																												
6		23-03-2013	23-03-2013																												
7	2013-14	13-06-2013	13-06-2013																												
TR has been able to mitigate few human-wildlife conflicts.	Fair																														
TR has been able to mitigate many human-wildlife conflicts.	Good	✓																													
TR has been effective in mitigating all human-wildlife conflicts.	Very good																														

Assessment criteria*											
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks							
				Sl. No	Particulars	2011-12		2012-13		2013-14	
						No of cases	Amt. Paid	No.of cases	Amt. Paid	No.of cases	Amt. Paid
				1	Crop loss	514	1553158	1411	5209712	440	1592904
				2	Cattle kill	8	23000	9	30500	05	15000
				3	Human Injury	3	17387	13	89256	05	122027
				4	Human Death	0	0	7	3200000	02	1000000
					TOTAL	525	1593545	1440	8529468	451	2729931

*The assessment will take into account the number of incidences reported and payment of compensation made and its timeliness.

2.7 Is the TR integrated into a wider ecological network / landscape following the principles of the ecosystem approach?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR not integrated into a wider network / landscape.	Poor		Draft TCP; Documents provided by Director; Discussion with Director;	<p>BRTTR is a part of larger Nilgiri Biosphere Reserve, a part of Western Ghat landscape, and a link between the forests of the Western Ghat and of the Eastern Ghat.</p>  <p>All the surrounding forests of BRTTR in Chamarajanagar district are protected areas. The forests in the other districts/ states to which the Reserve is connected are also PAs only. This leads to strong and long-range connectivity of the reserve.</p> <p>The forest has contiguity with Sathyamangalam Tiger Reserve, and there are corridors connecting it with Bandipur Tiger Reserve and Cauvery Wildlife Sanctuary.</p> <p>There are 2 corridors for tiger and 3 for elephant, one of which is common for both.</p>
Some limited attempts to integrate the TR into a network / landscape.	Fair			
TR is generally quite well integrated into a network / landscape.	Good	✓		
TR is fully integrated into a wider network/ landscape.	Very good			

3.2 Are resources (vehicle, equipment, building etc.) adequate, well organized and managed with desired access?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Few, if any, resources explicitly allocated for TR management.	Poor		Documents provided by Director; Discussion with Director;	The resources, such as vehicles (19 four-wheelers & 10 motorbikes), buildings (91 residential quarters, 10 office buildings, 27 APCs and 8 FRHs, total -136), equipments (wireless sets – 96, GPSs – 18), weapon (guns – 115) etc., are adequate in BRTTR. All these resources have been properly deployed and utilized for achieving management objectives of the Reserve. As per the desirable requirement, BRTTR Management need 5 more four wheelers for patrolling, 30 more guns, 25 quarters for staff and 3 vehicles for eco-tourism.
Some resources explicitly allocated for TR management but not systematically linked to management objectives.	Fair			
Some resources explicitly allocated towards achievement of specific TR management objectives.	Good	✓		
Adequate resources explicitly allocated towards achievement of specific TR management objectives.	Very good			

* These form a variety of resources. These may be segregated into immovable (structures) and movable categories and each further may be considered under the essential and desirable categories. It is best to start with what are the minimum needs to attain each objective, what is available and manner of use/deployment. The proportions of the 'essentials' and 'desirables' along the importance gradient of objectives would serve as pointers for score categories. Specific remarks would be vitally important.

3.3 Are financial resources other than those of the State linked to priority actions and are funds adequate, released timely and utilized?

adequate, released timely and utilized.

Assessment criteria*																													
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks																									
Resource allocation is adhoc, funds are inadequate and seldom released in time and not utilized.	Poor		Documents provided by Director; Discussion with Director;	<div>The details of central fundings received during last three years is given below:<div>(Rupees in lakhs)</div><table><tr><th>Year</th><th>Name of the scheme</th><th>Released Amount</th><th>Utilised Amount</th></tr><tr><td rowspan="2">2011 -12</td><td>Project Tiger</td><td>172.536</td><td>169.890</td></tr><tr><td>Project Elephant</td><td>25.229</td><td>25.224</td></tr><tr><td rowspan="2">2012-13</td><td>Project Tiger</td><td>222.280</td><td>217.143</td></tr><tr><td>Project Elephant</td><td>39.960</td><td>39.848</td></tr><tr><td rowspan="2">2013-14</td><td>Project Tiger</td><td>288.360</td><td>288.183</td></tr><tr><td>Project Elephant</td><td>22.385</td><td>22.105</td></tr></table><div>The utilization of funds has been almost cent-percent in all the years. However, it was reported that funds from NTCA have been proportionately inadequate and have not been released timely.</div></div>	Year	Name of the scheme	Released Amount	Utilised Amount	2011 -12	Project Tiger	172.536	169.890	Project Elephant	25.229	25.224	2012-13	Project Tiger	222.280	217.143	Project Elephant	39.960	39.848	2013-14	Project Tiger	288.360	288.183	Project Elephant	22.385	22.105
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	Project Elephant	22.385	22.105																										
Some specific allocation for management of priority action. Funds are inadequate and there is some delay in release, partially utilized.	Fair																												
Comprehensive planning and allocation that meets the most important objectives. Generally funds released with not much delay and mostly utilized.	Good	✓																											
Comprehensive planning and allocation of resources for attainment of most objectives. Funds generally released on-time and are fully utilized.	Very good																												

*Obtain details of funds released by NTCA and their utilization by TR in the last 3 years and indicate them under 'Remarks'. Also comment on the problems associated with fund allocations and their utilization.

3.4 Are financial resources from the State linked to priority action and funds adequate, timely released and utilized for the management of Tiger Reserve?

Assessment criteria*																				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks																
Resource allocation is adhoc, funds are inadequate and seldom released in time and not utilized.	Poor		Documents provided by Field Director; Discussion with Field Director;	<div>The details of funds released and utilized under different schemes of the State Government is as below: (Rupees in lakhs)</div> <table><tr><th>Year</th><th>Name of the scheme</th><th>Released Amount</th><th>Utilised Amount</th></tr><tr><td>2011-12</td><td>Around 19 different</td><td>232.312</td><td>230.403</td></tr><tr><td>2012-13</td><td>Plan & Non-plan</td><td>552.717</td><td>548.279</td></tr><tr><td>2013-14</td><td>schemes of the State Government</td><td>758.099</td><td>744.039</td></tr></table>	Year	Name of the scheme	Released Amount	Utilised Amount	2011-12	Around 19 different	232.312	230.403	2012-13	Plan & Non-plan	552.717	548.279	2013-14	schemes of the State Government	758.099	744.039
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Some specific allocation for management of priority action. Funds are inadequate and there is some delay in release, partially utilized.	Fair																			
Comprehensive planning and allocation that meets the most important objectives. Generally funds released with not much delay and mostly utilized.	Good																			
Comprehensive planning and allocation of resources for attainment of most objectives. Funds generally released on-time and are fully utilized.	Very good	✓		The utilization of funds has been almost cent-percent in all the years. Funds from the State Government are adequate and also timely released. There is an increasing trend in budget allotment in various schemes of the State Government over last three years.																

**Obtain details of funds released by State and their utilization by TR in the last 3 years and indicate them under 'Remarks'. Also comment on the problems associated with fund allocation and their utilization.*

3.5 What level of resources are provided by NGOs?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
NGOs contribute nothing for the management of the TR.	Poor		Documents provided by Director; Discussion with Director;	Wildlife Conservation Trust (WCT), Centre for Wildlife Studies/ Wildlife Conservation Society and ATREE are the main contributors to BRTR. Latter two NGOs mainly contribute in terms of research activities while WCT contribute in terms of vehicles, bicycles, equipment such as binoculars, wireless sets, GPSs, search lights, torches,, tents, jackets, shoes, back-packs etc. on regular basis. WCT had also bought 25.37 acres of land in corridor area to strengthen the corridor.
NGOs make some contribution to management of the TR but opportunities for collaboration are not systematically explored.	Fair			
NGOs contributions are systematically sought and negotiated for the management of some TR level activities.	Good	✓		
NGOs contributions are systematically sought and negotiated for the management of many TR level activities.	Very good			

4. Process

4.1 Does the TR have manpower resources trained in wildlife conservation for effective TR management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No trained officers and frontline staff in the TR.	Poor		Documents provided by Director; Discussion with Director;	No frontline staff and no officer presently posted in BRTTR have any formal training in wildlife management. However, the field staffs are periodically imparted training related to wildlife matters. During last three years, staffs were provided weapon training, training on rainwater harvesting, use of GPS and GIS, use of HULI software, wildlife crime and investigation and Phase-IV monitoring. A concrete staff training programme on issues related to various management aspects of BRTTR should be incorporated in TCP.
Some trained officers and few trained frontline staff, posted in the TR.	Fair	✓		
All trained officers and fair number of trained frontline staff posted in the TR.	Good			
All trained officers and most of the trained frontline staff is posted in the TR.	Very good			

**Indicate % of trained staff in various categories. The number and thematic areas of the 'Internal Training' programmes organized in the TR in the last 3 years may be taken into account. Has the TR prepared a 'Staff Development Plan'? Is it being implemented?*

4.2 Is TR staff management performance linked to achievement of management objectives?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No linkage between staff management performance and management objectives.	Poor		Documents provided by Director; Discussion with Director;	There is no direct linkage between staff management performance and their promotions. Confidential reports of the staff are used to judge their performance and promotion is linked to performance and fulfillment of the other eligibility criteria for the post, especially the number of years spent in the current post.
Some linkage between staff management performance and management objectives, but not consistently or systematically assessed.	Fair	✓		
Management performance for most staff is directly linked to achievement of relevant management objectives.	Good			
Management performance of all staff is directly linked to achievement of relevant management objectives.	Very good			

4.3 Is there effective public participation in TR management and does it show in making a difference?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no public participation in TR management.	Poor		Information provided by Director; Discussion with Director;	62 volunteers from 10 different places of Karnataka participated in population estimation exercise in 2013. Apart from involvement of volunteers in census, the public participation manifests in the form of intelligence sharing. A jaw trap case was caught and offenders were convicted because of information received from some EDC members of a Soliga settlement. Similarly, intelligence gathered from villagers resulted in nabbing of tiger and elephant poachers in last one year near Punjur. Many people from tribal settlements participate in fire extinguishing activities. Many NGOs and other independent volunteers help the BRTTR Management during festivals like Dodda Jatre of BR temple, and Rotti Habba at Dodda Sampige tree, especially in crowd control. Wildlife week celebration, organization of awareness camps for school children also help in garnering public participation.
Opportunistic public participation in some of the relevant aspects of TR management.	Fair			
Systematic public participation in most of the relevant aspects of TR management.	Good	✓		
Comprehensive and systematic public participation in all important and relevant aspects of TR management.	Very good			

**The involvement of NGOs/ NGLs in population estimation may be taken into account)*

4.4 Is there a responsive system for handling complaints and comments about TR management?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Ad-hoc approach to handling complaints.	Poor		Information provided by Director; Discussion with Director;	There is a system of handling and redressal of complaints and receiving feedback. Any petition received by the Director, is forwarded to an ACF for inquiry and suitable action is taken after the enquiry report is received. RTI register is systematically maintained. Year-wise detail of RTI applications received and disposed is as under:
Complaints handling system operational but not responsive to individual issues and with limited follow up.	Fair	✓		
Coordinated system logs and responds effectively to most complaints.	Good			
All complaints systematically logged in coordinated system and timely response provided with minimal repeat complaints.	Very good			

Year	RTI App. Received	Disposed
2011-12	22	22
2012-13	16	16
2013-14	22	22

**Does the TR maintain 'Suggestions Register'? What actions are taken to deal with suggestions?*

4.5 Does TR management addresses the livelihood issues* of resource dependent communities, especially of women?

Assessment criteria																		
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks														
No livelihood issues are addressed by TR management.	Poor		Information provided by Director; Discussion with Director;	BRTTR Management is sensitive towards addressing the livelihood issues of communities with forest dependencies.														
Few livelihood issues are addressed by TR management.	Fair			The details of employment generated by different activities of BRTTR is as follows:														
Substantial livelihood issues are addressed by TR management.	Good	✓		2011-12 166527 mandays 2012-13 268008 mandays 2013-14 297126 mandays														
Livelihood issues of resource dependent communities especially of women are addressed effectively by TR managers.	Very good			Soligas are local tribes who have been collecting honey and lichens for generations. It has been streamlined by giving community rights to these settlements under Forest Rights Act, 2006. The collection has been limited by allowing this activity only in fixed areas, for a fixed period of time. They sell these products to local LAMPS (Large Adivasi Multi-Purpose Society) societies headed by ACFs of the two sub-divisions. An initiative of value-addition and branding to this has been started at Kanneri colony. <table border="1"><tr><th>Minor Forest Produce</th><th>Income in 2012-13 (Rs.)</th><th>Income in 2013-14 (Rs.)</th></tr><tr><td>Honey</td><td>405720</td><td>989340</td></tr><tr><td>Tree Mas</td><td>2315800</td><td>3767940</td></tr><tr><td>Broom stick</td><td>112791</td><td>88809</td></tr><tr><td>Total</td><td>2834311</td><td>4846089</td></tr></table>	Minor Forest Produce	Income in 2012-13 (Rs.)	Income in 2013-14 (Rs.)	Honey	405720	989340	Tree Mas	2315800	3767940	Broom stick	112791	88809	Total	2834311
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Tree Mas	2315800	3767940																
Broom stick	112791	88809																
Total	2834311	4846089																
				Kanneri Colony EDC also gets a share from the wildlife safari fees paid by K. Gudi Wilderness Camp (a unit of Jungle Lodges & Resorts Ltd.). The EDC has received around Rs. 18 lakhs from ecotourism since its inception. Forest fringe villages and inside enclosures have been provided with a total of 1219 LPG connections over last 2 years. 1137 Solar Lanterns have been given to local communities														

***The number of mandays generated in the last 3 years may be taken into account. Are funds received from District Agencies and other sources? Provide details of funds received in last 3 years.**

4.6 Has the TR planned and implemented the voluntary 'Village Relocation' from the Core/ Critical Tiger Habitat (CTH)?

Assessment criteria⁺				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No planning and no implementation	Poor	✓	Documents provided by Director; Discussion with Director;	10 Soliga settlements with 396 families (population-2247), BR Hills Enclosure and 5 Coffee Estates are inside the core area. A study is being planned, to confirm whether the activities of Soligas or the impact of their presence upon wild animals is sufficient to cause irreversible damage and it threatens the existence of tigers and their habitat. Soligas have not yet opted for voluntary relocation.
Plans have been made but no implementation	Fair			
Plans have been made and some implementation is in progress	Good			
Plans have been made and are being actively implemented/ no human habitation in the CTH	Very good			

***Assessment will look into the village relocation planning process including availability of manpower, financial resources and NGO support, if any. Is there a mechanism to address the complaints received in respect of relocation process? Effort must be made to assess post-relocation success or otherwise.**

5. Output

5.1 Is adequate information on TR management publicly available?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no information on TR management publicly available.	Poor		Publicity material; Documents provided by Director; Discussion with Director;	Some information about the TR management is uploaded on the official tiger reserve website and is easily accessible to public. The BRTTR website is www.brt.gov.in . Other websites which display information related to the Reserve are The State Forest Department website www.karnatakaforest.gov.in and www.aranya.gov.in . The Reserve also has a Facebook page to increase its public presence. The brochures provide some basic information about the Reserve and tourism facilities. A new booklet named 'BRT – A Walk Through' has been published which covers the essence of the Reserve from various perspectives. It has been circulated widely. Publicity boards are displayed on roads and appropriate places. Information about TR management are also made available to the public through EDC/VFC meetings.
Publicly available information is general and has limited relevance to management accountability and the condition of public assets.	Fair			
Publicly available information provides detailed insight into major management issues and condition of public assets.	Good	✓		
Comprehensive reports are routinely available in public domain on management and condition of public assets.	Very good			

5.2 Are visitor services and facilities appropriate and adequate?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Visitor services and facilities do not exist.	Poor		Documents provided by Director; Discussion with Director; Field visits	K.Gudi is the Tourism center which is located inside the core. 7 rooms and 1 dormitory are provided by the BRTR Management to the visitors in K.Gudi and BR Hills tourism area. Jungle Lodges & Resorts Ltd. (JLR) also operates 8 tents, 3 loghuts and 2 dormitories for visitors. Safari tourism facilities are provided to the visitors through BRTR Management and JLR in the K.Gudi tourism area. There is a trek around the camping site at K. Gudi. Restrooms are available at K. Gudi. The tourism in the Reserve is completely regulated.
Visitor services and facilities are very basic.	Fair			
Visitor services and facilities are monitored from time to time and are fairly effective.	Good	✓		
Visitor services and facilities are conscientiously maintained, regularly upgraded and monitored for visitor satisfaction	Very good			

*Include the existence and quality of visitor and interpretation centers, including skills and capabilities of personnel manning these, TR related publications, films, videos; arrangements of stay (including places serving refreshments and food owned and managed by TR), watch towers and hides including safety factors, vehicles assigned for visitors including riding elephants, if any and their deployment, drinking water, rest rooms, garbage disposal, attended and self-guided services in the field, visitor feedback on the quality of wilderness experience.

5.3 Are research / monitoring related trends systematically evaluated and routinely reported and used to improve management?

Assessment criteria*																															
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks																											
Little or no systematic evaluation or routine reporting of trends.	Poor		Documents provided by Director;	BRTTR has good research based information. 31 research studies have been conducted in the Reserve from 1996 to 2014. The research reports are analyzed and some of the research findings have been incorporated in draft TCP. The following is the list of Research studies which have been used inTCP:																											
Some evaluation and reporting undertaken but neither systematic nor routine.	Fair		Discussion with Director;																												
Systematic evaluation and routine reporting of trends undertaken.	Good	✓																													
Systematic evaluation and comprehensive reporting of trends undertaken and attempts made at course corrections as relevant.	Very good																														
				<table><tr><th>S No</th><th>Research/Study Topic</th><th>Integration part of TCP</th></tr><tr><td>1</td><td>Distribution and dynamics of tigers by Dr U Karanth, CWS</td><td>Tiger density, Tiger numbers, Tiger Carrying Capacity</td></tr><tr><td>2</td><td>Study on elephants by Dr Sukumaran, CES</td><td>Home Range and Ranging Pattern of elephants</td></tr><tr><td>3</td><td>Biogeographical origin of BR Hills, ATREE</td><td>Geology of the TR</td></tr><tr><td>4</td><td>Species listing by Dr. Jayadev and S Karthikeyan</td><td>Species Lists</td></tr><tr><td>5</td><td>Long term vegetation monitoring and Lantana invasion, ATREE</td><td>Threats to the TR</td></tr><tr><td>6</td><td>Threats to the BRT Wildlife Sanctuary, ATREE</td><td>Threats to the TR</td></tr><tr><td>7</td><td>Monitoring Tigers, Co-predators, Prey and their Habitat : Field Guide</td><td>Protocols for monitoring</td></tr><tr><td>8</td><td>Predictive equation for large predators from prey biomass, Hayward et al</td><td>Tiger Carrying Capacity</td></tr></table>	S No	Research/Study Topic	Integration part of TCP	1	Distribution and dynamics of tigers by Dr U Karanth, CWS	Tiger density, Tiger numbers, Tiger Carrying Capacity	2	Study on elephants by Dr Sukumaran, CES	Home Range and Ranging Pattern of elephants	3	Biogeographical origin of BR Hills, ATREE	Geology of the TR	4	Species listing by Dr. Jayadev and S Karthikeyan	Species Lists	5	Long term vegetation monitoring and Lantana invasion, ATREE	Threats to the TR	6	Threats to the BRT Wildlife Sanctuary, ATREE	Threats to the TR	7	Monitoring Tigers, Co-predators, Prey and their Habitat : Field Guide	Protocols for monitoring	8	Predictive equation for large predators from prey biomass, Hayward et al	Tiger Carrying Capacity
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Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
				<div>9</div> <div>Genotyping faecal samples of Bengal tiger Panthera tigris tigris for population estimation: A pilot study</div> <div>For reporting tiger numbers in the past</div>
				<div>10</div> <div>Distribution and Abundance of large mammals in BRT Wildlife Sanctuary by H N Kumara et al</div> <div>Tiger Carrying Capacity, Distribution and status of mammals</div>
				<div>11</div> <div>Many other papers</div> <div>Values of the TR, SWOT analysis</div>
<p>HULI software has been developed indigenously to provide a comprehensive solution for digitization of Phase IV monitoring protocol of NTCA with the best available proven technologies. As the TR has been newly formed, there are no 'Sykes & Horill' plots in the Reserve.</p>				

***Not all TRs attract projects and researchers and with exceptions, little research takes place on the TRs own steam because of systemic limitations. However, monitoring of some critical issues is expected e.g. population of tiger, co-predators and prey with insights into their demography and distribution (some opportunistic sampling by sightings, signs and spatial distribution during assessment would be extremely useful in terms of expert impression and as a pulse), monitoring incidence of livestock grazing, fires, weeds, sources of water, a variety of illegal activities typically associated with the reserve, wildlife health (e.g. epidemics, immunization of livestock) regeneration and change in vegetation, visitors and their activities, offence cases, ex-gratia payments etc. Efforts must be made to assess the planning and implementation of Phase-IV monitoring protocols and the success of implementation of M-Stripes (wherever applicable). Are the 'Sykes and Horill' monitoring plots maintained and data analyzed?**

5.4 Is there a systematic maintenance schedule and funds in place for management of infrastructure / assets?

Assessment criteria																
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks												
No systematic inventory or maintenance schedule.	Poor		Documents provided by Director; Discussion with Director;	There is an annual Store and Tools schedule in the form of FAC (Forest Accounts Code) which is maintained at the BRTTR headquarters and Range level. The systematic inventories of all the assets, movable and immovable, are maintained in these schedules. There is a state-sponsored scheme for building maintenance. Maintenance of APCs is done under various state and center schemes. Likewise, there are state-sponsored schemes for maintenance of weapons and vehicles. Departmental roads are also maintained in different state and central schemes. For vehicles, tyres are changed and servicing is done as per fixed kilometer readings. Most of other maintenance is done on requirement basis. Funds are adequate for maintenance of all these assets.												
Inventory maintenance is adhoc and so is the maintenance schedule.	Fair															
Systematic inventory provides the basis for maintenance schedule but funds are inadequate.	Good	✓														
Systematic inventory provides the basis for maintenance schedule and adequate funds are made available.	Very good															
				<table><tr><th>Year</th><th>No. of Buildings Repaired</th><th>Amount Spent</th></tr><tr><td>2011-12</td><td>7</td><td>399960</td></tr><tr><td>2012-13</td><td>56</td><td>5904766</td></tr><tr><td>2013-14</td><td>64</td><td>6209173</td></tr></table>	Year	No. of Buildings Repaired	Amount Spent	2011-12	7	399960	2012-13	56	5904766	2013-14	64	6209173
Year	No. of Buildings Repaired	Amount Spent														
2011-12	7	399960														
2012-13	56	5904766														
2013-14	64	6209173														

6. Outcomes

6.1 Are populations of threatened species declining, stable or increasing?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Populations of key threatened/ endangered species are declining.	Poor		Information provided by Field Director;	<p>Although no regular censuses of threatened species are carried out in the TR some data is available from studies reported in various research papers. It has been reported in a study of 2010 that the prey biomass of the TR is more than 4127.82 kg/ km² due to high density of gaur and sambar. It further says that only 7 parks in the country have biomass above 4000 kg/ km². Good no. of sighting of jungle cat, leopard cat, rusty spotted cat and slender loris has been reported. The paper says that eleven sightings of rusty spotted cat / km is a first record of significant sightings for any forest.</p> <p>BRT also has a very healthy elephant population. The minimum density of elephants for the reserve was estimated to be 1.17 individuals km⁻². This estimate gives an approximate number of around 670.</p> <p>Other than these the population of Leopard was reported as around 45 in the last management plan prepared in 2008.</p> <p>However in the absence of any regular census the above data can not be assumed to indicate increasing trend for most of the species.</p>
Some threatened/ endangered species populations declining, some are increasing, most others are stable.	Fair	✓		
Several threatened/ endangered species populations increasing, most others are stable.	Good			
All threatened/ endangered species populations either increasing or stable.	Very good			

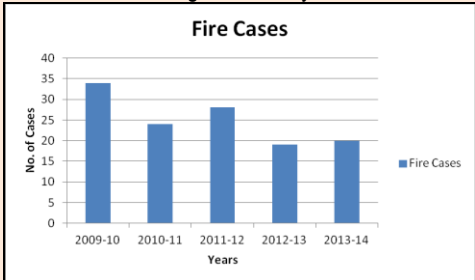
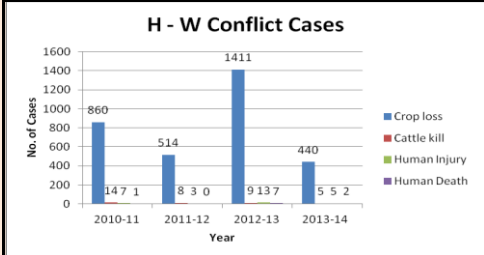
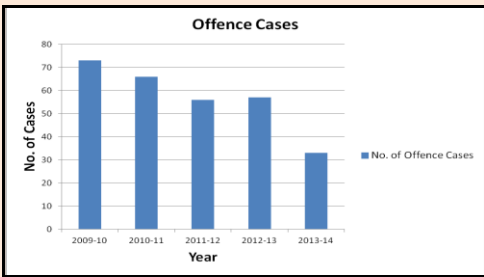
**This needs to practically relate to the natural ecosystem potential rather than being driven merely by numbers and visibility. The assessment score may be elaborated under remarks.*

6.2 Is the population of tigers showing a declining, stable or increasing trend?

Assessment criteria																
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks												
Population of tiger is showing a declining trend	Poor		Information provided by Director;	<div>The tiger census data for last three cesuses is shown below:<table><tr><th>Year</th><th>Density of Tiger / 100 km²</th><th>Estimated no. of Tigers in reserve</th></tr><tr><td>2011</td><td>6.7</td><td>38</td></tr><tr><td>2012</td><td>9.9</td><td>57</td></tr><tr><td>2013</td><td>10.21</td><td>59</td></tr></table><div>The above figures are based on Study on distribution and dynamics of tigers by WCS/CWS. These figures show an increasing trend in tiger population and also very high tiger density in the area.</div></div>	Year	Density of Tiger / 100 km ²	Estimated no. of Tigers in reserve	2011	6.7	38	2012	9.9	57	2013	10.21	59
Year	Density of Tiger / 100 km ²	Estimated no. of Tigers in reserve														
2011	6.7	38														
2012	9.9	57														
2013	10.21	59														
Population of tiger is stable	Fair															
Population of tiger is showing an increasing trend	Good	✓														
Population of tiger has significantly increased	Very good															

**This assessment should be based in the context of available population estimate (2012-13) and the outcomes of the currently ongoing Phase-IV analyses.*

6.3 Have the threats+ to the TR being reduced / minimized? Or is there an increase?

Assessment criteria										
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks						
Threats to the TR have not abated but have enhanced.	Poor		Information provided by Director; Discussion with Director;	The threats like HWC, forest fire, poaching, illicit cutting of trees, biotic pressure have been controlled.						
Some threats to the TR have abated, others continue their presence	Fair			Fire incidents during last three years						
Most threats to the TR have abated. The few remaining are vigorously being addressed	Good	✓								
All threats to the TR have been effectively contained and an efficient system is in place to deal with any emerging situation	Very good			Human Wildlife Conflict cases during last three years <table border="1"><tr><td>2011-12</td><td>525</td></tr><tr><td>2012-13</td><td>1440</td></tr><tr><td>2013-14</td><td>451</td></tr></table> 	2011-12	525	2012-13	1440	2013-14	451
2011-12	525									
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2013-14	451									
				Offence cases during last three years <table border="1"><tr><td>2011-12</td><td>56</td></tr><tr><td>2012-13</td><td>57</td></tr><tr><td>2013-14</td><td>33</td></tr></table> 	2011-12	56	2012-13	57	2013-14	33
2011-12	56									
2012-13	57									
2013-14	33									
The above information indicates that most threats are being effectively controlled and BRTTR Management is responsive to all these threats.										

***Does the TR have a Disaster Risk Management Plan to deal with existing as well as emerging threats?**

6.4 Are the expectations of visitors+ generally met or exceeded?

Assessment criteria																																					
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks																																	
Expectations of visitors generally not met.	Poor		Information provided by Director; Discussion with Director;	Visitor expectations are generally met. Suggestions and feedback of visitors are examined and implemented. There is always scope of improvement and BRTTR Management is endeavoring to bridge the gap between expectations and real experience. The visitation data is shown below: <table><tr><th rowspan="2">Year</th><th colspan="3">No. of visitors</th><th rowspan="2">Amount collected</th></tr><tr><th>Indians</th><th>Foreigners</th><th>Total</th></tr><tr><td>2009-10</td><td>6495</td><td>197</td><td>6692</td><td>14,48,465</td></tr><tr><td>2010-11</td><td>5443</td><td>184</td><td>5627</td><td>12,28,390</td></tr><tr><td>2011-12</td><td>5943</td><td>38</td><td>5981</td><td>12,57,200</td></tr><tr><td>2012-13</td><td>5897</td><td>237</td><td>6134</td><td>5,14,950</td></tr><tr><td>2013-14</td><td>6740</td><td>211</td><td>6951</td><td>15,41,900</td></tr></table>	Year	No. of visitors			Amount collected	Indians	Foreigners	Total	2009-10	6495	197	6692	14,48,465	2010-11	5443	184	5627	12,28,390	2011-12	5943	38	5981	12,57,200	2012-13	5897	237	6134	5,14,950	2013-14	6740	211	6951	15,41,900
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Expectations of many visitors are met.	Fair																																				
Expectations of most visitors are met.	Good	✓																																			
Expectations of almost all visitors are met.	Very good																																				

***What is the compliance status on Supreme Court/ NTCA Guidelines on Ecotourism in TRs?**

6.5 Are local communities supportive of TR management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Local communities are hostile.	Poor		Information provided by Field Director; Discussion with Field Director;	<p>Generally, local communities are supportive of the BRTTR Management. Intelligence sharing and fire management are two critical activities in which the Reserve is well supported by the local communities. However, BRTTR Management must continuously work to involve local communities in conservation and simultaneously provide them better livelihood options.</p>
Some are supportive.	Fair			
Most locals are supportive of TR management.	Good	✓		
All local communities supportive of TR management.	Very good			

***There could be many reasons for disenchantment. It could be real because of managerial neglect or the managerial efforts could be appropriate but there could be local elements/organizations who would like to keep the disaffection simmering for their own ulterior motives. Likewise success could be entirely because of the efforts of managers or they might be fortunate in striking partnerships with credible NGOs. Assessment may take the prevailing causes into account.**

7. MEE Score Card*

Framework Element Number	Framework Element Name	Number of Criteria (a)	Maximum Mark per question (b)	Total (a x b)	Marks obtained for the Element	Overall MEE Score and % age
1	Context	4	10	40	27.5	70.97%
2	Planning	7	10	70	55	
3	Inputs	5	10	50	40	
4	Process	6	10	60	32.5	
5	Outputs	4	10	40	30	
6	Outcomes	5	10	50	35	
Total		31		310	220	

**Efforts will be made by the NTCA-WII-MEE Team to address the issue of assigning 'differential' weightages to the 30 Assessment Criteria including 'normalization'.*

Assessment Criteria for Addressing Issues Relating to Climate Change & Carbon Capture In The Tiger Reserves (TRs)

1. Additional Criteria on Climate Change: Is the TR being consciously managed to adapt to climate change?

Condition	Category*	(Tick ✓)	Comment / Explanation	Next Steps
There have been no efforts to consider adaptation to climate change in management	Poor		BRTTR is not being consciously managed to adapt to climate change. Since the BRTTR Management is preparing TCP, it is, therefore, advisable to incorporate management actions to predicted climate change.	Since TCP is in draft stage, based on knowledge available on this issue, a workshop may be organized inviting experts in this field as resource persons and the recommendation of the workshop may provide management actions to adapt to climate change. Guide lines should be issued at National Level for assessment of impacts and measures for adaptations so as to prepare specific plans and their integration with the TCP
Some initial thought has taken place about likely impacts of climate change, but this has yet to be translated into management plans	Fair	✓		
Detailed plans have been drawn up about how to adapt management to predicted climate change, but these have yet to be translated into active management.	Good			
Detailed plans have been drawn up about how to adapt management to predicted climate change, and these are already being implemented	Very good			

2. Additional Criteria on Climate Change: Is the TR being consciously managed to prevent carbon loss and to encourage further carbon capture?

Condition	Category*	(Tick ✓)	Comment / Explanation	Next Steps
Carbon storage and carbon dioxide capture have not been considered in management of the TR	Poor		BRTTR is preventing carbon loss by adopting the following conservation measures: Measures for prevention of forest fires Reducing biotic pressure and protection of forest Promoting use of alternative source of energy including solar energy by local people as well as the staff residing inside the Reserve Although the various measures have been taken as part of the holistic conservation measures to prevent the carbon loss, clear prescriptions are required to be incorporated in TCP for reducing carbon emission/ effecting carbon capture in planning various activities / operations.	It is necessary to issue guide lines at National level for adopting various measures in this direction without compromising the primary objectives of Wildlife habitat/ TR management to preserve the biodiversity of unique habitats/ eco-systems.
Carbon storage and carbon dioxide capture have been considered in general terms, but has not yet been significantly reflected in management	Fair	✓		
There are active measures in place to reduce carbon loss from the TR, but no conscious measures to increase carbon dioxide capture	Good			
There are active measures in place both to reduce carbon loss from the TR and to increase carbon dioxide capture	Very good			

Management Effectiveness Evaluation (MEE) of Periyar Tiger Reserve

1. Context

1.1 Are the values of the TR well documented, assessed and monitored?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Values not systematically documented, assessed and monitored.	Poor		Discussion with CWLW,FD &DD, TCP para-1.3 and chapt-14,FD office records and field visit.	<p>Periyar Tiger Reserve (PTR) is situated in the Cardamom Hills and Pandalam Hills of Southern Western Ghats and its 90 km boundary share with Tamil Nadu boundary. The erstwhile Travancore State permitted to construct a dam across the Periyar river to provide irrigation to Tamil Nadu and Periyar Lake was formed in 1885. Forests around the lake was declared as Periyar Lake RF in 1899 by Travancore State and then realizing the importance of game preservation area around lake was declared Nellikkampetti Game Sanctuary in 1934 and in 1950 it was expanded into Periyar WL Sanctuary (777 km²). Considering the importance of the sanctuary in respect of its tiger population, the area was brought under Project Tiger in 1978 as 10th Tiger Reserve in the country. Terrain is undulating and rugged with lofty peaks and altitude varies from 100 m to 2019 m averaging 800m. The average rainfall is 2000 mm annually and temperature ranges 15°C to 31°C. Vegetation consists of ever green /semi ever green(74.6%), moist deciduous (12.7%), grass-land including sholas and savannahs etc (2.1 %), eucalyptus plantation(7.1 %) and aquatic ecosystem(3.5%). The Reserve has 1985 species of Angiosperm in which 50% are flower plants. Some of the Orchidaceae, Rubiceae and Acanthaceae families are endemic to PTR. These forests support significant endangered faunal species viz Tiger, Elephant, Gaur, LMT, Nilgiri langur, Nilgiri Tahr, sloth bear, Great Indian Hornbill etc. PTR has recorded 63 species of mammals (9 are endemic to WG), 323 species of birds (14 are endemic to WG), 48 species of reptiles (17 are endemic to WG), 29 species of amphibians (12 are endemic to WG), 45 species of fishes (16 are endemic to WG including 7 endemic to Periyar) and 167 species of butterflies (20 are endemic to WG).</p> <p>All the values of the TR are systematically identified and well documented in the categories of bio-diversity, economic, cultural, catchment, human ecological, aesthetic and scientific values. Parameters and criteria for monitoring & evaluation with success indicators of each value and schedule of evaluation have been explicitly prescribed. Periodically these are assessed through the Annual Reports, Census Reports through Camera Trap method, STRIPES protocol and study reports of different agencies.</p> <p>For regular monitoring of the values of marshy land management, weed management, waterhole management, fire management are being carried out by various short and long term studies mainly by the professionals of Periyar Tiger Conservation Fund (PTCF).</p>
Values generally identified but not systematically assessed and monitored.	Fair			
Most values systematically identified, assessed and monitored.	Good			
All values systematically identified, assessed and monitored.	Very good	✓		

1.2 Are the threats to TR values well documented and assessed*?

Assessment criteria⁺				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Threats not systematically documented or assessed.	Poor		Discussion with CWLW, FD & DD, TCP(core) chapt 3&6 and TCP(buffer) chapt-15 and field visit.	All the threats have systematically been identified, described and assessed in the management plan. Most of the threats identified are unmanaged pilgrimage in Sabarimala and Mangaladevi, porous inter-state boundary, poaching , private estates on boundary, fire, cattle grazing, invasion of woody species in grass-lands and voyals, collection of NTFP and firewood, potential threats of construction of new dams, eucalyptus plantation and low-lying power line. For threats assessment, the SWOT analysis for core and buffer has separately been carried out.
Threats generally identified but not systematically assessed.	Fair			
Most threats systematically identified and assessed.	Good			
All threats systematically identified and assessed.	Very good	✓		

****This assessment should be based on number, nature and extent of threats***

1.3 Is the 'Core Area' of TR free from human and biotic interference?

Assessment criteria⁺				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
The 'Core Area' has extensive human and biotic interference.	Poor		Discussion with FD/DD, DD office records, TCP and field visit.	All the human settlements/villages from the core zone have already been shifted to the fringe area of the buffer zone. The core zone of PTR is totally free from livestock grazing, cultivation, encroachments etc, resource extraction/ livelihood dependence of local communities; and thus no human or biotic interference exists in the Core Zone of PTR. The entire area of Core and Buffer is under the unified control of the Field Director.
The 'Core Area' has some human and biotic interference.	Fair			
The 'Core Area' has little human and biotic interference.	Good			
The 'Core Area' has no human and biotic interference.	Very good	✓		

****This assessment should be based on existence and the efforts made by TR management to address issues related to human settlements/ villages inside the core area; livestock grazing, cultivation, encroachments etc, resource extraction/ livelihood dependence of local communities and should reflect the overall interference due to all the above factors. The issue of 'Unified Control' of the 'Core' and 'Buffer' zones under the Field Director would also be taken into account.***

1.4 Has the TR complied with the four Statutory* Requirements (SR) along with Tripartite MoU and three Standard Operation Procedures (SOP)?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
None of the four SR, no compliance of Tripartite MoU and three SOPs met	Poor		Discussion with FD/DD, DD office records, TCP and field visit.	<p>All the four statutory requirements are successfully complied in PTR.</p> <ul style="list-style-type: none"> Core zone (881 sq km) and buffer zone (44 sq km) of PTR have been notified vide S.R.O. No. 1089/2007 (G.O. (P) No. 75/07/F&WLD dtd.31/12/2007) & vide S.R.O. No. 267/2011 (G.O. (P) No. 18/11/F&WLD dtd.22/03/2011) respectively. Periyar Foundation, already established during 2004, was reconstituted as Periyar Tiger Conservation Foundation (PTCF) in 2012 (Reg. No. 298/12/IV dtd.25/07/2012). Tiger conservation plans for core and buffer has already been approved by NTCA vide letter No. F. No.1-14/2011- NTCA dtd.21/03/2013. State-level Steering Committee under the Chairmanship of the Chief Minister has also already been constituted vide G.O. (Rt) No.72/2009/F&WLD dtd.12/02/2009 and one meetings of Steering Committee was conducted during 2009. There after no meeting has been held. Tripartite Agreement between Field Director, State Government and NTCA has been executed and complied in totality. The 3 SOPs on (i) Straying of Tiger in human dominated landscape, (ii) Tiger Mortality and (iii) Disposal of Carcasses are also strictly complied. There is no incident of tiger straying out from PTR. One sub-adult female death occurred during January 2011 due to intestinal parasites and carcass of the same was reported to have been disposed strictly following the NTCA protocol.
Two of the four SR, 50% conditions of the Tripartite MoU and SOPs complied	Fair			
Three of the four SR, 75% conditions of the Tri-partite MoU and SOPs complied	Good			
All four SR, 100% conditions of the Tripartite MoU and SOPs complied	Very good	✓		

***Statutory requirements are (1) Legal delineation and notification of Core and Buffer Areas; (2) Establishment of Tiger Conservation Foundation; (3) Development of a Tiger Conservation Plan; and (4) Constitution of a State level Steering Committee under the Chairmanship of the Chief Minister. TA refers agreement between Field Director, State Government and NTCA. The 3 SOPs are on (i) Straying of Tiger in human dominated landscape, (ii) Tiger Mortality and (iii) Disposal of Carcasses**

2. Planning

2.1 Status of Tiger Conservation Plan (TCP)*?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No TCP in place.	Poor		Discussion with CWLW, FD/DD, TCP chapt-6 and field visit.s	<p>PTR has a comprehensive and relevant TCPs for Core and Buffer which is duly approved by NTCA vide letter No. F. No.1-14/2011-NTCA dtd.21/03/2013. The TCP was prepared through participatory process by conducting TCP workshop involving stakeholders, line departments, scientific institutions, political representatives, etc held from 27th to 29th September 2010. A total of 85 representatives of stakeholders participated in the workshop. In addition to that suggestions made by the EDC members in monthly meetings have also been taken into consideration while finalizing the TCP.</p>
TCP is under preparation	Fair			
TR has a relevant TCP	Good			
TR has a comprehensive and relevant TCP, duly approved by the NTCA	Very good	✓		

***The scientific content and the participatory processes used in preparation of the TCP will be taken into account in assessing the quality of TCP.**

2.2 Does the TR safeguards the threatened biodiversity values?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR does not safeguard the threatened biodiversity values.	Poor		Discussion with CWLW, FD/DD, TCP chapt 10 &9, FD office records and field visit.	<p>A large number of threatened biodiversity values have been explicitly addressed in the TCP. Protection for tiger conservation has been accorded top priority in TR management and is addressed elaborately in protection plan. Further, the threatened biodiversity values are safeguarded through various zone and theme plans: fire management, habitat management, participatory forest management etc. Identifying illegal entry routes, Ganja cultivation and vulnerable areas for poaching, 71 anti-poaching camps have been established at strategic locations. Consequently, forest offences have decreased in last 3 years (31 cases in 2011, 23 cases in 2012 and 22 cases in 2013). EDC members have been motivated for the protection work and as a result, Vasantsena, a woman EDC, is voluntarily doing protection in Sandal area. TR has deployed the special protection force for Sandal wood region. Monsoon patrolling has been initiated in Ganja prone area for this purpose, 4 forest stations are established and 14 are proposed in TCP. Protection plan also contains strategy for improving infrastructure, communication facilities, vehicles, arms and ammunition, capacity building of the front line staff, intelligence gathering and joint patrolling with local people. Fire protection and control plan has been prepared. For safe movement of wild animals, corridor protection plan are in place. Disaster Management Plan has been sent for approval. In addition to that, strategies for specific issues like vehicular traffic regulation, high way patrolling, seeking Interstate co-ordination etc have been well designed and elaborated.</p> <p>Periyar Tiger Conservation Foundation has been constituted to attain the TR objectives. Livelihood issues of forest dependent communities have been addressed by the TR authority by involving people through varied Eco-developmental activities. Community Based Eco-tourism has been initiated to increase the income generation of the dependent people and in turn local people will help in TR management.</p> <p>Scientific monitoring of tigers, co-predators, prey and their habitat are detailed and are being adopted as per the directives of NTCA. The most threatened area of Goodricl Range of Ranni Forest Division, which was otherwise outside the core area, has been added into the core area and rendered protection from the year 2007 onwards. Thus, the TR safeguards the threatened biodiversity values.</p> <p>The prestigious Kerala Biodiversity Award 2013 (Government Organization) was granted to Periyar Tiger Conservation Foundation on 19 February 2014 for the outstanding contributions in the field of Biodiversity Conservation.</p>
TR safeguards a few threatened biodiversity values.	Fair			
TR safeguards a large number of threatened biodiversity values.	Good			
TR safeguards all threatened biodiversity values.	Very good	✓		

**Remarks need to elaborate on the kind of safeguards and how they work or are intended to work*

2.3 Are stakeholders given an opportunity to participate in planning process?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little, if any opportunity for stakeholder participation in planning.	Poor		Discussion with CWLW, FD/DD, TCP chapt-6 and field visit.	While preparing the TCP for Core and Buffer of PTR, participatory process has been adopted. Inception workshop was organized in September 2009 and workshop for the preparation of TCP was organized from 27 th to 29 th September 2010 by involving all stakeholders (EDCs, line departments, scientific institutions, political representatives, press people etc) and 85 representatives participated in the workshop. Further, at present 78 EDCs (User-group EDCs-3 nos, Neighbourhood EDCs-58 nos, Pilgrim-based EDCs -10 nos and Professional Group EDCs -7 nos) are functioning in PTR and they are confederated into Periyar East and West. Micro plans are prepared through participatory process (general body and executive committee meetings) in all 78 EDCs of PTR and confederations also take part in the planning process. All the stakeholders are identified and are regularly consulted as per the prescriptions given in the TCP.
Stakeholders participate in some planning.	Fair			
Stakeholders participate in most planning processes.	Good			
Stakeholders routinely and systematically participate in all planning processes.	Very good	✓		

*The result of participation must show in the field and not merely reported as a routine exercise.

2.4 Are habitat management programmes systematically planned, relevant and monitored, and contribute effectively to Tiger and other endangered species conservation?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Habitat management programmes are entirely adhoc.	Poor		Discussion with CWLW, FD/DD, TCP chapt -7, other documents and field visit.	All the habitat management programmes have been systematically planned, relevant and monitored and contribute effectively to tiger and other endangered species conservation. The habitats for tigers, co-predators, their prey populations (gaur, sambar, barking deer, etc) and other important threatened (IUCN categories) species such as hornbills, Nilgiri Tahr, etc are effectively managed with emphasis on the breeding and rearing habitat including factors such as food, water and shelter. Unique habitat types such as tall and marshy grass (vayals), are managed by controlled burning practices and monitored periodically by PTCF. Scientific maintenance of waterholes based on gap analysis is being carried out. The management of exotic/invasive weeds (Lantana, Eupatorium, Michania etc) is taken up as part of site-specific habitat management practices as well as grassland and marshy land management. The areas of high density of prey populations and potential habitats are prioritized and weed removal is being practiced and monitoring is carried out by PTCF professionals for its effectiveness. All riparian habitats that are important for hornbills and other arboreal animals are protected from fire, which helps in protecting the vegetation and canopy contiguity. Further, various protection measures are undertaken systematically as per prescriptions of TCP to safeguard the natural habitat to take their own course of enrichment/change and permanent plots for long term habitat monitoring has been created. Habitat management of invaded woody areas in grass lands through eradication of woody vegetation have been prescribed to be undertaken on experimental basis to check the conversion of grass land into woody land(7.2.2.3.3). For most species- specific habitat management interventions, prescriptions are to be implemented after proper study. However,
Limited planning and monitoring programmes are in place for habitat management.	Fair			
Habitat management programmes are generally planned and monitored.	Good			
Habitat management programmes are thoroughly planned and monitored.	Very good	✓		

				for the conservation of Hornbill, Otter, Nilgiri Tahr etc a glimpse of management interventions have been prescribed in the TCP (7.2.2.3.6) It was reported that for the corridor in the landscape a plan for adjoining areas/ corridor had been submitted for approval}.
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***This assessment should be primarily based on habitat management programmes in relation to habitats for species that are threatened (IUCN categories), are habitat specialists, subjected to seasonal movements, wide ranging with emphasis on the breeding and rearing habitat and may include factors such as food, water, shelter (all connotations).Habitat structure, composition, unique patches of vegetation and sensitive sites, sources of water and their distribution are integral. Corridors within buffer zone are critically important. For example, all riparian habitats. Have these been addressed? Is their a planning process in place? The management practices dealing with invasive species such as Lantana, Michania etc. would be examined.**

2.5 Does the TR has an effective Protection Strategy (PS)* and Security Plan and Security Audit (SA) in place?

Assessment criteria ⁺																							
Condition	Category [*]	(Tick ✓)	Reference document(s)	Remarks																			
TR has little or no PS and SA.	Poor		Discussion with CWLW, FD/DD, TCP-chapt-10, other documents and field visit.	Terrain of PTR is highly undulating and 71 anti-poaching camps are established in vulnerable areas keeping in views of the illegal entry routes into the TR.																			
TR has an adhoc PS and SA.	Fair			All vulnerable and sensitive areas prone to ganja cultivation and poaching have been identified. Special protection team is deployed for sandal wood protection and high way patrolling. Monsoon patrolling is ensured in ganja prone areas. 4 forest stations are established and 14 stations are proposed in the TCP. The varied Eco-developmental activities and participatory forest management has greatly enabled to control the illegal activities to a great extent in core as well as buffer zones. A fire prevention and control plan has been prepared and is practiced in the fire prone seasons. Inter-state level meetings are being conducted as per the Inter-state Protocol																			
sTR has a generally relevant PS and SA but is not very effective.	Good	✓		The protection/security plan also contain strategies for improving infrastructures, communication facilities, vehicles, arms and ammunition, deployment of staff, capacity building, intelligence gathering, joint patrolling etc.																			
TR has a comprehensive and very effective PS and SA.	Very good			Special Tiger Protection Force (STPF) is not constituted but special protection force is in place in TR. The details of offence for the past three years are shown in the following table: <table><tr><th>Year</th><th>wildlife +other cases</th><th>Charged/dropped/com-pounded</th><th>Pending</th><th>Convicted</th></tr><tr><td>2011</td><td>31</td><td>21</td><td>10</td><td>0</td></tr><tr><td>2012</td><td>23</td><td>18</td><td>5</td><td>0</td></tr><tr><td>2013</td><td>22</td><td>4</td><td>18</td><td>0</td></tr></table> It is evident from the table that the occurrence of number of cases has declining trend but the pendency of the cases for about 3 years and no conviction is matter of concern.	Year	wildlife +other cases	Charged/dropped/com-pounded	Pending	Convicted	2011	31	21	10	0	2012	23	18	5	0	2013	22	4	18
Year	wildlife +other cases	Charged/dropped/com-pounded	Pending	Convicted																			
2011	31	21	10	0																			
2012	23	18	5	0																			
2013	22	4	18	0																			

***This assessment takes inter-alia into account the nature of threats, the number and location of patrolling camps and foot and mobile patrolling, needs that relate to available manpower, terrain difficulties, practicability of area coverage, readiness to contain specific threats with necessary support and facilities. The constitution and functioning of Special Tiger Protection Force (STPF), Number of offences reported, arrests made, prosecution initiated and conviction achieved will be taken into account.**

2.6 Has the TR been effective in the mitigation of human-wildlife conflicts?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Human-wildlife conflicts are significant but poorly addressed.	Poor		Discussion with FD/DD, DD office records, TCP and field visit.	Human-wildlife conflict in PTR is in lesser degree due to the absence of enclosures or human settlements inside. Most of the conflicts are due to crop depredation. One person was killed by elephant during 2012-13 and two persons were attacked by wild animals in 2013-14 and timely action was taken for ex-gratia payment. To mitigate human-wildlife conflicts, Rs 4.80 lakhs in 2011-12, Rs7.54 lakhs in 2012-13 and Rs 3.65 lakhs in 2013-14 as compensation was paid to affected people. The damages are compensated by timely ex-gratia payments. Energized fences, trenches and stone walls are erected as barriers to reduce the damage due to the animals straying into the human habitations. The human-wildlife conflict measures in the territorial forest divisions contiguous to PTR are also proposed to be tackled in the TCP for adjoining/corridor areas by providing compensation and mitigation measures, etc.
TR has been able to mitigate few human-wildlife conflicts.	Fair			
TR has been able to mitigate many human-wildlife conflicts.	Good			
TR has been effective in mitigating all human-wildlife conflicts.	Very good	✓		

***The assessment will take into account the number of incidences reported and payment of compensation made and its timeliness.**

2.7 Is the TR integrated into a wider ecological network/ landscape following the principles of the ecosystem approach?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR not integrated into a wider network/ landscape.	Poor		Discussion with FD/DD, DD office records, TCP and field visit.	PTR landscape is large compact and continuous landscape of more than 4500 sq km being contiguous with the Agasthyamalai Biosphere Reserve in the south (Thiruvananthapuram Forest Division, Shenduruni and Thiruvananthapuram Wildlife Division) and Theni, Thirunelveli Forest Divisions & Srivilliputhur Sanctuary in Tamil Nadu State. It is also contiguous with the other forest divisions in the Western Ghats like Kottayam, Ranni, Konni, Achencol, Thenmala and Punalur. The important corridor in Aryankavu Gap has been identified. The areas selected as adjoining area for PTR is based on a study conducted by French Institute of Pondicherry (Rationalization of PA Network) & FERAL (Identification of corridor in Periyar-Agasthyamalai Landscape) and PTCF is formed for management of PTR and Adjoining Landscape. In addition, Biodiversity Conservation and Rural Livelihood Improvement Project (BCRLIP) is envisaged and initiated for the management of Periyar and Agasthyamalai Landscape. The Green India Mission (GIM), is one of the eight National Missions under India's National Action Plan on Climate Change is also being implemented at the landscape level (including the territorial divisions) in Kerala. It has been reported that The TCP for adjoining areas / corridor consists of the corridor in the landscape mitigating threats related to biodiversity conservation etc. along with incorporation of biodiversity conservation strategies in the working plans of territorial forest divisions in the identified landscape has been submitted for approval. However, it is noteworthy that only 44 km ² areas, having tourism, pilgrimage and various leases have only been identified as buffer area. Large areas of adjacent Rani and Kottayam Forest Divisions around the core, serving as ecological buffer has been left out. In the absence of securing these areas as buffer, the greater integration of landscape is doubtful.
Some limited attempts to integrate the TR into a network/ landscape.	Fair			
TR is generally quite well integrated into a network/ landscape.	Good	✓		
TR is fully integrated into a wider network/ landscape.	Very good			

***Assessment needs to consider the scope of opportunities on the landscape scale that exist. Consider whether any attempts have been made and what are these? Have all the important corridors been identified? What actions are planned/implemented for their security? Have the Forest Working Plans and Forest Development Corporation Plans within the identified landscapes taken cognizance of such new requirement? These should have been reflected in TCPs. Is there is any effort to rationalize land use around TR? Is any effort being made to plan and use 'Smart Green Infrastructure'?**

3. Inputs

3.1 Are personnel adequate, well organized and deployed with access to adequate resources in the Tiger Reserve (TR)*?

Assessment criteria ⁺																																													
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks																																									
Few, personnel explicitly allocated but poorly supported for TR management.	Poor		Discussion with FD/DD, DD office records, TCP and field visit.	<p>PTR comprises two divisions- Periyar East and Periyar West with 5 territorial Ranges and 3 functional Ranges (Eco-development, Research and Flying Squad) & 36 sections (basic unit of protection). There is a proposal in the TCP to increase the number of sections to 41 to enhance the protection.</p> <p>The existing sanctioned strength (total 383 including office staff) of staff in Periyar East and West Divisions are presently adequate and most of the important posts are filled except 18 BFOs (strength 213), 2 drivers (strength 10), 8 boat driver/ boat watcher (strength 11) and 2 draftsman (strength 2). Age wise classification of the existing front line staff (RFO, SFO and BFO/WATCHER) are given below:</p> <table><tr><th rowspan="2">Posts</th><th colspan="5">Age Classes(Yrs)</th></tr><tr><th>20-30</th><th>30-40</th><th>40-50</th><th>50-60</th><th>Total</th></tr><tr><td>RFO</td><td>-----</td><td>4</td><td>2</td><td>2</td><td>8</td></tr><tr><td>Dy RO</td><td>---</td><td>----</td><td>4</td><td>3</td><td>7</td></tr><tr><td>SFO</td><td>3</td><td>12</td><td>19</td><td>21</td><td>55</td></tr><tr><td>BFO</td><td>15</td><td>127</td><td>53</td><td>---</td><td>195</td></tr><tr><td>Total</td><td>18</td><td>143</td><td>78</td><td>26</td><td>265</td></tr></table> <p>Above indicates that most of the staff are young and are assets to the TR management. They are deployed in difficult areas where forest stations/anti-poaching camps are established to achieve the TR objectives. Field staffs are equipped with walkie talkie, metal detector, binocular and GPS etc. and forest stations/ anti-poaching camps are provided with wireless base sets, solar light facilities and basic amenities to live in the camps. About 200 daily waged mazdoors are also working in PTR at strategic places.</p> <p>Thus the Park management is well organized and is always ready to contain any specific threats with staff support and existing facilities.</p>	Posts	Age Classes(Yrs)					20-30	30-40	40-50	50-60	Total	RFO	-----	4	2	2	8	Dy RO	---	----	4	3	7	SFO	3	12	19	21	55	BFO	15	127	53	---	195	Total	18	143	78	26	265
Posts	Age Classes(Yrs)																																												
	20-30	30-40			40-50	50-60	Total																																						
RFO	-----	4			2	2	8																																						
Dy RO	---	----	4	3	7																																								
SFO	3	12	19	21	55																																								
BFO	15	127	53	---	195																																								
Total	18	143	78	26	265																																								
Some personnel explicitly allocated for TR management but not adequately supported and systematically linked to management objectives.	Fair																																												
Some personnel with fair support explicitly allocated towards achievement of specific TR management objectives.	Good																																												
Adequate personnel appropriately supported and explicitly allocated towards achievement of specific TR management objectives.	Very good	✓																																											

***This assessment should inter-alia be based on number of personnel allocated for attainment of TR objectives at the Range , Round, Beat and Patrolling camps levels or as relevant to the needs (sanctioned posts vis- a- vis existing personnel and needs beyond the sanctioned strengths. It is possible that posts have last been sanctioned several years back that do not now account for the current needs)**

3.2 Are resources (vehicle, equipment, building etc.) adequate, well organized and managed with desired access?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Few, if any, resources explicitly allocated for TR management.	Poor		Discussion with FD/DD, DD office records, TCP and field visit.	<p>The vehicles presently available includes Bolero/Gypsy(6), Jeep/Camper(12), Motor cycle(15), Swaraj Mazada(2) and Motor Boat(7) and are in good conditions. The vehicles are adequate and most of the vehicles are new and maintained periodically. All the vehicles are equipped with wireless communications.</p> <p>As field equipments, TR has wireless base set (18), Repeater(2), wireless mobile sets(21), walkie talkies(36), metal detector(4), camera traps(62), GPS (70), PDA (18), Laser Range Finders (40), Digital cameras (5), tents (2) and adequate no of compasses, computers, laptops, binoculars, solar chargers etc to meet the objectives of PTR</p> <p>All the 107 existing buildings including staff quarters, office buildings and related establishments are maintained periodically and presently used(Table 22.2 of TCP). TR contains 63 anti-poaching camps (excluding 8 temporary sheds) and some of them are well equipped and well furnished according to the field conditions. In addition to that few buildings are proposed to be constructed in the TR for better protection (para 22.3 &22.4 of TCP-chapter 22).</p> <p>TR owns 16 rifles and 1 pistol which is inadequate for protecting such a large area. As per TCP requirement of the arms for the TR management has been estimated to be 14 pistols and 84 rifles (TCP para-10.1.7.11).</p> <p>Thus, some more resources need to be allocated towards achievement of management objectives.</p>
Some resources explicitly allocated for TR management but not systematically linked to management objectives.	Fair			
Some resources explicitly allocated towards achievement of specific TR management objectives.	Good	✓		
Adequate resources explicitly allocated towards achievement of specific TR management objectives.	Very good			

** These form a variety of resources. These may be segregated into immovable (structures) and movable categories and each further may be considered under the essential and desirable categories. It is best to start with what are the minimum needs to attain each objective, what is available and manner of use/deployment. The proportions of the 'essentials' and 'desirables' along the importance gradient of objectives would serve as pointers for score categories. Specific remarks would be vitally important.*

3.3 Are financial resources other than those of the State linked to priority actions and are funds adequate, released timely and utilized?

Assessment criteria*																				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks																
Resource allocation is adhoc, funds are inadequate and seldom released in time and not utilized.	Poor		Discussion with FD/DD, DD office records, TCP and field visit.	<div>• The funds received from Government of India and their utilization by PTR in the last 3 years given below. <div>(Rupees in lakhs)</div></div> <table><tr><th>Year</th><th>Allot/ Release</th><th>Utilised</th><th>Balance</th></tr><tr><td>2011-12</td><td>295.12</td><td>283.97</td><td>11.15</td></tr><tr><td>2012-13</td><td>286.96</td><td>272.84</td><td>14.12</td></tr><tr><td>2013-14</td><td>357.01</td><td>341.12</td><td>15.89</td></tr></table> <div>Financial resources from the Government of India are effectively utilized based on the release for meeting the TR objectives. As appeared in the discussion with DD of Periyar East, no problem is faced by the TR authority in getting the fund released from the State Government. However, the inability to utilise the entire released amount need to be looked into.</div>	Year	Allot/ Release	Utilised	Balance	2011-12	295.12	283.97	11.15	2012-13	286.96	272.84	14.12	2013-14	357.01	341.12	15.89
Year	Allot/ Release	Utilised			Balance															
2011-12	295.12	283.97			11.15															
2012-13	286.96	272.84			14.12															
2013-14	357.01	341.12			15.89															
Some specific allocation for management of priority action. Funds are inadequate and there is some delay in release, partially utilized.	Fair																			
Comprehensive planning and allocation that meets the most important objectives. Generally funds released with not much delay and mostly utilized.	Good	✓																		
Comprehensive planning and allocation of resources for attainment of most objectives. Funds generally released on-time and are fully utilized.	Very good																			

***Obtain details of funds released by NTCA and their utilization by TR in the last 3 years and indicate them under 'Remarks'. Also comment on the problems associated with fund allocations and their utilization.**

3.4 Are financial resources from the State linked to priority action and funds adequate, timely released and utilized for the management of Tiger Reserve?

Assessment criteria*																
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks												
Resource allocation is adhoc, funds are inadequate and seldom released in time and not utilized.	Poor		Discussion with FD/DD, DD office records, TCP and field visit.	<div>The funds received from State Government and their utilization by PTR in the last 3 years given below:<div>(Rupees in lakhs)</div><table><tr><th>Year</th><th>Allot/ Release</th><th>Utilised</th></tr><tr><td>2011-12</td><td>187.125</td><td>187.125</td></tr><tr><td>2012-13</td><td>158.400</td><td>158.400</td></tr><tr><td>2013-14</td><td>280.000</td><td>240.340</td></tr></table></div>	Year	Allot/ Release	Utilised	2011-12	187.125	187.125	2012-13	158.400	158.400	2013-14	280.000	240.340
Year	Allot/ Release	Utilised														
2011-12	187.125	187.125														
2012-13	158.400	158.400														
2013-14	280.000	240.340														
Some specific allocation for management of priority action. Funds are inadequate and there is some delay in release, partially utilized.	Fair															
Comprehensive planning and allocation that meets the most important objectives. Generally funds released with not much delay and mostly utilized.	Good	✓														
Comprehensive planning and allocation of resources for attainment of most objectives. Funds generally released on-time and are fully utilized.	Very good															

***Obtain details of funds released by State and their utilization by TR in the last 3 years and indicate them under 'Remarks'. Also comment on the problems associated with fund allocation and their utilization.**

3.5 What level of resources are provided by NGOs?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
NGOs contribute nothing for the management of the TR.	Poor		Discussion with FD/DD, office records and field visit.	<p>Following supports have been provided by NGOs:</p> <p>(1)WCT (an NGO), has provided protection related equipments like water bottle(216), torches(251), rain coats(216),safari metal beds(216),back pack (216), mosquitoes'-nets (216), winter jackets (216), blankets (216), sleeping bags (200), hunter shoes (200), tents (25), splendor motorcycle(3) etc and these are explicitly allocated to field staff for achieving the TR objectives.</p> <p>(2)WWF supplied field guides at section-level for all staff for identifying animals in the field (150 nos.)</p> <p>(3)ATREE through Gandigram Rural Institute, Dindigul imparted training to EDC members (60 nos.) on handicraft making that helped better livelihood of dependent community of PTR.</p> <p>(4)WTI provided capacity building training for the professionals of PTCF (1 no.) and VANAM in association with Wildlife Association of Rajapalayam.</p> <p>(5)Nilgiri Wildlife Association conducted Awareness Campaigns (3 nos.) for the press/media from Tamil Nadu.</p> <p>(6)Kottayam Natural History Society (in Kerala) has provided considerable public support in conservation of resources.</p> <p>(7)NALAM HOSPITAL, Tamil Nadu conducted 50 medical camps for all the protection staff working in PTR, EDCs within and on the fringe of PTR.</p> <p>(8)CARE 4 WILD, Chennai donated 120 nos. sheet roll for bedding and 420 field shoes.</p> <p>(9)NGOs and individuals interested in conservation have been involved in population estimation and monitoring of wildlife at appropriate times.</p>
NGOs make some contribution to management of the TR but opportunities for collaboration are not systematically explored.	Fair			
NGOs contributions are systematically sought and negotiated for the management of some TR level activities.	Good			
NGOs contributions are systematically sought and negotiated for the management of many TR level activities.	Very good	✓		

4. Process

4.1 Does the TR have manpower resources trained in wildlife conservation for effective TR management?

Assessment criteria*																																													
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks																																									
No trained officers and frontline staff in the TR.	Poor		Discussion with FD/DD, TCP chapt 8 & 20, DD office records and field visit.	The Deputy Director (Periyar East) is trained in wildlife management from WII.																																									
Some trained officers and few trained frontline staff, posted in the TR.	Fair			All the Forest Range Officers and field staff in PTR have undergone training in wildlife modules being organized by PTCF for placing camera traps, identifying the individual tigers using Extract-Compare software prescribed by NTCA, laying transects, use of field equipments etc . All the Beat and Section Forest Officers undergo in-service training course for one year in combination with 3 months police training with Police Academy. Apart from the above, they are sensitized in wildlife management through 15 days capsule training by PTCF. Periyar Field Learning Center (FLC) also provides trainings to field staff on various aspects																																									
All trained officers and fair number of trained frontline staff posted in the TR.	Good	✓		The number and thematic areas of the 'Internal Training' programmes organized in the PTR by PTCF during 2013-14 is given below.																																									
All trained officers and most of the trained frontline staff is posted in the TR.	Very good			<table><tr><th>Subject</th><th>Participants</th><th>Number</th></tr><tr><td>Fish fauna of TR</td><td>F. watcher</td><td>23</td></tr><tr><td>Tiger monitoring/GPS</td><td>Field staff</td><td>17</td></tr><tr><td>WL crime prevention</td><td>----,,----</td><td>33</td></tr><tr><td>Managt. effectiveness</td><td>-----,,----</td><td>73</td></tr><tr><td>Tiger monitoring/8 day protocol</td><td>----,,----</td><td>72</td></tr><tr><td>Gen. Tr. On WL managt.</td><td>-----,,-----</td><td>73</td></tr><tr><td>Forest Acts/Laws</td><td>---,,---</td><td>55</td></tr><tr><td>Disaster Management</td><td>---,,---</td><td>53</td></tr><tr><td>Camera Trap Training</td><td>---,,---</td><td>56</td></tr><tr><td>Phasse-I Monitoring Tr Programme</td><td>All Field staff of Kerla in 25 batches</td><td>2100</td></tr><tr><td>Tr. On office procedures</td><td>Office staff</td><td>22</td></tr><tr><td>Personal Effectiveness</td><td>Office/field staff</td><td>97</td></tr><tr><td>Identification of plant spp</td><td>Field staff</td><td>32</td></tr></table> <p>In addition to that, Periyar Field Learning Centre conducted training on Participatory Forest Management in Gujarat, Capacity building in Forestry and community based Eco-tourism Programme in Himachal Pradesh / GSWLS in which total 165 staff + EDC members participated. However, personnel should undergo long/short term courses of wildlife management in WII, D.Dun for effective management. The TCP of Core and Buffer of PTR contains Human Resource Development Plan. Some themes of training for protection, human - wildlife conflict, fire management and wildlife management has been prescribed and few of them has been implemented at Periyar Field Learning Centre. Specialized training programmes for long/short term courses (TCP-para 8.5, Table-8.1) for various categories of officers and front line staff is given with names of the Institutions.</p>	Subject	Participants	Number	Fish fauna of TR	F. watcher	23	Tiger monitoring/GPS	Field staff	17	WL crime prevention	----,,----	33	Managt. effectiveness	-----,,----	73	Tiger monitoring/8 day protocol	----,,----	72	Gen. Tr. On WL managt.	-----,,-----	73	Forest Acts/Laws	---,,---	55	Disaster Management	---,,---	53	Camera Trap Training	---,,---	56	Phasse-I Monitoring Tr Programme	All Field staff of Kerla in 25 batches	2100	Tr. On office procedures	Office staff	22	Personal Effectiveness	Office/field staff	97	Identification of plant spp	Field staff
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Identification of plant spp	Field staff	32																																											

***Indicate % of trained staff in various categories. The number and thematic areas of the 'Internal Training' programmes organized in the TR in the last 3 years may be taken into account. Has the TR prepared a 'Staff Development Plan'? Is it being implemented?**

4.2 Is TR staff management performance linked to achievement of management objectives?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No linkage between staff management performance and management objectives.	Poor		Discussion with FD/DD, DD office records, TCP and field visit.	There is no direct linkage between staff performance in achieving specific management objectives and their promotions. Performance evaluation at annual interval is being carried out for the front line staff on the basis of various criteria as per service rule. The promotions are mostly on the basis of seniority subjected to rejection of unfits. The foresters and guards are eligible for CM's Award, on the basis of entry of good performance in their service records. The CMs Forest Medal is has been awarded to Sri. Manu Satyan (FRO), Sri. Shajju Viswanathan (BFO) and Sri. Francis M Yohannan (BFO) in 2012 and Sri. N.Sreekumar (BFO) in 2013 in PTR for their best performance in protection and participatory forest management, etc.
Some linkage between staff management performance and management objectives, but not consistently or systematically assessed.	Fair			
Management performance for most staff is directly linked to achievement of relevant management objectives.	Good	✓		
Management performance of all staff is directly linked to achievement of relevant management objectives.	Very good			

4.3 Is there effective public participation in TR management* and does it show in making a difference?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no public participation in TR management.	Poor		Discussion with FD/DD, DD office records, TCP and field visit.	PTR has effective public participation in TR management in which following participatory programmes are being implemented. 1-Vasanthasena, a woman EDC, is involved in voluntary patrolling in sandal region during daytime. Every day, 5 women participate in the voluntary patrolling which is equivalent to Rs. 4.20 lakhs/year. 2- About 100 volunteers from various schools, colleges, EDCs involve in the cleaning programme every month. 3-The SAPP EDC members clean the traditional routes of Sabarimala and remove plastic wastes. About 200 service centres functioning along the traditional routes to Sabarimala with 1200 members involve in cleaning programme during and after the pilgrim season every year. 4-As part of mutual commitments, the members of all 78 EDCs get involved in community based eco-tourism, participatory fire management, <i>patrolling in</i> vulnerable areas and monsoon patrolling, etc. 5-The Wildlife Week Celebration is conducted entirely by the local of Kumily Panchayat. <i>About 25000 people participate in the conservation oriented activities every year.</i> 6-There is also participation in population estimation and monitoring complemented with fire prevention and control and visitor management in Sabarimala and Mangaladevi pilgrimage management. According to the study report of PTCF, improvement of regeneration and reduction in biomass collection is ensured in Sabarimala region and Kokkara region with active participation by SAPP EDCs and FWTG EDC. 14 National and International awards are so far received by PTR, PTCF and the EDCs functioning in PTR for the outstanding contributions in the field of Biodiversity Conservation.
Opportunistic public participation in some of the relevant aspects of TR management.	Fair			
Systematic public participation in most of the relevant aspects of TR management.	Good			
Comprehensive and systematic public participation in all important and relevant aspects of TR management.	Very good	✓		

The involvement of NGOs/ NGLs in population estimation may be taken into account)

4.4 Is there a responsive system for handling complaints and comments* about TR management?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Ad-hoc approach to handling complaints.	Poor		Discussion with FD/DD, DD office records, TCP and field visit.	<p>For handling complaints, visitor's book/ suggestion register is maintained for the visitors to give complaints and comments. The suggestions/ comments are taken note of and responded periodically by DD. The complaints submitted to Minister/ PCCF/CWLW are enquired through office of DD/FD reports are furnished to the authorities. The complaints of local stakeholders and EDC members are discussed and decided in the Executive Meeting of the EDCs, General Body of the EDCs and in the meetings of the Confederations. The records of decisions on complaints are maintained in the respective registers of the EDCs. Any other complaints regarding the TR management is discussed at Range Co-ordination Committee meetings and remedial courses taken without any delay.</p> <p>The following websites maintained at various offices have the facility to receive comments or complaints that are promptly answered.</p> <p>www.periyartigerreserve.org www.periyarfoundation.org http://117.239.77.10/~forusr/wckottayam, www.bamboogrove.org www.keralaforestdepartment.org www.keralatourismdepartment.org Staff</p> <p>Adalath is being conducted for settling the complaints of the staff.</p> <p>However, a complaint register should be maintained in FD and DD offices depicting all receiving and disposing complaints to know the situation of pending cases.</p>
Complaints handling system operational but not responsive to individual issues and with limited follow up.	Fair			
Coordinated system logs and responds effectively to most complaints.	Good	✓		
All complaints systematically logged in coordinated system and timely response provided with minimal repeat complaints.	Very good			

*Does the TR maintains 'Suggestions Register'? What actions are taken to deal with suggestions?

4.5 Does TR management addresses the livelihood issues* of resource dependent communities, especially of women?

Women:

Assessment criteria																																
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks																												
No livelihood issues are addressed by TR management.	Poor		Discussion with FD/DD, DD office records, TCP and field visit.	<p>Forest dependent communities were provided alternate employment through trekking programme, paper bag unit, agriculture improvement, thatch grass collection, micro enterprises, organic farming and marketing, catering, pilgrim service centers, visitor services etc. The revenue generated and man days created are given below:</p> <p style="text-align: right;">(Revenue in bracket in lakh)</p> <table><tr><th>EDC</th><th>2010-11</th><th>2011-12</th><th>2012-13</th></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td>PETS EDC</td><td>7371 (22.11)</td><td>8743 (34.97)</td><td>8158 (32.6)</td></tr><tr><td>Tribal tracker EDC</td><td>4678 (14.03)</td><td>5717 (22.87)</td><td>5070 (20.28)</td></tr><tr><td>Tribal heritage EDC</td><td>4210 (12.63)</td><td>5103 (20.40)</td><td>5602 (22.40)</td></tr><tr><td>Ex-Vayana EDC</td><td>2891 (8.67)</td><td>2661 (10.60)</td><td>3320 (13.30)</td></tr><tr><td>Vidiyal EDC</td><td>4781 (14.34)</td><td>4917 (19.70)</td><td>5453 (21.80)</td></tr></table> <p>A total of about 186 SHGs are effectively functioning under the 78 EDCs of PTR. These SHGs address the livelihood issues of various resource dependent communities including women</p>	EDC	2010-11	2011-12	2012-13					PETS EDC	7371 (22.11)	8743 (34.97)	8158 (32.6)	Tribal tracker EDC	4678 (14.03)	5717 (22.87)	5070 (20.28)	Tribal heritage EDC	4210 (12.63)	5103 (20.40)	5602 (22.40)	Ex-Vayana EDC	2891 (8.67)	2661 (10.60)	3320 (13.30)	Vidiyal EDC	4781 (14.34)	4917 (19.70)	5453 (21.80)
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Vidiyal EDC	4781 (14.34)	4917 (19.70)	5453 (21.80)																													
Few livelihood issues are addressed by TR management.	Fair																															
Substantial livelihood issues are addressed by TR management.	Good																															
Livelihood issues of resource dependent communities especially of women are addressed effectively by TR managers.	Very good	✓																														

				<p>EDCs such as Vasanthasena (60 members) and Vanitha EDC (80 members). Vasanthasena EDC voluntarily involved in the day time patrolling of sandal region, is an example for women empowerment. The man days contributed by Vansanthasena EDC in last 3 years is given below:</p> <table><tr><th>Year</th><th>Man-days generated</th></tr><tr><td>2011</td><td>1400</td></tr><tr><td>2012</td><td>1375</td></tr><tr><td>2013</td><td>1050</td></tr></table> <p>Livelihood issues are being addressed through various activities such as organic pepper, honey enterprises, thatching grass, fish and milk which fetched last year Rs. 195.00 lakhs, Rs. 5.60 lakhs, Rs.13.98 lakhs, Rs. 6.75 lakhs and Rs. 76.50 lakhs respectively as revenue. TR management has made the provisions such that about 70 to 80 % revenue goes to the EDCs.</p> <p>The efforts made by the TR management for addressing the livelihood issues of resource dependent communities, especially of women, are highly commendable.</p> <p>The PTR won the coveted U.N-India Bio-diversity Governance Awards in 2012 for out-standing governing model of biodiversity management, holistic approach adopted towards conservation, protection and management of TR.</p>	Year	Man-days generated	2011	1400	2012	1375	2013	1050
Year	Man-days generated											
2011	1400											
2012	1375											
2013	1050											

***The number of mandays generated in the last 3 years may be taken into account. Are funds received from District Agencies and other sources? Provide details of funds received in last 3 years.**

4.6 Has the TR planned and implemented the voluntary 'Village Relocation' from the Core/ Critical Tiger Habitat (CTH)?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No planning and no implementation	Poor		Discussion with FD/DD, DD office records, TCP and field visit.	The Core Area of PTR has no human and biotic interference. All the human settlements/villages from the core zone have already been shifted much before the declaration of TR to outside the core area, to the fringe area of the buffer zone. The core zone of PTR is totally free from livestock grazing, cultivation, encroachments and resource extraction/ livelihood dependence of local communities. Thus no human or biotic interference exists in the Core Zone of PTR.
Plans have been made but no implementation	Fair			
Plans have been made and some implementation is in progress	Good			
Plans have been made and are being actively implemented/ no human habitation in the CTH	Very good	✓		

***Assessment will look into the village relocation planning process including availability of manpower, financial resources and NGO support, if any. Is there a mechanism to address the complaints received in respect of relocation process? Effort must be made to assess post-relocation success or otherwise.**

5. Output

5.1 Is adequate information on TR management publicly available?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no information on TR management publicly available.	Poor		Discussion with FD/DD, DD office records, TCP and field visit.	<p>Information on TR management is available on the following websites, which are maintained; www.periyartigerreserve.org, www.periyarfoundation.org, www.keralaforestdepartment.org http://117.239.77.10/~forusr/wckottayam, www.bamboogrove.org and www.keralatourismdepartment.org. The approved TCP is available in Forest department web site: "www.keralaforestdepartment.org" There are 200 old research projects completed and published about PTR. Presently information is imparted to public through Nature Education Awareness Campaign, leaflets, supplements, celebrations at important days(Wildlife Week Celebration, World Environmental Day Celebration, World Earth Day Celebration etc), library ,websites, souvenirs and wildlife movies(Wild Periyar, Eden in Mountain, EDC Development in Periyar TR, Myths about You, Butterflies of Periyar), Birds of Periyar(booklets), Newsletters, Brochures(5,00,000 printed every year), Pamphlets, Coffee table books and hoardings etc. The detailed information is also available with the publications of the Kerala Tourism Department and Kerala Tourism Development Corporation.</p>
Publicly available information is general and has limited relevance to management accountability and the condition of public assets.	Fair			
Publicly available information provides detailed insight into major management issues and condition of public assets.	Good			
Comprehensive reports are routinely available in public domain on management and condition of public assets.	Very good	✓		

5.2 Are visitor services and facilities appropriate and adequate?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Visitor services and facilities do not exist.	Poor		Discussion with FD/DD, DD office records, TCP chapter-23 and field visit.	<ul style="list-style-type: none"> The tourism plan has been prepared based on the guidelines circulated by NTCA and approved by NTCA More than 7 lakh visitors come to the Park every year. That needs considerable facilities for visitors. <p>The bulk of visitors come for boat cruising in the Periyar lake, which is in buffer area. There are 8 motor boats in PTR for the visitors. KFD has 4 boats (total capacity 170) making 5 trips (850 visitors/day). KFDC has 4 boats (total capacity 288) making 5 trips (1440 visitors) per day.</p> <ul style="list-style-type: none"> Visitors are offered various community based eco-tourism programmes in PTR, which includes soft trek (2-3 hours), day long trek, accommodation in the buffer zone designated for tourism in the approve TCP. Following Ecotourism Programmes are offered: A-Trekking: i-Nature Walk/ Green Walk(Soft Trek); ii- Jungle Patrol (Soft Trek); iii-Border Hiking (Hard Walk) and iv- Periyar Tiger Trail (Adventure Trekking) B-Day Programme: i-Bamboo rafting; ii-Bullock cart discoveries; iii-Tribal Heritage Museum and iv-Tribal Art performance Following Accommodation are available in TR: (A). Accommodation facilities by KFD inside TR: IB, Anavachal-4 DB(double bed rooms);
Visitor services and facilities are very basic.	Fair			
Visitor services and facilities are monitored from time to time and are fairly effective.	Good			
Visitor services and facilities are conscientiously maintained, regularly upgraded and monitored for visitor satisfaction	Very good	✓		

				<p>IB,Annexe,Anavachal-2DB; IB,Edapalayam-2DB; IB,Old, Sabarimala-2DB; IB, New, Sabarimala-5DB; Vanasree dormitory-40 beds; Vanlekshmi dormitory-40 beds; Nature Edu. Centre, Pamba-100 beds; Bamboo Grove(By EDC)-15 Cottages; Jungle Inn(By EDC)-2 beds and Jungle Camp(By EDC)-15 Tents</p> <p>All these facilities are manned by BFOs/SFOs/EDCs and directly supervised by the ROs concerned. All these facilities are supported by watchers.</p> <p>(B). Accommodation by other agencies inside TR:</p> <p>Lake Palace (A Heritage hotel- 6 rooms), Aranya Nivas (3-Star accommodation- 30 rooms), Periyar House (44 rooms) and Holiday Homes (23 rooms+3 dormitories)</p> <ul style="list-style-type: none"> • Facilities relating to awareness and interpretation have been established at: i-Information cum booking centre at Ambadi Jn., ii-Rajiv Gandhi Centre for Nature Education and Research at Thekkady, iii-Information Centre at Boat Landing. There is a Good Library at Thekkady. Visitor register has been kept at every camping places • Other facilities include: Toilet Facility at Boat landing & Turtle Park; Parking Facility at Thekkady; Turtle Shop & Periyar Caffe at Thekkady. There are 3 Cardiology Centres and 5 Pilgrim Resting Sites between Pamba and Sannidhanam. • For upgrading the visitors facility, Tiger Art Gallery is being developed at Gandhi Park located in Kumily Town. Further, an Interpretation Centre at Anavachal and a Museum at Boat Landing in reconstructed Coffee Shop are being developed. There is a proposal for developing a International standard museum at Kumily Town. • PTR has already initiated a project to recycle plastic waste through Kumily Grama Panchayat as an effective garbage disposal system. For procuring the required machineries, PTR has invested Rs. 17 lakhs. • The TR authority has presented the feedback comments from the 30 visitors written between Feb 2014 to 20 April 2014 in which visitors have appreciated the TR biodiversity, wilderness and supports given by the personnel. <p>Thus, visitors' services and facilities are conscientiously maintained, regularly upgraded and monitored for the visitors' satisfaction.</p>
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****Include the existence and quality of visitor and interpretation centers, including skills and capabilities of personnel manning these, TR related publications, films, videos; arrangements of stay (including places serving refreshments and food owned and managed by TR), watch towers and hides including safety factors, vehicles assigned for visitors including riding elephants, if any and their deployment, drinking water, rest rooms, garbage disposal, attended and self guided services in the field, visitor feed back on the quality of wilderness experience.***

5.3 Are research/ monitoring related trends systematically evaluated and routinely reported and used to improve management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no systematic evaluation or routine reporting of trends.	Poor		Discussion with FD and DD, DD office records, TCP chapt 8 & 20 and field visit.	<p>200 research/ conservation studies have been conducted in the Park by various institutions of which a good number of them have been conducted by the PTCF's professionals which have been incorporated in the TCP and is being implemented.</p> <p>PTR management with its own manpower and capacity (in PTCF) is monitoring tigers, co-predators, prey and their habitat regularly. Professional support (conservation biologist, ecologist, sociologist, economist, nature education officer, ecotourism officer, etc) is also being extended for data analysis and report preparation.</p> <p>Phase-IV monitoring is carried out effectively and reports submitted (two times) to NTCA. The reports containing information on tiger, co-predator, prey population, habitat quality with human disturbances with insights of demography, distribution, etc were available in the PTR office.</p> <p>As part of regular monitoring a 'Daily Monitoring Protocol' is also systematically implemented in the TR.</p> <p>Based on floristic study of the TR and RBA of adjoining forest areas, 148km² of Goodricke Range was added on to the Core area of the TR. The adjacent area of the Meghamalai in Tamil Nadu was declared as a sanctuary based on the study conducted by the Periyar Team to consolidate the boundary and improve the conservation in the landscape as a whole.</p> <p>Various research and monitoring topics were provided chapter 8 & 20 of TCP. In addition regular Research / monitoring activities are being carried out with the support of professionals working in PTCF.</p> <p>TR management has reported that Participatory Research is also being carried out in buffer zone with the support of EDC members such as Firewood and Thatching Grass Collectors' EDC, Ex-vayana Bark Collectors' EDC and Sabarimala Pilgrim Management (SAPP) EDC for documenting regeneration, incidence of livestock grazing, fires, weeds, sources of water, illegal activities associated with PTR, wildlife health, visitors and their activities, offence cases, ex-gratia payments etc in their areas of operation.</p> <p>The modified Whitaker Plot is being laid in various habitats of PTR (10 plots with the size of 1 ha. each) for long term monitoring of vegetation dynamics.</p>
Some evaluation and reporting undertaken but neither systematic nor routine.	Fair			
Systematic evaluation and routine reporting of trends undertaken.	Good			
Systematic evaluation and comprehensive reporting of trends undertaken and attempts made at course corrections as relevant.	Very good	✓		

***Not all TRs attract projects and researchers and with exceptions, little research takes place on the TRs own steam because of systemic limitations. However, monitoring of some critical issues is expected e.g. population of tiger, co-predators and prey with insights into their demography and distribution (some opportunistic sampling by sightings, signs and spatial distribution during assessment would be extremely useful in terms of expert impression and as a pulse), monitoring incidence of livestock grazing, fires, weeds, sources of water, a variety of illegal activities typically associated with the reserve, wildlife health (e.g. epidemics, immunization of livestock) regeneration and change in vegetation, visitors and their activities, offence cases, ex-gratia payments etc. Efforts must be made to assess the planning and implementation of Phase-IV monitoring protocols and the success of implementation of M-Stripes (wherever applicable). Are the 'Sykes and Horill' monitoring plots maintained and data analyzed?**

5.4 Is there a systematic maintenance schedule and funds in place for management of infrastructure/assets?

Assessment criteria																																																							
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks																																																			
No systematic inventory or maintenance schedule.	Poor		Discussion with DD, DD office records, TCP and field visit.	Systematic maintenance schedule and funds are in place for management of vehicles, roads. Fire lines, buildings (staff quarters, office buildings, anti-poaching camps etc), wireless sets, walkie talkie, arms and ammunitions, GPS, camera traps, survey equipments , water holes, trek-paths etc. TR is having the lists of all infrastructure/assets and are provided in TCP in the form of Annexures. All the Range Officers maintain the infrastructure /assets created in respective ranges. All the buildings including staff quarters, office buildings, APCs and related establishments are maintained periodically and presently used. EDC also maintain the 3 camping sites where visitor's staying facilities are provided. PTCF provides 30% of its revenue for PA management which is also being used for habitat improvement and maintenance of infrastructure related to protection of PTR. The expenditure incurred during the last 3 years on maintenance works are given below:																																																			
Inventory maintenance is adhoc and so is the maintenance schedule.	Fair																																																						
Systematic inventory provides the basis for maintenance schedule but funds are inadequate.	Good																																																						
Systematic inventory provides the basis for maintenance schedule and adequate funds are made available.	Very good	✓			<table><tr><td>Works</td><td>2011-12 Exp</td><td>2012-13 Exp</td><td>2013-14 Exp</td></tr><tr><td>Maintenance of APC</td><td>19.83</td><td>3.91</td><td>15.73</td></tr><tr><td>Maintenance of buildings</td><td>119.52</td><td>42.51</td><td>43.73</td></tr><tr><td>Maintenance of Vehicles</td><td>30.25</td><td>57.76</td><td>37.45</td></tr><tr><td>Maintenance of Roads</td><td>16.11</td><td>16.10</td><td>36.90</td></tr><tr><td>Maintenance of Electronic Equipments</td><td>5.95</td><td>2.80</td><td>5.74</td></tr><tr><td>Maintenance of Trek path</td><td>33.65</td><td>33.25</td><td>48.85</td></tr><tr><td>Maintenance of Firelines</td><td>12.51</td><td>16.78</td><td>44.74</td></tr><tr><td>Maintenance of Waterholes</td><td>0.40</td><td>1.00</td><td>3.45</td></tr><tr><td>Maintenance of Vayals</td><td>2.65</td><td>2.81</td><td>4.88</td></tr><tr><td>Controlled burning</td><td>1.68</td><td>2.00</td><td>3.32</td></tr><tr><td>Vista line clearance</td><td>4.35</td><td>4.00</td><td>3.00</td></tr><tr><td>Trenches</td><td>12.94</td><td>44.30</td><td>15.91</td></tr></table>	Works	2011-12 Exp	2012-13 Exp	2013-14 Exp	Maintenance of APC	19.83	3.91	15.73	Maintenance of buildings	119.52	42.51	43.73	Maintenance of Vehicles	30.25	57.76	37.45	Maintenance of Roads	16.11	16.10	36.90	Maintenance of Electronic Equipments	5.95	2.80	5.74	Maintenance of Trek path	33.65	33.25	48.85	Maintenance of Firelines	12.51	16.78	44.74	Maintenance of Waterholes	0.40	1.00	3.45	Maintenance of Vayals	2.65	2.81	4.88	Controlled burning	1.68	2.00	3.32	Vista line clearance	4.35	4.00	3.00	Trenches	12.94
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TR management reported that there is no fund crunch for the management of infrastructure/assets in accordance with inventory. The stock registers for the above and the periodicity of maintenance is properly recorded in the registers.																																																							

6. Outcomes

6.1 Are populations of threatened species declining, stable or increasing?

0.7 Are populations of threatened species declining, stable or increasing?

Assessment criteria*																																				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks																																
Populations of key threatened/ endangered species are declining.	Poor		Discussion with DD, DD office records, TCP and field visit.	The elephant estimation carried out in PTR during 2005 and 2010 shows a stable population in the TR (1059 during 2010 and 1036 during 2005). The dung count method was used for estimation of elephants in both years. The details are given in the following table.																																
Some threatened/ endangered species populations declining, some are increasing, most others are stable.	Fair			<table><tr><th rowspan="2">Year</th><th colspan="3">Elephant Density/ Number Estimate</th></tr><tr><th>No.</th><th>LCL</th><th>UCL</th></tr><tr><td>2010</td><td>1059</td><td>717</td><td>1564</td></tr><tr><td>2005</td><td>1036</td><td>738</td><td>1456</td></tr></table>	Year	Elephant Density/ Number Estimate			No.	LCL	UCL	2010	1059	717	1564	2005	1036	738	1456																	
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	No.	LCL		UCL																																
2010	1059	717	1564																																	
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Several threatened/ endangered species populations increasing, most others are stable.	Good		Other important species in PTR is being monitored annually adopting the methods prescribed by NTCA and WII for Phase-IV monitoring of tigers, co-predators, prey and their habitat. The detail of estimation of important threatened animals in PTR is given in following table.																																	
All threatened/ endangered species populations either increasing or stable.	Very good	✓		<table><tr><th rowspan="2">Species</th><th colspan="2">Year wise Density of individual/km2</th></tr><tr><th>2012</th><th>2013</th></tr><tr><td>Gaur</td><td>8.34</td><td>15.58</td></tr><tr><td>Sambar</td><td>5.15</td><td>4.24</td></tr><tr><td>Elephant</td><td>2.16</td><td>2.30</td></tr><tr><td>Wild boar</td><td>5.52</td><td>14.72</td></tr><tr><td>Barking deer</td><td>1.02</td><td>2.52</td></tr><tr><td>Mouse deer</td><td>1.19</td><td>0.77</td></tr><tr><td>Nilgiri langur</td><td>15.92</td><td>32.90</td></tr><tr><td>LTM</td><td>1.48</td><td>----</td></tr><tr><td>Malabar giant squirrel</td><td>4.03</td><td>4.21</td></tr></table> <p>The last two years data reveals that the population of all threatened/ endangered species populations either increasing or stable.</p>	Species	Year wise Density of individual/km2		2012	2013	Gaur	8.34	15.58	Sambar	5.15	4.24	Elephant	2.16	2.30	Wild boar	5.52	14.72	Barking deer	1.02	2.52	Mouse deer	1.19	0.77	Nilgiri langur	15.92	32.90	LTM	1.48	----	Malabar giant squirrel	4.03	4.21
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*This needs to practically relate to the natural ecosystem potential rather than being driven merely by numbers and visibility. The assessment score may be elaborated under remarks.

6.2 Is the population of tigers showing a declining, stable or increasing trend?

0.2 Is the population of tigers showing a declining, stable or increasing trend?

Assessment criteria*																
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks												
Population of tiger is showing a declining trend	Poor		Discussion with DD, DD office records, TCP and field visit.	<div>The results of tiger population estimation through studies conducted by PTCF using camera trap technique suggested by NTCA and WII carried out in 2008 and 2012 shows the tiger density to be 3.5 and 3.8 adult tigers / 100km², respectively. This has been estimated to be 5.46 adult tigers / 100km² for the TR during All India Tiger estimation carried out in 2010-11 by WII, Dehradun.</div> <table><tr><th>YEAR OF CENSUS</th><th>AGENCY CARRYING OUT</th><th>NUMBER OF ADULT TIGERS/100 KM²</th></tr><tr><td>2008</td><td>PTR</td><td>3.80</td></tr><tr><td>2010-11</td><td>WII</td><td>5.46</td></tr><tr><td>2012</td><td>PTR</td><td>3.50</td></tr></table> <div>PTR is dominated mostly with evergreen forest (more than 60%) which comprises comparatively less fodder and thus less herbivore (prey) populations in evergreen forest. Moreover, the remaining 40% forest is the potential habitats for tigers. These forests are being used for movement between potential habitats adjoining PTR in Kerala as well as in Tamil Nadu.</div>	YEAR OF CENSUS	AGENCY CARRYING OUT	NUMBER OF ADULT TIGERS/100 KM ²	2008	PTR	3.80	2010-11	WII	5.46	2012	PTR	3.50
YEAR OF CENSUS	AGENCY CARRYING OUT	NUMBER OF ADULT TIGERS/100 KM ²														
2008	PTR	3.80														
2010-11	WII	5.46														
2012	PTR	3.50														
Population of tiger is stable	Fair	✓														
Population of tiger is showing an increasing trend	Good															
Population of tiger has significantly increased	Very good															

*This assessment should be based in the context of available population estimate (2010-11) and the outcomes of the currently ongoing Phase-IV analyses.

6.3 Have the threats* to the TR being reduced/ minimized? Or is there an increase?

Assessment criteria																																																																	
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks																																																													
Threats to the TR have not abated but have enhanced.	Poor		Discussion with DD, DD office records, TCP and field visit	The threats to the TR from biotic interference in the form of firewood removal, grazing, ganja cultivation, fire, etc. have been considerably reduced through management intervention and the implementation of Eco-development programmes with the active participation of forest fringe villages.																																																													
Some threats to the TR have abated, others continue their presence	Fair			The reduction in resource dependency in PTR is given below:																																																													
				<table><tr><th rowspan="2">Type of resource</th><th colspan="2">Quantity collected</th><th rowspan="2">Reduction/ increase in Collection</th><th rowspan="2">% of Reduction / increase</th></tr><tr><th>1997</th><th>2012</th></tr><tr><td>Firewood (Own use)</td><td>8601768</td><td>2672520</td><td>5929248</td><td>68.9</td></tr><tr><td>Firewood (Sale)</td><td>2648480</td><td>641990</td><td>2006490</td><td>75.8</td></tr><tr><td>Fish (Own use)</td><td>53020</td><td>15300</td><td>37720</td><td>71.1</td></tr><tr><td>Fish (Sale)</td><td>135220</td><td>78400</td><td>56820</td><td>42.0</td></tr><tr><td>Black Dammar</td><td>57068</td><td>3047</td><td>54021</td><td>94.6</td></tr><tr><td>Thatching Grass</td><td>345892</td><td>633472</td><td>(+)287580</td><td>(+)83.1</td></tr><tr><td>Fodder Grass</td><td>415398</td><td>51757</td><td>363641</td><td>87.5</td></tr><tr><td>Pole</td><td>76164</td><td>3395</td><td>72769</td><td>95.5</td></tr><tr><td>Bamboo</td><td>247353</td><td>21352</td><td>226001</td><td>91.3</td></tr><tr><td>Honey</td><td>10295</td><td>410</td><td>9885</td><td>96.0</td></tr><tr><td>Cinnamon bark</td><td>30135</td><td>0</td><td>0</td><td>100.0</td></tr></table>	Type of resource	Quantity collected		Reduction/ increase in Collection	% of Reduction / increase	1997	2012	Firewood (Own use)	8601768	2672520	5929248	68.9	Firewood (Sale)	2648480	641990	2006490	75.8	Fish (Own use)	53020	15300	37720	71.1	Fish (Sale)	135220	78400	56820	42.0	Black Dammar	57068	3047	54021	94.6	Thatching Grass	345892	633472	(+)287580	(+)83.1	Fodder Grass	415398	51757	363641	87.5	Pole	76164	3395	72769	95.5	Bamboo	247353	21352	226001	91.3	Honey	10295	410	9885	96.0	Cinnamon bark	30135	0	0
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Most threats to the TR have abated. The few remaining are vigorously being addressed	Good	✓																																																															
All threats to the TR have been effectively contained and an efficient system is in place to deal with any emerging situation	Very good			<p>The above data reveals that most of the threats are reduced significantly. TR authority has reported that the thatching grass collection has increased because collection is being practiced as a management tool to prevent extensive forest fire as well as to provide fresh shoots of grass for the herbivores; hence considered as a positive activity of EDCs.</p> <p>About 8 to 10 million people visit Sabarimala Temple annually. Although it is situated in buffer it has a lot of impact on adjacent forests. The State Government has approved Sabarimala Master Plan during 2007, prepared by the consultant M/s IL&FS ECOSMART LTD with funding by NTCA. The objective of Master Plan is to streamline the ecological and social concerns of pilgrimage. However, the Master Plan has not been implemented in a time bound manner.</p> <p>The tourism exerts a lot of pressure in Thekkady, also in buffer. 5,43,731 tourists visited Thekkady (excluding children) in 2010-11, of which 8.2% were foreigners. Of the 89,298 vehicles which entered the Reserve 92.28% were light vehicles, 3.26% heavy vehicles and 4.10% two-wheelers. Ample pre-caution and rigorous mechanism for monitoring of adverse impacts should be done so as to contain this threat.</p> <p>Although, a paragraph in section 12.8 of TCP has been dealt under heading of "Disaster management" it is sketchy and a separate plan should be prepared to deal with possible disasters concerning PTR.</p>																																																													

*Does the TR has a Disaster Risk Management Plan to deal with existing as well as emerging threats?

6.4 Are the expectations of visitors* generally met or exceeded?

Assessment criteria																																																																												
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks																																																																								
Expectations of visitors generally not met.	Poor		Discussion with FD & DD, DD office records, visitor's book and field visits.	All the tourism programmes including the Community Based Ecotourism Programmes [CBET] are strictly conducted only in areas designated for tourism in the Buffer zone of PTR. The no of visitors in last 3 years are given below:																																																																								
Expectations of many visitors are met.	Fair			<table><tr><th>Year</th><th colspan="3">No of Visitors</th></tr><tr><td></td><th>Domestic</th><th>Foreigners</th><th>Total</th></tr><tr><td>2010-11</td><td>499001</td><td>44730</td><td>543731</td></tr><tr><td>2011-12</td><td>628214</td><td>48476</td><td>676690</td></tr><tr><td>2012-13</td><td>666371</td><td>40611</td><td>780853</td></tr></table>	Year	No of Visitors				Domestic	Foreigners	Total	2010-11	499001	44730	543731	2011-12	628214	48476	676690	2012-13	666371	40611	780853																																																				
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Expectations of most visitors are met.	Good																																																																											
Expectations of all most all visitors are met.	Very good	✓		<p>There has been a very good enhancement in the no of visitors in last 3 years which indicates that the visitors' expectations are generally met.</p> <p>Guest books kept in each CBET programmes reveals that the visitors are mostly satisfied with the existing programmes. The TR authority has presented the feedback comments from the 30 visitors written between Feb 2014 to 20 April 2014 in which visitors have appreciated the TR biodiversity, wilderness and facilities/supports given by the personnels.</p> <p>The increase in the number of participation in each CBET programmes reveals that the visitors are highly satisfied. The details of participants in each CBET programmes are given below:</p> <table><tr><th>CBET programme</th><th>2010-11</th><th>2011-12</th><th>2012-13</th></tr><tr><td>Bamboo rafting</td><td>2301</td><td>3166</td><td>5018</td></tr><tr><td>Border hiking</td><td>973</td><td>1166</td><td>1422</td></tr><tr><td>Bamboo grove</td><td>456</td><td>323</td><td>844</td></tr><tr><td>Jungle camp</td><td>140</td><td>1</td><td>166</td></tr><tr><td>Windy walk</td><td>-----</td><td>-----</td><td>-----</td></tr><tr><td>Pug mark trail</td><td>-----</td><td>-----</td><td>574</td></tr><tr><td>Tribal dance</td><td>-----</td><td>216</td><td>3115</td></tr><tr><td>Tiger trail</td><td>237</td><td>414</td><td>557</td></tr><tr><td>Jungle scout</td><td>1156</td><td>1934</td><td>2879</td></tr><tr><td>Jungle inn</td><td>-----</td><td>8</td><td>6</td></tr><tr><td>Nature walk</td><td>13851</td><td>13495</td><td>13581</td></tr><tr><td>Tribal heritage museum</td><td>696</td><td>637</td><td>----</td></tr><tr><td>Green walk</td><td>7409</td><td>8631</td><td>9874</td></tr><tr><td>Bullock cart discovery</td><td>538</td><td>301</td><td>50</td></tr><tr><td>Range scan</td><td>142</td><td>-----</td><td>-----</td></tr><tr><td>Cloud walk</td><td>1660</td><td>644</td><td>-----</td></tr><tr><td></td><td>29559</td><td>30936</td><td>38086</td></tr></table> <p>Further , the visitors get more satisfied by looking the participation of Vasanthasena , a woman EDC, in protection work, children from various school and colleges in cleaning programme of TR and SAPP EDC members in cleaning the traditional routes & removing the plastics waste from the traditional routes of Sabarimala.</p>	CBET programme	2010-11	2011-12	2012-13	Bamboo rafting	2301	3166	5018	Border hiking	973	1166	1422	Bamboo grove	456	323	844	Jungle camp	140	1	166	Windy walk	-----	-----	-----	Pug mark trail	-----	-----	574	Tribal dance	-----	216	3115	Tiger trail	237	414	557	Jungle scout	1156	1934	2879	Jungle inn	-----	8	6	Nature walk	13851	13495	13581	Tribal heritage museum	696	637	----	Green walk	7409	8631	9874	Bullock cart discovery	538	301	50	Range scan	142	-----	-----	Cloud walk	1660	644	-----		29559	30936	38086
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*What is the compliance status on Supreme Court/ NTCA Guidelines on Ecotourism in TRs?

6.5 Are local communities supportive of TR management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Local communities are hostile.	Poor		Discussion with CWLW, FD,DD,office records, study report by PTCF and field visit.	<p>PTR function as a team and TR management has built up a strong social fencing around the Reserve with the help of these people through EDC System. Many awards were received by the EDC for the collective performance. A total of 14 National and International awards are, so far, received by PTR, PTCF and the EDCs functioning in PTR. Many EDCs are functioning for effective protection and management of the Tiger Reserve. Following participatory programmes are being implemented in PTR for protection purpose:</p> <ul style="list-style-type: none"> • Vasanthasena, a woman EDC involve in voluntary patrolling in sandal region during day-time. Every day, 5 women participate in the voluntary patrolling and during 2013 a total of 1050 man days were generated. • Public participation in massive cleaning programme is usually undertaken every month. About 100 volunteers from various schools, colleges, EDCs involve in the cleaning programme. • The SAPP EDC members clean the traditional routes of Sabarimala and remove plastic wastes. About 200 service centres functioning along the traditional routes to Sabarimala with 1200 members involve in cleaning programme during and after the pilgrim season every year. • As part of mutual commitments, the EDC members involve in participatory fire management, patrolling in vulnerable areas, monsoon patrolling, etc by all the 78 EDCs in PTR. • The Wildlife Week Celebration is being entirely conducted by the local of Kumily Panchayat. About 25000 people participate in the programme that shows their involvement in conservation oriented activities. • Improvement of regeneration and reduction in biomass collection is ensured in Sabarimala region and Kokkara region with active participation by SAPP EDCs and FWTG EDC. • There is also participation in fire prevention and control, visitor management, Sabarimala and Mangaladevi pilgrimage management and population estimation and monitoring. • There is public participation in protection and specifically in joint patrolling in vulnerable areas. <p>Thus the local communities are supportive of TR management.</p>
Some are supportive.	Fair			
Most locals are supportive of TR management.	Good			
All local communities supportive of TR management.	Very good	✓		

**There could be many reasons for disenchantment. It could be real because of managerial neglect or the managerial efforts could be appropriate but there could be local elements/organizations who would like to keep the disaffection simmering for their own ulterior motives. Likewise success could be entirely because of the efforts of managers or they might be fortunate in striking partnerships with credible NGOs. Assessment may take the prevailing causes into account.*

7. MEE Score Card⁺

Framework Element Number	Framework Element Name	Number of Criteria (a)	Maximum Mark per question (b)	Total (a x b)	Marks obtained for the Element	Overall MEE Score and % age
1	Context	4	10	40	40	91.13%
2	Planning	7	10	70	65	
3	Inputs	5	10	50	42.5	
4	Process	6	10	60	52.5	
5	Outputs	4	10	40	40	
6	Outcomes	5	10	50	42.5	
Total		31		310	282.5	

⁺*Efforts will be made by the NTCA-WII-MEE Team to address the issue of assigning 'differential' weightages to the 30 Assessment Criteria including 'normalization'.*

Assessment Criteria for addressing issues relating to Climate Change & Carbon capture in the Tiger Reserves (TRs)

1. *Additional Criteria on Climate Change: Is the TR being consciously managed to adapt to climate change?*

Condition	Category*	(Tick ✓)	Comment/ Explanation	Next Steps
There have been no efforts to consider adaptation to climate change in management	Poor		Although some initial thoughts has taken place no concrete plans have been drawn up.	Guide lines should be issued at national level for assessment of impacts and measures for adaptations so as to prepare specific plans and their integration with the TCP
Some initial thought has taken place about likely impacts of climate change, but this has yet to be translated into management plans	Fair	✓		
Detailed plans have been drawn up about how to adapt management to predicted climate change, but these have yet to be translated into active management.	Good			
Detailed plans have been drawn up about how to adapt management to predicted climate change, and these are already being implemented	Very good			

2. *Additional Criteria on Climate Change: Is the TR being consciously managed to prevent carbon loss and to encourage further carbon capture?*

Condition	Category*	(Tick ✓)	Comment/ Explanation	Next Steps
Carbon storage and carbon dioxide capture have not been considered in management of the TR	Poor		Periyar TR harbours unbroken stretch of rain forest and acts as an important sink for the carbon and create mitigating zone for reducing the global warning. No extraction is allowed in the TR which helps for permanent carbon sink. Improved regeneration in TR also helps for permanent carbon sink. Fire protection and non removal of biomass leads to no carbon emission and increase the amount of carbon stored in the soil. Although various measures have been taken as part of the holistic conservation measures to prevent the carbon loss, clear prescriptions are required to be incorporated in TCP for reducing carbon emission/ effecting carbon capture in planning various activities / operations.	It is necessary to issue guide lines at National level for adopting various measures in this direction without compromising the primary objectives of Wildlife habitat/ TR management to preserve the biodiversity of unique habitats/ eco-systems. Guide lines should be issued at National Level for assessment of impacts and measures for adaptations so as to prepare specific plans and their integration with the TCP
Carbon storage and carbon dioxide capture have been considered in general terms, but has not yet been significantly reflected in management	Fair	✓		
There are active measures in place to reduce carbon loss from the TR, but no conscious measures to increase carbon dioxide capture	Good			
There are active measures in place both to reduce carbon loss from the TR and to increase carbon dioxide capture	Very good			

Management Effectiveness Evaluation (MEE) of Parambikulam Tiger

1. Context

1.1 Are the values of the TR well documented, assessed and monitored?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Values not systematically documented, assessed and monitored.	Poor		Discussion with FD/DD, TCP para-1.3 & 14, information from TR and field visit.	<p>Parambikulam Tiger Reserve (PKMTR) is part of the Neillampathy- Anamalai ecological sub unit of Western Ghat. The following values have been documented in draft TCP in chapter 1 in section 1.3 under heading of "Statement of Significance".</p> <p>The TR supports diverse habitat types viz, tropical evergreen, semi evergreen, moist & dry deciduous, moist bamboo brakes, reed brakes, montane wet temperate (shola) forests), montane grasslands & vayals (marshy grass-lands). Teak plantations cover about 1/3 rd area of TR. Deep freshwater eco-system created by 3 dams adds to the diversity of the TR.</p> <p>TR supports about 1400 species of Angiosperms belonging to 680 genera and 133 families which include about 70 species of orchids also.</p> <p>Faunal diversity of the Reserve include tiger, leopard, wild dog as main carnivores and elephant, gaur, sambar, barking deer, spotted deer, wild goat, nilgiri tahr etc as main herbivores. Endangered lion tailed macaque, nilgiri langur; Malabar giant squirrel, flying squirrel etc are among the important arboreal animals. Aquatic fauna includes crocodiles, and Mahaseer etc. There are 273 species of avifauna.</p> <p>Altogether 1049 species of insects, 269 species of butterflies, 277 species of moths, 47 species of fishes and 16 species of frogs take shelter in the TR. There are several endemic, rare, endangered and threatened species of flora and fauna have been mentioned to be found in TR.</p> <p>TR is a part of ecological continuity in between Peechi to Eravikulam through Anamalai and helps in gene pool movement because of being in migratory routes.</p> <p>The supply water and electricity Kerala and Tamil Nadu.</p> <p>The biological richness of the Reserve offers excellent scope for scientific researches and aesthetic beauty attracts the tourists in Parambikulam.</p> <p>Parameters and criteria for monitoring & evaluation with success indicators of each threat and schedule of valuation have been documented in chapt-14 of TCP and are being monitored.</p>
Values generally identified but not systematically assessed and monitored.	Fair			
Most values systematically identified, assessed and monitored.	Good			
All values systematically identified, assessed and monitored.	Very good	✓		

1.2 Are the threats to TR values well documented and assessed*?

Assessment criteria*				
Condition	Categ ory*	(Tick ✓)	Reference document(s)	Remarks
Threats not systematically documented or assessed.	Poor		Discussion with FD/ DD, TCP chapt- 3.4 & 6.5 , information from TR and field visit.	Threats to the TR value are well documented and assessed in the TCP. The major threats to the Reserve are poaching , ganja cultivation, sandal wood smuggling , forest fires, NTFP collection, human-wildlife conflicts, fuel wood collection , stray dogs in tribal settlements, electrocution of animals, animal mortality due to accidents, large scale teak plantation, weed infestation in key habitats, disease out –break, pilgrims problems, electric lines, Estates etc. Even the minor threats like staff dissatisfaction with facilities related to welfare and protection, soil and moisture conservation work without proper study, development of water sources without proper planning, increase in spring desiccation and degradation of indicative species, no security plan for unique and RET species, non PA status of 145.76 sq km Core area, Estate on the fringes of Core in northern side etc are well considered, documented and assessed. Comprehensive SWOT analysis has been carried out in the TCP. No forest/wildlife offences are booked in last 3 years. No major disease / epidemic out break or threat to wildlife population noticed in last five years. Thus, all threats are systematically identified and assessed.
Threats generally identified but not systematically assessed.	Fair			
Most threats systematically identified and assessed.	Good			
All threats systematically identified and assessed.	Very good	✓		

***This assessment should be based on number, nature and extent of threats**

1.3 Is the 'Core Area' of TR free from human and biotic interference?

Assessment criteria*				
Condition	Categ ory*	(Tick ✓)	Reference document(s)	Remarks
The 'Core Area' has extensive human and biotic interference.	Poor		Discussion with FD/ DD, TCP, information from TR and field visit.	The Core/CTH has been notified excluding 39.872 km ² area consisting areas of (i) 3 reservoirs (Parambicum, Thunacadavu and Peruvaripallam); (ii) Area of 6 tribal settlements/ colonies (Sungam colony, Pooppara colony, Fifth colony, Kuriakutty colony, Earth dam colony and Kadar colony) with 100 meter buffer around; (iii) Teak Plantation of Sungama range (18.30 km ²). These are actually parcels of land/ enclaves, surrounded all around by the Core/ CTH and have been notified as buffer of the TR. Although these exerts some biotic pressures on the core TR management has taken eco-development initiatives to reduce the pressures and has established Tiger Cell for identifying existing conflicting land use practices affecting Tiger and prey habitat around core and buffer to resolve through multi-sectoral dialogue including the WPOs of the adjoining divisions. It was reported that there is no livestock grazing, no cultivation and no encroachment by the local community in the core. It is noteworthy that 145.76 km ² of forest areas in the core as well as 252.77 km ² forest areas in buffer have come from 3 forest divisions (Nemmara FD, Chalakudy FD and Vazhachal FD). The Forest areas carved out from these Divisions for TR is being still looked after by the respective divisions in addition to their normal territorial functions. In fact this is not a happy situation.
The 'Core Area' has some human and biotic interference.	Fair			
The 'Core Area' has little human and biotic interference.	Good	✓		
The 'Core Area' has no human and biotic interference.	Very good			

***This assessment should be based on existence and the efforts made by TR management to address issues related to human settlements/ villages inside the core area; livestock grazing, cultivation, encroachments etc, resource extraction/ livelihood dependence of local communities and should reflect the overall interference due to all the above factors. The issue of 'Unified Control' of the 'Core' and 'Buffer' zones under the Field Director would also be taken into account.**

1.4 Has the TR complied with the four Statutory* Requirements (SR) along with Tripartite MoU and three Standard Operation Procedures (SOP)?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
None of the four SR, no compliance of Tripartite MoU and three SOPs met	Poor		Discussion with FD/DD, information from TR and field visit.	1-The Govt. of Kerala has notified 390.89 sq km as core/ CTH, which consists of 245.128 sq km of existing Parambikulam WLS and 145.76 sq km of adjoining territorial forest by its No. – GO(P) 53/2009/F &WLD dated 16.12.2009. The Buffer (252.77 sq km) has been notified by notification No. GO (P) 54/2009/F &WLD dated 17.12.2009. 2-Parambikulam Tiger Conservation Foundation was constituted vide GO (MS)87/2013/F&WLD dated 20.09.2013 and registered at Sub-Registrar Office , Thiruvananthapuram under Charitable and Religious Trust Act 1920 dated 06.01.2014. 3- TCP has been prepared and approved by NTCA vide Letter No-F.No.1-14/2011-NTCA dated 21.03.2013. 4- State Level Steering Committee was constituted vide Notification-GO(Rt) No 72/2009/F & WLD dated 12.02.2009 and Steering Committee Meeting was held on 18-12-2009 whose minutes of meeting was issued on 19-07-2010 vide GO - 16994/F & WLD, Forest and Wildlife (F) Department , by the Govt. of Kerala. 5-The first draft of TCP for adjoining / corridor area is stated to be ready by the authority for the submission to NTCA. 5-The 3 SOPs are being followed. No tiger straying and tiger mortality has taken place in last 3 years. Deep freeze has been procured in the TR 6- It is evident from the compliance report submitted with APO that Tripartite MoU conditions are being complied.
Two of the four SR, 50% conditions of the Tripartite MoU and SOPs complied	Fair			
Three of the four SR, 75% conditions of the Tripartite MoU and SOPs complied	Good			
All four SR, 100% conditions of the Tripartite MoU and SOPs complied	Very good	✓		

***Statutory requirements are (1) Legal delineation and notification of Core and Buffer Areas; (2) Establishment of Tiger Conservation Foundation; (3) Development of a Tiger Conservation Plan; and (4) Constitution of a State-level Steering Committee under the Chairmanship of the Chief Minister. TA refers agreement between Field Director, State Government and NTCA. The 3 SOPs are on (i) Straying of Tiger in human dominated landscape, (ii) Tiger Mortality and (iii) Disposal of Carcasses**

2. Planning

2.1 Status of Tiger Conservation Plan (TCP)*?

Assessment criteria																		
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks														
No TCP in place.	Poor		Discussion with FD/DD, TCP, information from TR, presentations and field visit.	TCP for the core and buffer was prepared which was approved by NTCA vide Letter No-F.No.1-14/2011-NTCA dated 21.03.2013. TCP was prepared with the participation of stake holders by arranging workshops dated 6-2-2010 & 20-4-2010. General Body meetings of FDAs were held dated 3-2-2012 & 25-7-2012 for involving the local people in the planning process of TCP.														
TCP is under preparation	Fair																	
TR has a relevant TCP	Good																	
TR has a comprehensive and relevant TCP, duly approved by the NTCA	Very good	✓																
			<table><tr><th>Date</th><th>Place</th><th>No of participants</th></tr><tr><td>06.02.2010</td><td>Anappady</td><td>15 (workshop)</td></tr><tr><td>20.04.2010</td><td>Anappady</td><td>26 (workshop)</td></tr><tr><td>03.02.2012</td><td>Anappady</td><td>65 (meeting)</td></tr><tr><td>25.07.2012</td><td>Anappady</td><td>35 (meeting)</td></tr></table>		Date	Place	No of participants	06.02.2010	Anappady	15 (workshop)	20.04.2010	Anappady	26 (workshop)	03.02.2012	Anappady	65 (meeting)	25.07.2012	Anappady
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25.07.2012	Anappady	35 (meeting)																
				It was reported that the minutes of the workshops issued and suggestions given by the EDC members were incorporated in the TCP. Scientifically good TCP has been prepared and research inputs have been incorporated.														

***The scientific content and the participatory processes used in preparation of the TCP will be taken into account in assessing the quality of TCP.**

2.2 Does the TR safeguards the threatened biodiversity values?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR does not safeguard the threatened biodiversity values.	Poor		Discussion with FD/DD, TCP- chapter 4 (para 4.3) and 7, Presentation by DD, information from TR and field visit.	<p>Strategy for management of TR has been prescribed in Zone plan for Core and Buffer Zone plan for core includes (i) guidelines issued to electricity boards for overcoming the threats from electric lines passing through the core, (ii) free ranging dogs to be removed/vaccinated, (iii) effective measures to be taken to avoid animal mortality due to accidents. Theme Plans include Theme Plan for Protection, Theme Plan for Fire Protection and Theme Plan for Watershed & Habitat Management. On the similar lines, Zone plan for Buffer has also been prepared.</p> <p>The theme plan for protection (Security Plan) has detailed out strategy involving establishment of 7 forest stations, 17 out-posts, 25 anti- poaching camps, 3 check posts, 16 chain gates and 43 trek-path covering 256.77 km. The plan provides measures for monsoon patrolling, Raids, inter-state co operation, deployment of Social Tiger Protection Force & a rapid action strike force, communication system (vehicle and wireless), proper arming of staff, capacity building, intelligence gathering and preparation of criminal profiles. Tiger cell, State level and district level co-ordination committees have been constituted to monitor detection, investigation and prosecution of wildlife offences.</p> <p>Fire management plan and water-shed & habitat management plan have been prepared with detailed provisions for safeguarding the bio-diversity value of TR. Scientific monitoring of tigers , co-predators , prey and their habitat are detailed in chapt-9 of TCP in accordance with the directions issued by the NTCA.</p> <p>However, following issues need to be resolved for full safe guard:</p> <ul style="list-style-type: none"> • 145.76 km² inviolate/ core area of the TR is not National Park or Sanctuary, but has the status of merely Reserve Forest. Further, this area of 145.76 km² of core and 252.77 km² of buffer are not in administrative control of TR. • There are 6 tribal settlements with 306 families. These are actually parcels of land/ enclaves, surrounded all around by the Core/ CTH and have been notified as buffer of the TR. Although legally they are not the part of the core, their presence inside the core does not render the core inviolate. • All the Gun license holders within 10 Km radius of Protected Area are not registered with Park Authorities
TR safeguards a few threatened biodiversity values.	Fair			
TR safeguards a large number of threatened biodiversity values.	Good	✓		
TR safeguards all threatened biodiversity values.	Very good			

*Remarks need to elaborate on the kind of safeguards and how they work or are intended to work

2.3 Are stakeholders given an opportunity to participate in planning process?

Assessment criteria ⁺																			
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks															
Little, if any opportunity for stakeholder participation in planning.	Poor		Discussion with FD/DD, TCP, information from TR and field visit	Stakeholders have been given opportunities to participate in the planning process. Regular meetings are conducted with the EDC members and micro-plans are prepared with the consent of the public. The following workshops/meetings were conducted with the stakeholders/ EDCs before the preparation of the TCP. It was reported that the minutes of the workshops issued and suggestions given by the EDC members were incorporated in the TCP.															
Stakeholders participate in some planning.	Fair																		
Stakeholders participate in most planning processes.	Good																		
Stakeholders routinely and systematically participate in all planning processes.	Very good	✓			<table><tr><th>Date</th><th>Place</th><th>No of Participants</th></tr><tr><td>06.02.2010</td><td>Anappady</td><td>15 (workshop)</td></tr><tr><td>20.04.2010</td><td>Anappady</td><td>26 (workshop)</td></tr><tr><td>03.02.2012</td><td>Anappady</td><td>65 (meeting)</td></tr><tr><td>25.07.2012</td><td>Anappady</td><td>35(meeting)</td></tr></table> <p>There are 9 EDCs in 11 settlements and the activities undertaken in EDCs are based on the micro-plans which are prepared in the general body meetings. All the EDCs are confederated into FDA, PKMTR. The Executive Committee of FDA, PKMTR also includes representatives from all the line departments. APOs are finalized after the discussion in the monthly meetings of general body and executive committees of the EDCs. PKMTR Foundation is also constituted which also take help of stake-holders in the planning process. A social auditing is also taking place in EDCs and FDA. In Sangam Colony EDC meeting dated 22-5-2014, it was reported during visit of MEE Team that 60 families are working in the forest department.</p>	Date	Place	No of Participants	06.02.2010	Anappady	15 (workshop)	20.04.2010	Anappady	26 (workshop)	03.02.2012	Anappady	65 (meeting)	25.07.2012	Anappady
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*The result of participation must show in the field and not merely reported as a routine exercise.

2.4 Are habitat management programmes systematically planned, relevant and monitored, and contribute effectively to Tiger and other endangered species conservation?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Habitat management programmes are entirely adhoc.	Poor		Discussion with FD/DD, TCP chapter 7 & 4 (para4.3), information from TR and field visit.	The TCP provides details of habitat management programmes required to safeguard different values of TR. The extent of Reservoirs in PKMTR extends up to 29.36 sq km and these reservoirs are the perennial source of water for elephants, tigers, co-predators and prey species. There are 61 streams /rivulets in the TR. 42 streams are perennials, whereas, 19 have seasonal water during the year. Creation of small check dams from upper hilly regions should be started in such streams and then moving downward. Out of 58 water holes in TR, 33 water holes dry up in summer and as per prescription, these are to be deepened in order to store more water for longer period. As prescribed, new water holes will be developed in scarcity areas at average intervals of 1 km. TR supports 102 vayals and maintenance of these vayals has been prescribed to be taken once in two years. Shrub lines / tree lines extending towards vayals to be removed, streams leading to vayals are to be treated by gully plugging/ brush wood and weeds coming into vayals to be eradicated. Invasive weeds (Lantana, Eupatorium and Michania) are prevalent in PKMTR and these are to be removed in accordance with the approval of the competent authority. Provision of vista clearance has been made for wildlife observations and to avoid road hits etc.
Limited planning and monitoring programmes are in place for habitat management.	Fair			
Habitat management programmes are generally planned and monitored.	Good	✓		
Habitat management programmes are thoroughly planned and monitored.	Very good			

				Regarding the management of teak plantations, it is mentioned to be retained during the TCP period. The management prescriptions provided for above programmes are based on scientific studies and field observations of the local officers. However, the water holes have been developed without proper planning. It is also obvious from the map enclosed in TCP, that water holes are over developed in some portions whereas very few in certain areas. Further there is, no special plan to cater to the exclusive needs of protection and habitat management for unique and RET species.
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***This assessment should be primarily based on habitat management programmes in relation to habitats for species that are threatened (IUCN categories), are habitat specialists, subjected to seasonal movements, wide ranging with emphasis on the breeding and rearing habitat and may include factors such as food, water, shelter (all connotations).Habitat structure, composition, unique patches of vegetation and sensitive sites, sources of water and their distribution are integral. Corridors within buffer zone are critically important. For example, all riparian habitats. Have these been addressed? Is their a planning process in place? The management practices dealing with invasive species such as Lantana, Michania etc. would be examined.**

2.5 Does the TR has an effective Protection Strategy (PS)* and Security Plan and Security Audit (SA) in place?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR has little or no PS and SA.	Poor		Discussion with FD/DD; TCP para-4.3, 7.2 and chapter 10; information from TR and field visit.	TCP provides detailed security plan for the protection of TR. Participatory forest management including Eco-tourism has greatly enabled to control the illegal activities to a great extent and it is evident from the office records that no offence report has been booked in last 3 years. Theme plan for protection and theme plan fire protection have been prepared separately in great detail covering all aspect of safety measures. Under the theme plan for protection (Security Plan), after identifying poaching locations, ganja cultivation area and illegal entry routes, maps have been prepared. For protection 7 forest stations (equipped with office buildings, residences, toilets, lights, water supply etc), 17 out- posts, 25 anti-poaching camps, 3 check posts, 16 chain gates and 43 trek-path covering 256.77 km length have been established/created complemented with 7 anti-poaching camps, 7 chain gates and 9 trek-path of length 45 km are proposed. Raids and Monsoon patrolling are carried out with the help of anti-poaching watchers on prescribed sensitive routes. To check the illegal entries and movement of poachers, Inter-division and Inter-state co-ordination has been sought. Vehicles and communication systems (30 wireless sets and 63 walkie talkie) are deployed in TR. Personnel of TR are provided with .315-rifles (9), .303-rifles(8), 12-bore guns(4), revolver(5) and-ammunition for discharging their duties. In order to effectively manage the poaching in reservoirs 4 speed boats have been provided at sensitive points. Procedures for capacity building of staff, for intelligence gathering and for preparing criminal profile directory have been elaborated in detail in TCP. Social Tiger Protection Force including 190 EDC members and Strike Force for rapid action have been constituted. For monitoring the investigation of cases related with tiger, a Tiger Cell under the chairmanship of CCF (FD) has been constituted. Further, State Level Co-ordination Committee under the Chairmanship of Principal Secretary, Home Department and District Level Co-ordination Committee under the Chairmanship of District Collector had been constituted by GO No (Rt)-137/2003/F&WLD dated 12-03-2003 for effective
TR has an adhoc PS and SA.	Fair			
TR has a generally relevant PS and SA but is not very effective.	Good			
TR has a comprehensive and very effective PS and SA.	Very good	✓		

			<p>monitoring, detection and prosecution of wildlife offences. Strategy for fire management includes identification of fire prone areas, maintenance and control burning of 42 fire lines (covering 425.90 km length), involvement of 522 tribal families in preparing fire management plan and in its implementation, making awareness campaign for wild fire and patrolling on all fire affected areas have been prescribed in TCP to be carried out.</p> <p>There is no forest/wildlife offence booked in last 3 years.</p> <p>There is no poaching case since 2004.</p> <p>Regarding security audit, it is provided in the TCP that FD (Project Tiger) will conduct quarterly security audit and generate report. The annual report of security audit shall be placed before Steering Committee Governing body of Foundation.</p> <p>FDA Parambikulam received 5th Green Award from “Junglees”, a Kolkata based NGO, for Best Protected Tiger Reserve in India with a shield and 1.5 lakh cash prize.</p> <p>Further, TR received Bagh Mitra Award from WWF for being best in Tiger Conservation during 2013-14.</p>
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***This assessment takes inter-alia into account the nature of threats, the number and location of patrolling camps and foot and mobile patrolling, needs that relate to available manpower, terrain difficulties, practicability of area coverage, readiness to contain specific threats with necessary support and facilities. The constitution and functioning of Special Tiger Protection Force (STPF), Number of offences reported, arrests made, prosecution initiated and conviction achieved will be taken into account.**

2.6 Has the TR been effective in the mitigation of human-wildlife conflicts?

Assessment criteria*

Assessment criteria	Condition	Category*	(Tick ✓)	Reference document(s)	Remarks																																				
	Human-wildlife conflicts are significant but poorly addressed.	Poor		Discussion with FD/DD, TCP, information from TR and field visit	Human-animal conflict are prevalent in all tribal colonies, Thekkady and Sheikalmudi area in Parambikulam TR due to elephants, gaurs and wild boars and common locations for the conflicts in core area added from Nemmara are Nerchappara to Thengumpadam in the fringe . [TCP – para 6.4(8)]. However, the following measures have been taken for the safety of the public:																																				
	TR has been able to mitigate few human-wildlife conflicts.	Fair			<table><tr><th>Sl.N</th><th>Name ofSettlement</th><th>Preventive measures</th></tr><tr><td>1</td><td>Poopara</td><td>Elephant Proof trench and Kayala(stone wall)</td></tr><tr><td>2</td><td>Earthdam</td><td>Kayala(stone wall)</td></tr><tr><td>3</td><td>Kuriarkutty</td><td>Elephant Proof trench</td></tr><tr><td>4</td><td>Kadar Colony</td><td>Elephant Proof trench</td></tr><tr><td>5</td><td>Anakkayam Sholayar</td><td>Solar power fence</td></tr><tr><td>6</td><td>Malakkapara</td><td>----</td></tr><tr><td>7</td><td>Sholayar Power House</td><td>Solar power fence</td></tr><tr><td>8</td><td>Thavalakkuzhi para</td><td>Solar power fence</td></tr><tr><td>9</td><td>Sungam</td><td>Boundary wall</td></tr><tr><td>10</td><td>Shernelly</td><td>----</td></tr><tr><td>11</td><td>Anjam Colony</td><td>Elephant Proof trench and Kayala(stone wall)</td></tr></table>	Sl.N	Name ofSettlement	Preventive measures	1	Poopara	Elephant Proof trench and Kayala(stone wall)	2	Earthdam	Kayala(stone wall)	3	Kuriarkutty	Elephant Proof trench	4	Kadar Colony	Elephant Proof trench	5	Anakkayam Sholayar	Solar power fence	6	Malakkapara	----	7	Sholayar Power House	Solar power fence	8	Thavalakkuzhi para	Solar power fence	9	Sungam	Boundary wall	10	Shernelly	----	11	Anjam Colony	Elephant Proof trench and Kayala(stone wall)
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	TR has been able to mitigate many human-wildlife conflicts.	Good																																							
	TR has been effective in mitigating all human-wildlife conflicts.	Very good	✓		<p>In the following cases of human injury, compensation have been paid in last 4 years within the period of the time prescribed in Right to Service Act.</p> <table><tr><th>Year</th><th>Nature of incidents</th><th>Num ber</th><th>Compensa- tion Paid</th></tr><tr><td>2009</td><td>Minor injuries by Gaur</td><td>1</td><td>5,000</td></tr><tr><td>2010</td><td>Minor injuries by Gaur &Wild boar</td><td>2</td><td>8,153</td></tr><tr><td>2011</td><td>Injuries by Snake bite</td><td>3</td><td>15,000</td></tr></table>	Year	Nature of incidents	Num ber	Compensa- tion Paid	2009	Minor injuries by Gaur	1	5,000	2010	Minor injuries by Gaur &Wild boar	2	8,153	2011	Injuries by Snake bite	3	15,000																				
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				2012	Minor injuries by Gaur & Wild boar	4	25,000
				2013	2 Minor injuries by W. boar & 1 major injuries by Sloth bear	3	54,440
				It is noteworthy, that the this tiger reserve has been very successful on mitigation of man animal conflicts by removing all the livestock population from the tiger reserve by convincing the residents. Entire tiger reserve is free from grazing pressure. There is very good harmony between management and people living inside the TR.			

***The assessment will take into account the number of incidences reported and payment of compensation made and its timeliness.**

2.7 Is the TR integrated into a wider ecological network/ landscape following the principles of the ecosystem approach?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR not integrated into a wider network/ landscape.	Poor		Discussion with FD/DD, TCP, information from TR and field visit.	Parambikulam TR is an integral part of Western Ghats which is situated in the Nelliampathy – Anamalai sub unit of WG. Surrounding areas of TR is buffered by many protected areas and Non-protected areas of Kerala and Tamil Nadu. The total extent of Tiger Conservation Unit/ Landscape within Kerala is 3225.73 km ² and in Tamil Nadu is 1479.27 km ² totalling to 4705 km ² . The adjoining areas of Kerala have continuity of forests. There is a habitat fragmentation between Sholayar and Malayattoor due to natural geographic features. In the western, northern and southern side of TR in Kerala, landscape is surrounded by Eravikulam NP, Chinnar WLS, Kuringimala WLS, Annamalai Shola NP, Pambadum Shola NP, Chimmony WLS, Peechi WLS, Thattekkad Bird Sanctuary and many non-protected areas. On the eastern side of the TR, boundary of Tamil Nadu starts and is surrounded by Anamalai TR, Chinnar WLS, E.NP, AS NP and non-protected forests. The reserve being a part of major ecological continuum from Peechi to Eravikulam through Anamalai, aids the survival of large viable populations of wildlife. The Parambikulam valley extends from East to West opening up migratory routes for wild animals from Nelliampathy to Eravikulam National Park. Parambikulam Tiger Reserve along with Anamalai Tiger Reserve forms the northern most extension of Anamalai portion of the Western Ghat before being blocked by Palakkad Gap. Thus migration of animals like elephants and subsequent genetic exchange between their populations is facilitated. Two corridors connecting the reserve to PAs are identified. It is reported that adjoining/ corridor TCP (Indicative Plan) is being finalized which deals with mitigating threats related to wildlife and biodiversity conservation in production sectors/ working plans of territorial forest divisions in the identified landscape. It is noteworthy that the core is open (without any buffer) in the northern side of TR.
Some limited attempts to integrate the TR into a network/ landscape.	Fair			
TR is generally quite well integrated into a network/ landscape.	Good	✓		
TR is fully integrated into a wider network/ landscape.	Very good			

***Assessment needs to consider the scope of opportunities on the landscape scale that exist. Consider whether any attempts have been made and what are these? Have all the important corridors been identified? What actions are planned/implemented for their security? Have the Forest Working Plans and Forest Development Corporation Plans within the identified landscapes taken cognizance of such new requirement? These should have been reflected in TCPs. Is there is any effort to rationalize land use around TR? Is any effort being made to plan and use 'Smart Green Infrastructure'?**

3. Inputs

3.1 Are personnel adequate, well organized and deployed with access to adequate resources in the Tiger Reserve (TR)*?

Assessment criteria*							
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks			
Few, personnel explicitly allocated but poorly supported for TR management.	Poor		Discussion with FD/DD, information from TR, TCP- para- 7.2 &13,and field visit.	The following personnel are deployed for the TR management against the sanctioned posts in the TR.			
Some personnel explicitly allocated for TR management but not adequately supported and systematically linked to management objectives.	Fair			Designation	Sanctioned posts	In Place	Vacancy
				F.D	1	1	0
				D.D	1	1	0
				Office Staff	22	19	3
				Sub-total	24	21	3
				R.F.O	4	4	0
				Dy R.F.O	2	2	0
S.F.O	20	19		1			
Some personnel with fair support explicitly allocated towards achievement of specific TR management objectives.	Good			B.F.O/ R.F Watcher	49	43	6
			Other Staff	7	4	3	
			Sub-total	82	72	10	
Adequate personnel appropriately supported and explicitly allocated towards achievement of specific TR management objectives.	Very good	✓	Total	106	93	13	
			The above table indicates that there are12.19 % shortage in front-line staff. The age groups of field staff were found to be 32 below 40 yrs, 30 in the range 40-50 and 10 in the range 50-60. Thus the field staffs are young and energetic to discharge the arduous nature of duties in the TR. In addition to that 115 daily waged mazdoors in Social Tiger Protection Force and 71 daily waged mazdoors in various community based eco-tourism are engaged. It has been reported that to employ adequate protection staff , appointment of about 10 permanent watchers and some additional posts of field staff are proposed in the TCP, the action for which is stated to be underway. Communication system (vehicle and wireless), arms and ammunitions and accommodations have been provided to the field staff.				

**This assessment should inter-alia be based on number of personnel allocated for attainment of TR objectives at the Range, Round, Beat and Patrolling camps levels or as relevant to the needs (sanctioned posts vis- a- vis existing personnel and needs beyond the sanctioned strengths. It is possible that posts have last been sanctioned several years back that do not now account for the current needs)*

3.2 Are resources (vehicle, equipment, building etc.) adequate, well organized and managed with desired access?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Few, if any, resources explicitly allocated for TR management.	Poor		Discussion with FD/DD, information from TR, TCP para-4.3 & 7.2 and field visit.	<p>The TR has 92 buildings (Residential-53, Wireless stations-7, Office buildings-3, Watch towers-5, Check posts-3, Interpretation centre-1, Information centre-1 and Others -19). Further, 7 forest stations and 17 out-posts need office buildings, residential quarters with toilet facilities.</p> <p>There are 42 fire lines covering 425.90 km length (31.8 km with 10.4 m width and 394.1 km with 5.2m width) have been created in the core of TR.</p> <p>TR has 9 vehicles (four wheelers-7 and bikes-2). In order to effectively manage the poaching in reservoirs 4 speed boats have been provided at sensitive points.</p> <p>TR has 26 arms (.315 rifles-9, .303 rifles-8, 12 bore guns-4 and revolver-5 and required ammunitions. As stated in TCP para-7.2.2.1.12, for better protection 3 more revolvers and 32 rifles are to be purchased during the plan period. Wireless communication system involves 30 wireless sets and 63 walkie talkies. However, the wireless communication system is not established completely and requires urgent action.</p>
Some resources explicitly allocated for TR management but not systematically linked to management objectives.	Fair			
Some resources explicitly allocated towards achievement of specific TR management objectives.	Good	✓		
Adequate resources explicitly allocated towards achievement of specific TR management objectives.	Very good			

* These form a variety of resources. These may be segregated into immovable (structures) and movable categories and each further may be considered under the essential and desirable categories. It is best to start with what are the minimum needs to attain each objective, what is available and manner of use/deployment. The proportions of the 'essentials' and 'desirables' along the importance gradient of objectives would serve as pointers for score categories. Specific remarks would be vitally important.

3.3 Are financial resources other than those of the State linked to priority actions and are funds adequate, released timely and utilized?

Released under the provisions of the RTI Act, 2005

Assessment criteria*																																																
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks																																												
Resource allocation is adhoc, funds are inadequate and seldom released in time and not utilized.	Poor		Discussion with FD/DD, TCP, information from TR and field visit	The status of funding in CSSPT (Project Tiger) in last 3 years are as under: (Rupees in lakhs) <table><tr><th>Year</th><th>Central/State Share</th><th>Release/ allotment</th><th>Utilised</th><th>Bal- -nce</th></tr><tr><td rowspan="3">2011-12</td><td>Central</td><td>172.450</td><td>172.450</td><td>0</td></tr><tr><td>State</td><td>112.750</td><td>97.550</td><td>15.20</td></tr><tr><td>Total</td><td>285.200</td><td>270.000</td><td>15.20</td></tr><tr><td rowspan="3">2012-13</td><td>Central</td><td>227.870</td><td>226.610</td><td>1.26</td></tr><tr><td>State</td><td>165.630</td><td>156.170</td><td>9.46</td></tr><tr><td>Total</td><td>393.500</td><td>382.780</td><td>10.72</td></tr><tr><td rowspan="3">2013-14</td><td>Central</td><td>209.444</td><td>209.444</td><td>0</td></tr><tr><td>State</td><td>217.360</td><td>*221.430</td><td>-4.07*</td></tr><tr><td>Total</td><td>426.804</td><td>430.874</td><td>-4.07*</td></tr></table> <p>*Note: This seems to be typographical error</p> <p>Field Director office records revealed that there was no problem in release of the fund from State Government. The money released by the GOI is adequate enough to meet most important objectives. Almost all Central Assistance have been fully utilized in the same financial year and Utilization Certificates had been sent.</p>	Year	Central/State Share	Release/ allotment	Utilised	Bal- -nce	2011-12	Central	172.450	172.450	0	State	112.750	97.550	15.20	Total	285.200	270.000	15.20	2012-13	Central	227.870	226.610	1.26	State	165.630	156.170	9.46	Total	393.500	382.780	10.72	2013-14	Central	209.444	209.444	0	State	217.360	*221.430	-4.07*	Total	426.804	430.874	-4.07*
Year	Central/State Share	Release/ allotment			Utilised	Bal- -nce																																										
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	Total	426.804	430.874	-4.07*																																												
Some specific allocation for management of priority action. Funds are inadequate and there is some delay in release, partially utilized.	Fair																																															
Comprehensive planning and allocation that meets the most important objectives. Generally funds released with not much delay and mostly utilized.	Good																																															
Comprehensive planning and allocation of resources for attainment of most objectives. Funds generally released on-time and are fully utilized.	Very good	✓																																														

				The Assistance in Project Elephant is as follows:												
				<table><tr><td>Status</td><td>2011-12</td><td>2012-13</td><td>2013-14</td></tr><tr><td>Released</td><td>8.30</td><td>2.52</td><td>3.70</td></tr><tr><td>Utilised</td><td>8.20</td><td>2.52</td><td>3.70</td></tr></table>	Status	2011-12	2012-13	2013-14	Released	8.30	2.52	3.70	Utilised	8.20	2.52	3.70
Status	2011-12	2012-13	2013-14													
Released	8.30	2.52	3.70													
Utilised	8.20	2.52	3.70													
				The utilization is 100%.												

***Obtain details of funds released by NTCA and their utilization by TR in the last 3 years and indicate them under 'Remarks'. Also comment on the problems associated with fund allocations and their utilization.**

3.4 Are financial resources from the State linked to priority action and funds adequate, timely released and utilized for the management of Tiger Reserve?

Assessment criteria*																		
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks														
Resource allocation is adhoc, funds are inadequate and seldom released in time and not utilized.	Poor		Discussion with FD/DD, TCP, information from TR and field visit	Parambikulam TR receives the State Fund from about 17 schemes; like PT State Share, NABARD, Eco-tourism, Non-plan (building, roads, bridges etc), IFM, ED, Forest Protection, PE, xii th and xiii th FC and WGDP, etc. The details of funds released and utilized under different schemes of the State Government excluding State share of CSSPT and PE (details of both furnished in element/ criteria 3.3 above) is as below:														
Some specific allocation for management of priority action. Funds are inadequate and there is some delay in release, partially utilized.	Fair			(Rupees in lakhs)														
Comprehensive planning and allocation that meets the most important objectives. Generally funds released with not much delay and mostly utilized.	Good	✓		<table><tr><th>Year</th><th>Name of the scheme</th><th>Released Amount</th><th>Utilised Amount</th></tr><tr><td>2011-12</td><td rowspan="3">About 15 schemes</td><td>58.68</td><td>43.20</td></tr><tr><td>2012-13</td><td>95.72</td><td>92.58</td></tr><tr><td>2013-14</td><td>127.46</td><td>126.93</td></tr></table>	Year	Name of the scheme	Released Amount	Utilised Amount	2011-12	About 15 schemes	58.68	43.20	2012-13	95.72	92.58	2013-14	127.46	126.93
Year				Name of the scheme	Released Amount	Utilised Amount												
2011-12			About 15 schemes	58.68	43.20													
2012-13	95.72	92.58																
2013-14	127.46	126.93																
Comprehensive planning and allocation of resources for attainment of most objectives. Funds generally released on-time and are fully utilized.	Very good		TR has reported that there was no problem in release of the fund in the same financial year. The above Table indicates that State fund allocation has increasing trend and funds are able to meet the most important objectives.															

***Obtain details of funds released by State and their utilization by TR in the last 3 years and indicate them under 'Remarks'. Also comment on the problems associated with fund allocation and their utilization.**

3.5 What level of resources are provided by NGOs?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
NGOs contribute nothing for the management of the TR.	Poor		Discussion with FD/DD, TCP, information from TR and field visit	The status of NGO support as informed by the TR authorities is as follows: WWF supported in 2012-13 in Phase-IV Tiger monitoring by providing technical supports. Wildlife Conservation Trust (WCT), Mumbai donated field kits/ equipments including two vehicles to the Reserve worth Rs 20.00 lakhs. Most of the NGOs who are in vicinity of Palakkad and Coimbatore and few reputed Research Institute of the state/ country, took part in the work-shop of TCP preparation and their suggestions were incorporated in the TCP.
NGOs make some contribution to management of the TR but opportunities for collaboration are not systematically explored.	Fair	✓		
NGOs contributions are systematically sought and negotiated for the management of some TR level activities.	Good			
NGOs contributions are systematically sought and negotiated for the management of many TR level activities.	Very good			

4. Process

4.1 Does the TR have manpower resources trained in wildlife conservation for effective TR management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No trained officers and frontline staff in the TR.	Poor		Discussion with FD/DD, TCP, information from TR and field visit	Except the DD, Wildlife Education (who has done certificate course from WII), none of the officers/ frontline staff, has done Diploma/ Certificate courses in Wildlife Management in WII. The DD (Wildlife Education) has completed wildlife Certificate course from WII, D.Dun and DD has undergone 15 days training in wildlife enforcement technique and PA management by WWF at South Africa. FD of the Reserve had undergone various modules of Wildlife Management from WII, D.Dun. None of the RFO, Foresters and Forest Guards (except basic orientation courses on wildlife during their professional trainings in forest colleges/ schools after recruitment) have done any regular course in wildlife management. However, all the Forest Guards underwent field exposure in Wildlife Management in Wildlife Sanctuaries and National Parks in Kerala. The trainings were also imparted on handling GPS & Arms and monitoring for tiger, co-predators, prey species and their habitat assessment through Camera-trap & sign/ regeneration surveys. The trainings on Wildlife Evidences and Census technique have been imparted. During the months of January14 and February14, orientation training to field staff, bird watching training and butterfly training were conducted at TR level. Although training module has been developed and incorporated in the TCP-chapter-4., Training calendar for the year 2014-15 has been proposed.
Some trained officers and few trained frontline staff, posted in the TR.	Fair	✓		
All trained officers and and fair number of trained frontline staff posted in the TR.	Good			
All trained officers and most of the trained frontline staff is posted in the TR.	Very good			

**Indicate % of trained staff in various categories. The number and thematic areas of the 'Internal Training' programmes organized in the TR in the last 3 years may be taken into account. Has the TR prepared a 'Staff Development Plan'? Is it being implemented?*

4.2 *Is TR staff management performance linked to achievement of management objectives?*

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No linkage between staff management performance and management objectives.	Poor		Discussion with FD/DD, TCP, information from TR and field visit	<p>There is no direct linkage between staff performance in achieving specific management objectives and their promotions. Performance evaluation at annual interval is being carried out for the front line staff on the basis of various criteria as per service rule. The promotions are mostly on the basis of seniority subjected to rejection of unfits.</p> <p>However, there is state level Chief Minister Award scheme for outstanding devotion to duty and Mr Jegadeesh (BFO) had received the Chief Minister Award for his best performance in the field.</p>
Some linkage between staff management performance and management objectives, but not consistently or systematically assessed.	Fair			
Management performance for most staff is directly linked to achievement of relevant management objectives.	Good	✓		
Management performance of all staff is directly linked to achievement of relevant management objectives.	Very good			

4.3 *Is there effective public participation in TR management* and does it show in making a difference?*

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no public participation in TR management.	Poor		Discussion with FD/DD, TCP, information from TR and field visit	<p>Local people are actively involved in TR management activities. 115 local Tribes engaged in the Protection work are termed Social Tiger Protection Force. Joint patrolling with EDC members is also in force.</p> <p>Community based eco-tourism programs provides major employment opportunities to the local tribes in TR. Annual inflow of tourists is about 50,000 and at present 13 eco-tourism packages are in operation. All activities are carried out with the help of local tribal guides and tribal drivers. Around 71 EDC members are employed in this program.</p> <p>"Parambikulam Dhara" Water is purified by Kuriarkutti EDC members and empty bottles are taken back to keep the TR clean. Tribal women of Kadas EDC run the Paper Bag unit and sell them at the eco-shops. Tailoring unit is run by the tribal women of different EDC's. They also stitch uniform for naturalists and anti-poaching watchers. It provides employment opportunities to tribal women. Tribal women also run the Plastic processing units. Most of the people in the reserve have been traditionally involved in honey collection from buffer areas. The wild honey collected is processed by trained tribal women and sold at eco-shops under the brand name "Parambikulam Honey". They also prepare bee wax balm, juice, jam, pickle, candy and handicrafts of bamboo and reed and sell it at Government eco-shops.</p> <p>The main crop of pepper, turmeric, ginger and coffee are produced and under organic certificate obtained from an approved agency (Lacon Quality Control, Cochin), the</p>
Opportunistic public participation in some of the relevant aspects of TR management.	Fair			
Systematic public participation in most of the relevant aspects of TR management.	Good			
Comprehensive and systematic public participation in all important and relevant aspects of TR management.	Very good	✓		

			<p>products are sold at 15-20% premium in the market. Consequently the tribal groups especially women got involved themselves in income generating activities and their dependency on forest got reduced enormously. There have complete control over grazing. No incidence of poaching/ fire occurrence in the Reserve since 2006 has taken place. TR look like plastic free zone and sustainable use of NTFP was insured.</p> <p>Species surveys / estimation process is being taken up with the involvement of various research organizations/ student communities. It was reported that during last year, survey of odonates and spiders were conducted and this year estimation of birds, Nilgiri tahr and spiders are proposed. Thus, comprehensive and systematic public participation in all important and relevant aspects of TR management are involved.</p>
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The involvement of NGOs/ NGIs in population estimation may be taken into account)

4.4 Is there a responsive system for handling complaints and comments* about TR management?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Ad-hoc approach to handling complaints.	Poor		Discussion with FD/DD, TCP, information from TR and field visit	The complaints received from the level of Minister/PCCF/CWLW are inquired through Deputy Director and the reports are furnished to the higher authorities. The complaints received from local stakeholders and EDC members are discussed and decided in the executive meetings and general body meetings of EDCs and in the meetings of the FDA. It was reported that the records of the decisions and complaints had been maintained in the respective registers of the EDC. For receiving the complaints from the tourists, feedback registers and forms are available at the all the eco-tourism points and accommodations. The received complaints are discussed with eco-tourism management team and disposed off periodically. It was reported that public can place their suggestions/ complaints through the website of the TR (www.parambikulam.org/) Toll free number maintained by the Department for the purpose. Every suggestion/ complaint made by the visitors/residents is being reviewed by TR management and best awards/compliments are being given for best suggestions.
Complaints handling system operational but not responsive to individual issues and with limited follow up.	Fair			
Coordinated system logs and responds effectively to most complaints.	Good			
All complaints systematically logged in coordinated system and timely response provided with minimal repeat complaints.	Very good	✓		

**Does the TR maintains 'Suggestions Register'? What actions are taken to deal with suggestions?*

4.5 Does TR management addresses the livelihood issues* of resource dependent communities, especially of women?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No livelihood issues are addressed by TR management.	Poor		Discussion with FD/DD, presentation by DD, TCP, information from TR and field visit.	<p>Parambikulam TR is the home of 4 tribal communities (population-1400) namely Kadar, Malasar, Muduvas and Malamalar having altogether different culture, socio-economic and spatial organization. Their livelihood totally depends on the forests. TR has attempted a win-win model for biodiversity governance that balances the imperatives of conservation, livelihoods and economic production.</p> <p>TR management addresses the livelihood issues of resource dependent communities, specially of women, in the following ways:</p> <p>1) Community Based Eco-tourism and Eco- development activities.</p> <ul style="list-style-type: none"> Eco- tourism packages—Community based eco-tourism programmes provide major employment opportunity to the tribals. Reserve is visited by about 50,000 visitors annually and at present 13 eco-tourism packages are in operation in buffer areas. All activities are conducted with the help of local tribal guides. Around 71 EDC members are employed in it. Parambikulam Vehicle Safari---5 vehicles are operating for effective visitor transport facilities and wages of guides and drivers are paid by FDA on monthly basis Parambikulam Dhara: This water is purified in a unit which is operated with the solar energy and average 350-400 liters of purified drinking water is produced every day. The empty bottles are taken back which make the TR plastic free zone. Kuriarkutti EDC members are doing this job. Parambikulam Paper Bag unit: This unit is operated by Kadas EDC to replace the polythene garbage. Tailoring unit: This unit is run by tribal women. They also stitch uniforms for naturalists and anti poaching watchers which provides employment opportunities to the tribal women. Souvenirs from recycled plastic waste: This plastic processing unit has been setup with help of tribal women. Many tribal women are getting livelihood opportunity in this unit. <p>2) Value addition of NTFP and organic certification of products</p> <ul style="list-style-type: none"> Parambikulam Honey: the wild honey collected from buffer area is processed with the help of trained tribals and 3-4 tonnes of honey is sold every year. Certification in the name of Parambikulam Honey helps the tribals to earn around 40-60 % premium by avoiding the vicious trap of middlemen. Parambikulam Bee Wax Balm: this is an initiative to support the primitive Malasar Tribes this tribe are trained in making balm and sold through eco shops. Parambikulam Amla unit: the tribal women of Earth dam EDC are trained by Agriculture University for making juice, jam pickle and candy. Handicraft unit: this unit is launched by FDA using bamboo and reeds and expert tribal women are employed in this profession. 80% revenue from the sale of the product
Few livelihood issues are addressed by TR management.	Fair			
Substantial livelihood issues are addressed by TR management.	Good			
Livelihood issues of resource dependent communities especially of women are addressed effectively by TR managers.	Very good	✓		

				<p>is shared with the tribal women.</p> <ul style="list-style-type: none"> Organic Certification: Poopara EDC members are involved in agriculture and produces pepper, turmeric, ginger and coffee. Organic certification was obtained approved agency (Lacon Quality Control, Cochin) and consequently 59-20 % premium is obtained from the crops. Establishment of Eco shops: To sell the products, 3 eco-shops have been established by the FDA at Parambilulam, Palakkad. Revenue generated from the eco shops helped in augmenting of income of local tribes. <p>During the year 2010-11 and 2011-12, revenue generated from these activities amounts to Rs. 186 lakhs and Rs. 212 lakhs respectively. Out of this, 40% was paid as wages, 40% was used for maintenance 20% for community development programmes to the local communities.</p> <p>Further, the local tribals and tribal women have been engaged in development activities carried out through the central and state funds as daily wagers and 93, 000 man days were generated to the local people.</p> <p>In recognition of these, TR received NTCA Award from MOEF for excellence in “Innovative Practices” during the year 2012.</p> <p>TR received State Chief Minister Award for Innovations in Public Policy under Developmental Intervention category during 2013-14</p>
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***The number of mandays generated in the last 3 years may be taken into account. Are funds received from District Agencies and other sources? Provide details of funds received in last 3 years.**

4.6 Has the TR planned and implemented the voluntary ‘Village Relocation’ from the Core/ Critical Tiger Habitat (CTH)?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No planning and no implementation	Poor		Discussion with FD/DD, TCP, information from TR and field visit	<p>The Core/CTH has been notified excluding 39.872 km² area consisting areas of (i) 3 reservoirs (Parambikulam, Thunacadavu and Peruvapallam); (ii) Area of 6 tribal settlements/ colonies (Sungam colony, Pooppara colony, Fifth colony, Kuriakutty colony, Earth dam colony and Kadar colony) with 100 meter buffer around; (iii) Teak Plantation of Sungama range (18.30 km²). These are actually parcels of land/ enclaves, surrounded all around by the Core/ CTH and have been notified as buffer of the TR.</p> <p>As all the human settlements inside the core have been excluded from the core area of the TR, legally they are not the part of the core. However, their presence inside the core will not render the core inviolate. Hence voluntary relocation process as applicable in other cases should be planned and implemented.</p> <p>As stated in TCP (para 4.6), 6 tribal settlements have 43.27 ha. land and 306 families. Out of 6 settlements/ colonies, 95% people residing in Kuriakutty Colony have expressed their willingness for relocation. 60% of people had opted Option - I and 40% Option – II. As 5% people of Kuriakutty Colony still not willing for relocation further dialogue is in progress by the Tiger Reserve Authorities. This process needs to be expedited.</p>
Plans have been made but no implementation	Fair			
Plans have been made and some implementation is in progress	Good	✓		
Plans have been made and are being actively implemented/ no human habitation in the CTH	Very good			

***Assessment will look into the village relocation planning process including availability of manpower, financial resources and NGO support, if any. Is there a mechanism to address the complaints received in respect of relocation process? Effort must be made to assess post-relocation success or otherwise.**

5. Output

5.1 Is adequate information on TR management publicly available?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no information on TR management publicly available.	Poor		Discussion with FD/DD, TCP, information from TR and field visit	Approved TCP of PKMTR is placed in the Website of the Forest Department of Kerala: http://www.forest.kerala.gov.in/ and that of PKMTR http://parambikulam.org/ . The TR website has also uploaded useful information on the TR including various facilities for visitors. Reports of population estimations are published and available to the public. Information is also available in brochures, pamphlets, coffee table books, posters etc. It is reported that detailed information is available with the publications of the Kerala Tourism Department and Kerala Tourism Development Corporation.
Publicly available information is general and has limited relevance to management accountability and the condition of public assets.	Fair			
Publicly available information provides detailed insight into major management issues and condition of public assets.	Good			
Comprehensive reports are routinely available in public domain on management and condition of public assets.	Very good	✓		

5.2 Are visitor services and facilities appropriate and adequate?

Assessment criteria*																																																																
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks																																																												
Visitor services and facilities do not exist.	Poor		Discussion with FD/DD, TCP(buffer)-chapt-14, information from TR, Presentation by DD/FD and field visit.	Around 50,000 visitors annually come to the TR. The details of the facilities provided to the visitors are given below: A- Facilities common for day visitors: <table><tr><th>S.N</th><th>Type of Facility</th><th>Location</th></tr><tr><td>1</td><td>Amenity Centre/Resting Place</td><td>Anappady</td></tr><tr><td>2</td><td>Interpretation Centre/ Library</td><td>Anappady</td></tr><tr><td>3</td><td>Informrnation Centre/Vanasree Eco-shop</td><td>Anappady</td></tr><tr><td>4</td><td>Information cum sale counter</td><td>Parambikulam</td></tr><tr><td>5</td><td>Canteen Facility</td><td>Anappady</td></tr><tr><td>6</td><td>Parambikulam Dhara(Drinking Water)</td><td>Parambikulam</td></tr><tr><td>7</td><td>Toilet Facility for ladies and men</td><td>Anappady& Parambikulam</td></tr><tr><td>8</td><td>Parking facility for Vehicles(Private-30 vehicles)</td><td>Anappady</td></tr><tr><td>9</td><td>EDC Shops (6 no)</td><td>Parambikulam</td></tr><tr><td>10</td><td>Vanasree Eco-shop</td><td>Anappady</td></tr><tr><td>11</td><td>Vanasree Photo Gallery</td><td>Parambikulam</td></tr><tr><td>12</td><td>Tribal Heritage Centre</td><td>Parambikulam</td></tr><tr><td>13</td><td>Dam View Point</td><td>Thunakadavu</td></tr><tr><td>14</td><td>Valley View Point</td><td>Parambikulam</td></tr><tr><td>15</td><td>Orientation Centre (capacity 30)</td><td>Anappady</td></tr></table> B-Facilities for nature camp participants <table><tr><td>1</td><td>Nature Study Hall (capacity 80)</td><td>Anappady</td></tr><tr><td>2</td><td>Dormitory-Hornbill (capacity 40)</td><td>Anappady</td></tr><tr><td>3</td><td>Tiger Hall (capacity 20)</td><td>Parambikulam</td></tr><tr><td>4</td><td>Trekking Trails</td><td></td></tr></table> C- Facilities for participants of Ecotourism Programmes	S.N	Type of Facility	Location	1	Amenity Centre/Resting Place	Anappady	2	Interpretation Centre/ Library	Anappady	3	Informrnation Centre/Vanasree Eco-shop	Anappady	4	Information cum sale counter	Parambikulam	5	Canteen Facility	Anappady	6	Parambikulam Dhara(Drinking Water)	Parambikulam	7	Toilet Facility for ladies and men	Anappady& Parambikulam	8	Parking facility for Vehicles(Private-30 vehicles)	Anappady	9	EDC Shops (6 no)	Parambikulam	10	Vanasree Eco-shop	Anappady	11	Vanasree Photo Gallery	Parambikulam	12	Tribal Heritage Centre	Parambikulam	13	Dam View Point	Thunakadavu	14	Valley View Point	Parambikulam	15	Orientation Centre (capacity 30)	Anappady	1	Nature Study Hall (capacity 80)	Anappady	2	Dormitory-Hornbill (capacity 40)	Anappady	3	Tiger Hall (capacity 20)	Parambikulam	4	Trekking Trails	
S.N	Type of Facility	Location																																																														
1	Amenity Centre/Resting Place	Anappady																																																														
2	Interpretation Centre/ Library	Anappady																																																														
3	Informrnation Centre/Vanasree Eco-shop	Anappady																																																														
4	Information cum sale counter	Parambikulam																																																														
5	Canteen Facility	Anappady																																																														
6	Parambikulam Dhara(Drinking Water)	Parambikulam																																																														
7	Toilet Facility for ladies and men	Anappady& Parambikulam																																																														
8	Parking facility for Vehicles(Private-30 vehicles)	Anappady																																																														
9	EDC Shops (6 no)	Parambikulam																																																														
10	Vanasree Eco-shop	Anappady																																																														
11	Vanasree Photo Gallery	Parambikulam																																																														
12	Tribal Heritage Centre	Parambikulam																																																														
13	Dam View Point	Thunakadavu																																																														
14	Valley View Point	Parambikulam																																																														
15	Orientation Centre (capacity 30)	Anappady																																																														
1	Nature Study Hall (capacity 80)	Anappady																																																														
2	Dormitory-Hornbill (capacity 40)	Anappady																																																														
3	Tiger Hall (capacity 20)	Parambikulam																																																														
4	Trekking Trails																																																															
Visitor services and facilities are very basic.	Fair																																																															
Visitor services and facilities are monitored from time to time and are fairly effective.	Good																																																															
Visitor services and facilities are conscientiously maintained, regularly upgraded and monitored for visitor satisfaction	Very good	✓																																																														

				1	Tented Niche (capacity 21)	Anappady
				2	Bear Hut (capacity 2)	Anappady
				3	Treetop Hut (capacity 2)	Anappady
				4	Treetop Hut (capacity 2)	Parambikulam
				5	Civet/Cheetal Valley(capacity 6 each)	Thunakadavu
				6	Bison Valley Lodge (capacity 6)	Parambikulam
				7	Honey Comb Complex (capacity 30)	Parambikulam
				8	Bamboo rafting & Tribal Symphony	Parambikulam
				9	Vehicle Safari	Anappady
				10	Veettikunnu Island Nest (capacity 5)	Parambikulam
				11	Peruvari Island Nests	Peruvaripallam Reservoir
				12	Thellikkal Nights	Anappady
				13	IB at Thunajadavu/Anappady (cap-8)	For officer's only
				<p>In addition to above, Kerala Wildlife Tourism Information Centre, Pollachi carry out tourism activities which make stay arrangement in Eco huts and Bulbul Dormitory whose carrying capacities are 10 no. and 40 no. at a time respectively. Brochures and pamphlets about TR are available at information cum sale counter at Parambikulam.</p> <p>Food / refreshments are served at the canteen. For drinking purposes, Parambikulam water is provided to the visitors at Eco shop.</p> <p>Tourists are attended by the trained guides and drivers during visitation in 10 safari vehicles. Visitors feedback registers are maintained at all ecotourism packages for night stay to convey their opinion on quality of wilderness experiences, suggestions and complaints.</p> <p>It is reported that Deputy Director (Wildlife Education) is exclusively deployed to look and monitor the conservation awareness and visitor management programmes. Visitor facilities are regularly upgraded and monitored.</p>		

****Include the existence and quality of visitor and interpretation centers, including skills and capabilities of personnel manning these, TR related publications, films, videos; arrangements of stay (including places serving refreshments and food owned and managed by TR), watch towers and hides including safety factors, vehicles assigned for visitors including riding elephants, if any and their deployment, drinking water, rest rooms, garbage disposal, attended and self guided services in the field, visitor feed back on the quality of wilderness experience.***

5.3 Are research/ monitoring related trends systematically evaluated and routinely reported and used to improve management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no systematic evaluation or routine reporting of trends.	Poor		Discussion with FD/DD, TCP, information from TR and field visit	<p>There are 33 research projects completed and published about Parambikulam. The following Research Institutes have been involved for conducting Research:</p> <p>1) Kerala Forest Research Institute, Peechi; 2) Tropical Botanical Garden & Research Institute, Thiruvananthapuram; 3) Institute of Forest Genetics and Timber Breeding, Coimbatore; 4) Centre for Water Resource Development and Management, Calicut; 5) Research Centre for Environment and Social Sciences, Thiruvananthapuram; 6) School of Social Sciences, Kottayam; 7) Wildlife Institute of India, Dehradun; 8) Salim Ali School of Ecology and Environmental Sciences, Pondicherry; 9) Indian Institute of Science; and 10) National Centre for Biological Sciences</p> <p>The available research studies/ information are taken into consideration while preparing the TCP. It has been informed that recommendations of the Consultancy Report on "Conservation Review for Rationalisation of PA Network in Kerala" by French Institute of Pondicherry, has been helpful while notifying the core and buffer of the TR. Annual Phase-IV monitoring of Tiger, Co-predator and prey species was carried out in 2012-13 with the technical support of WWF in 430.76 km² area of TR.</p> <p>As part of daily monitoring, "Daily Monitoring Protocol" is being implemented and recorded. To monitor the waterhole management, a journal is maintained for each waterhole.</p> <p>The monitoring has enabled TR to achieve followings: Livestock grazing and fire incidences are not reported since 2006. No forest/ wildlife offences were booked in last 3 years and no major case of disease/ epidemic outbreak or threat to wildlife population noticed in the last 5 years in the TR. Perennial sources of water are abundant in TR but during pinch period some western part of TR faces shortage of water and these areas are augmented with artificial water holes. Ex-gratia payment has been done in time human injury cases.</p> <p>The TR should build its technical capability of carrying out annual phase IV monitoring through camera traps and assessment of tiger, co-predator and prey species of its own. Further the daily monitoring protocol of NTCA should be strictly followed with building up of database and its analysis.</p>
Some evaluation and reporting undertaken but neither systematic nor routine.	Fair			
Systematic evaluation and routine reporting of trends undertaken.	Good	✓		
Systematic evaluation and comprehensive reporting of trends undertaken and attempts made at course corrections as relevant.	Very good			

**Not all TRs attract projects and researchers and with exceptions, little research takes place on the TRs own steam because of systemic limitations. However, monitoring of some critical issues is expected e.g. population of tiger, co-predators and prey with insights into their demography and distribution (some opportunistic sampling by sightings, signs and spatial distribution during assessment would be extremely useful in terms of expert impression and as a pulse), monitoring incidence of livestock grazing, fires, weeds, sources of water, a variety of illegal activities typically associated with the reserve, wildlife health (e.g. epidemics, immunization of livestock) regeneration and change in vegetation, visitors and their activities, offence cases, ex-gratia payments etc. Efforts must be made to assess the planning and implementation of Phase-IV monitoring protocols and the success of implementation of M-Stripes (wherever applicable). Are the 'Sykes and Horill' monitoring plots maintained and data analyzed?*

5.4 Is there a systematic maintenance schedule and funds in place for management of infrastructure/assets?

Assessment criteria								
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks				
No systematic inventory or maintenance schedule.	Poor		Discussion with FD/DD, TCP, information from TR and field visit	Registers of infrastructure and assets are maintained in FD office which are in the form of buildings, vehicles, arms and ammunitions , roads , fire lines, wireless sets/electronic equipments, survey instruments, tourism related assets etc and maintenance is carried out based on the funds availability. The money spent on maintenance of infrastructure and other assets in the last 3 years are detailed below:				
Inventory maintenance is adhoc and so is the maintenance schedule.	Fair							
Systematic inventory provides the basis for maintenance schedule but funds are inadequate.	Good	✓			Type of maintenance works	Expenditure in lakhs		
Systematic inventory provides the basis for maintenance schedule and adequate funds are made available.						2011-12	2012-13	2013-14
					APCs/ sheds	25.60	26.00	17.79
				Buildings	14.10	22.60	28.44	
	Vehicles	16.45		19.83	23.67			
	Roads	10.63	19.73	37.87				
	Electronic equipments	5.07	6.31	7.60				
	Total	71.85	94.49	115.37				
				Apart from above funds , about 30% of money collected in FDA(from eco-tourism programme) is shared for habitat improvement activities and protection in the TR.				

6. Outcomes

6.1 Are populations of threatened species declining, stable or increasing?

Assessment criteria*																																								
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks																																				
Populations of key threatened/ endangered species are declining.	Poor		Discussion with FD/DD, TCP, information from TR and field visit.	From the documents provided by the TR it appears that Census of wild animals other than tiger and elephant has not been carried out since 2002. In appendix of TCP mammalian census figures have been given for 1993, 1997 and 2003. Phase IV monitoring carried out through camera trapping in 430 km ² area of TR during the year 2012- 13. In the absence of any recent census data other than 2002 for comparison with the 2012-13 phase IV monitoring data, there is no option other than looking into the 2002 data for some gross conclusion.																																				
Some threatened/ endangered species populations declining, some are increasing, most others are stable.	Fair																																							
Several threatened/ endangered species populations increasing, most others are stable.	Good	✓																																						
All threatened/ endangered species populations either increasing or stable.	Very good																																							
				<table><tr><th>Species</th><th>2002* (No.)</th><th>2012-13* Density/km²</th></tr><tr><td>Gaur</td><td>305</td><td>10.39</td></tr><tr><td>Sambar</td><td>226</td><td>6.13</td></tr><tr><td>Chital</td><td>326</td><td>2.57</td></tr><tr><td>Mouse deer</td><td>6</td><td>2.99</td></tr><tr><td>Barking deer</td><td>11</td><td>0.90</td></tr><tr><td>Wild boar</td><td>137</td><td>10.38</td></tr><tr><td>Nil. langur</td><td>432</td><td>31.68</td></tr><tr><td>LTM</td><td>193</td><td>7.67</td></tr><tr><td>Bonnet Macaq.</td><td>179</td><td>3.43</td></tr><tr><td>Mal. G. Squirrel</td><td>--</td><td>3.53</td></tr><tr><td>Prey Biomass</td><td>--</td><td>6324.39/km²</td></tr></table>	Species	2002* (No.)	2012-13* Density/km ²	Gaur	305	10.39	Sambar	226	6.13	Chital	326	2.57	Mouse deer	6	2.99	Barking deer	11	0.90	Wild boar	137	10.38	Nil. langur	432	31.68	LTM	193	7.67	Bonnet Macaq.	179	3.43	Mal. G. Squirrel	--	3.53	Prey Biomass	--	6324.39/km ²
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				*The census area is 430 km ²																																				
				Although both the data are not comparable due to different																																				

				<p>methodology of estimation, the gross indication is that 2012-13 has higher population. Further, during field visit different age gradations were observed particularly in gaur and sambar populations, which is a healthy population trend. Malabar Giant Squirrels were also easily spotted.</p> <p>During phase IV monitoring of 2012-13 camera traps have captured 77 leopards. During 1996 census operation, leopard population was found 8 in Parambikulam WLS.</p> <p>However, in the absence of census data of endangered species after 2010, the population of all the threatened/ endangered species cannot be safely assumed to be stable or increasing.</p>
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***This needs to practically relate to the natural ecosystem potential rather than being driven merely by numbers and visibility. The assessment score may be elaborated under remarks.**

6.2 Is the population of tigers showing a declining, stable or increasing trend?

Assessment criteria*																																								
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks																																				
Population of tiger is showing a declining trend	Poor		Discussion with FD/DD, TCP, information from TR and field visit	<p>During the monitoring of tiger population in last 5 years , the following trend was estimated. The status of tiger population was estimated in 2008 extending from Indira Gandhi WLS (Tamil Nadu) to Chinnar WLS and Parambikulam WLS (Kerala) in 2744 sq km landscape within a contiguous forest patch of 4400 km². Within Kerala, the tiger occupancy of this population was in 1425 km² with an estimated population of 7 to 8 tigers. According to 2010 All India Tiger census report , the tiger occupancy on Kerala side of Anamalai –Nelliampathy landscape was in 1483 km² with an estimated population of 32 to 36 tigers.</p> <p>In 2012-13, under Phase –IV Tiger Monitoring works in Parambikulam TR, 430.76 km² (390.89 km² core + 39.87 km² buffer) area has been covered under camera trapping and 26 individual tigers and 77 leopards have been identified. Except number of individuals captured no other data for 2012-13 is available with TR. No data for 2013-14 is available. The following figures were made available by the TR authorities:</p> <table><tr><th>Year</th><th>Effective Area</th><th>No of Tigers</th></tr><tr><td>2008</td><td>1425 sq km</td><td>7 to 8</td></tr><tr><td>2010</td><td>1483 sq km</td><td>32 to 36</td></tr><tr><td>2012-13</td><td>430.76 sq km</td><td>26</td></tr></table> <p>Figures of tiger estimation of Parambikulam TR furnished in the “Status of Tigers, Co-predators and Prey in India,2010” report and figures provided by TR authorities related to Phase IV monitoring of 2012-13 are given in following Table:</p> <table><tr><th>Elements</th><th>2009</th><th>2011</th><th>2012-13</th></tr><tr><td>AGENCY</td><td>WII</td><td>WWF</td><td>WWF/PK MTR</td></tr><tr><td>ETA (km²)</td><td>302</td><td>197</td><td>NA</td></tr><tr><td>Unique Individual</td><td>7</td><td>12</td><td>NA</td></tr><tr><td>Population</td><td>8</td><td>13</td><td>26</td></tr><tr><td>Density/100 km²</td><td>2.65</td><td>6.61</td><td>NA</td></tr></table> <p>In the absence of essential elements in 2012-13 estimates it will be safe to assume that Population of tiger is showing an increasing trend in TR.</p>	Year	Effective Area	No of Tigers	2008	1425 sq km	7 to 8	2010	1483 sq km	32 to 36	2012-13	430.76 sq km	26	Elements	2009	2011	2012-13	AGENCY	WII	WWF	WWF/PK MTR	ETA (km ²)	302	197	NA	Unique Individual	7	12	NA	Population	8	13	26	Density/100 km ²	2.65	6.61	NA
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Population	8	13	26																																					
Density/100 km ²	2.65	6.61	NA																																					
Population of tiger is stable	Fair																																							
Population of tiger is showing an increasing trend	Good	✓																																						
Population of tiger has significantly increased	Very good																																							

***This assessment should be based in the context of available population estimate (2010-11) and the outcomes of the currently ongoing Phase-IV analyses.**

6.3 Have the threats* to the TR being reduced/ minimized? Or is there an increase?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Threats to the TR have not abated but have enhanced.	Poor		Discussion with FD/DD, TCP, information from TR and field visit	<p>Varied Eco-development activities and people's participation have greatly helped in reducing the threats significantly in TR. The revenue generated from various Eco-tourism packages is pooled and recycled back for community development and TR welfare. During 2010-11 and 2011-12, revenue generated from these activities amounts to Rs 186 lakhs and Rs 212 lakhs respectively. Out of this 40 % was paid as wages, 40 % was used for maintenance and 20 % for community development programmes to the local communities. These activities established the credibility of the department in the local community and consequently, the public helped in conservation programmes. The out-come came as complete control of grazing, no incidences of poaching/fire in the Reserve since 2006, sustainable use of NTFP was ensured and TR became plastic free zone. However , following issues need to be addressed to make TR completely Threat free:</p> <ul style="list-style-type: none"> • Pro active action to contain adverse effects of Pilgrimage to Mariamman, Athucheriyamman and Kovil temples; which are enclaves in Core • All the Gun license holders within 10 Km radius of Protected Area are not registered with Park Authorities • Lack of information on distribution status of unique/RET species and absence of monitoring protocols for their regular population estimation • Preparation of invasive species management plan with the help of research institutes • 145.76 km² area of core has Reserve Forest status. Further this area and 252.77 km² of buffer are not in administrative control of TR. •
Some threats to the TR have abated, others continue their presence	Fair			
Most threats to the TR have abated. The few remaining are vigorously being addressed	Good	✓		
All threats to the TR have been effectively contained and an efficient system is in place to deal with any emerging situation	Very good			

***Does the TR has a Disaster Risk Management Plan to deal with existing as well as emerging threats?**

6.4 Are the expectations of visitors* generally met or exceeded?

Assessment criteria														
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks										
Expectations of visitors generally not met.	Poor		Discussion with FD/DD, TCP, information from TR and field visit	An extent of 38.959 km ² of Parambikulam WLS is notified as buffer of TR which is contained as Eco-tourism zone constituting 15.41 % of the buffer area of the TR. In a legal term, Supreme Court/NTCA Guidelines are complied with. In Eco Tourism activities local people and EDC's are widely associated and revenue is shared. The details of the visitation during last 4 years is enclosed furnished below: <table><tr><th>Financial Year</th><th>2010-11</th><th>2011-12</th><th>2012-13</th><th>2013-14</th></tr><tr><td>No of Visitors</td><td>47,500</td><td>49,593</td><td>28,670</td><td>51,726</td></tr></table>	Financial Year	2010-11	2011-12	2012-13	2013-14	No of Visitors	47,500	49,593	28,670	51,726
Financial Year	2010-11	2011-12			2012-13	2013-14								
No of Visitors	47,500	49,593			28,670	51,726								
Expectations of many visitors are met.	Fair													
Expectations of most visitors are met.	Good													
Expectations of all most all visitors are met.	Very good	✓		Expectation of all most all visitors is generally met.										

***What is the compliance status on Supreme Court/ NTCA Guidelines on Ecotourism in TRs?**

6.5 Are local communities supportive of TR management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Local communities are hostile.	Poor		Discussion with FD/DD, TCP, information from TR and field visit.	Local communities have been involved in planning processes and in the preparation of TCP. TR management has helped in addressing the livelihood issue of the local communities. Community based eco development programme has been launched in which huge number of community members through EDC got involved. Drivers and Guides from tribal communities have been engaged to accompany visitors. EDC members are involved in preparing "Parambikulam Dhara" water, paper bag unit, tailoring work, conducting eco- shops, preparing wax balm and handicraft unit. Those EDCs who are engaged in producing pepper, turmeric, ginger and coffee, their product have been registered under the organic certification which fetches 15-20% extra monetary gain. Ambulance service has been made available to the locals for medical aids. School is in operation in Sangam Colony and a pre-metric hostel for tribals has been constructed with the help of Tribal Development Department. In addition, tribal students are being assisted in higher education in form of tuition fee. The FDA, Parambikulam is approved as Field NGO for execution of NRHM project (Arogya Keralam) for implementation of Health related issues in Parambikulam FDA is assisting the tribal women during the delivery period (Rs 5000) to encourage Hospital delivery resulted in reduction of number of home deliveries. FDA is also running an ambulance for the people. Peoples are happy with the income generation activities and the help provided by the department. All local communities are supportive to the TR management..
Some are supportive.	Fair			
Most locals are supportive of TR management.	Good			
All local communities supportive of TR management.	Very good	✓		

*There could be many reasons for disenchantment. It could be real because of managerial neglect or the managerial efforts could be appropriate but there could be local elements/organizations who would like to keep the disaffection simmering for their own ulterior motives. Likewise success could be entirely because of the efforts of managers or they might be fortunate in striking partnerships with credible NGOs. Assessment may take the prevailing causes into account.

7. MEE Score Card*

Framework Element Number	Framework Element Name	Number of Criteria (a)	Maximum Mark per question (b)	Total (a x b)	Marks obtained for the Element	Overall MEE Score and % age
1	Context	4	10	40	37.5	86.29%
2	Planning	7	10	70	62.5	
3	Inputs	5	10	50	40	
4	Process	6	10	60	50	
5	Outputs	4	10	40	35	
6	Outcomes	5	10	50	42.5	
Total		31		310	267.5	

*Efforts will be made by the NTCA-WII-MEE Team to address the issue of assigning 'differential' weightages to the 30 Assessment Criteria including 'normalization'.

Assessment Criteria for addressing issues relating to Climate Change & Carbon capture in the Tiger Reserves (TRs)

1. Additional Criteria on Climate Change: Is the TR being consciously managed to adapt to climate change?

Condition	Category*	(Tick ✓)	Comment/ Explanation	Next Steps
There have been no efforts to consider adaptation to climate change in management	Poor		During discussion it appeared that some initial thoughts has taken place, but any concrete plan has not been drawn up.	Guide lines should be issued at national level for assessment of impacts and measures for adaptations so as to prepare specific plans and their integration with the TCP.
Some initial thought has taken place about likely impacts of climate change, but this has yet to be translated into management plans	Fair	✓		
Detailed plans have been drawn up about how to adapt management to predicted climate change, but these have yet to be translated into active management.	Good			
Detailed plans have been drawn up about how to adapt management to predicted climate change, and these are already being implemented	Very good			

2. Additional Criteria on Climate Change: Is the TR being consciously managed to prevent carbon loss and to encourage further carbon capture?

Condition	Category*	(Tick ✓)	Comment/ Explanation	Next Steps
Carbon storage and carbon dioxide capture have not been considered in management of the TR	Poor		Parambikulam TR acts as an important sink for the carbon and help in reducing the global warning. No wild fire leads to reduction in carbon emission and increase in the amount of carbon in the soil. Complete ban on extraction and improved regeneration in TR also helps for permanent carbon sink. Various measures like control over grazing, illicit felling, fire wood collection etc have also helped in preventing the carbon loss. Although various measures have been taken as part of the holistic conservation measures to prevent the carbon loss, clear prescriptions are required to be incorporated in TCP for reducing carbon emission/ effecting carbon capture in planning various activities / operations.	It is necessary to issue guide lines at National level for adopting various measures in this direction and for the assessment of impacts, so that specific plans may be integrated with the TCP without compromising the primary objectives of TR management to preserve the biodiversity.
Carbon storage and carbon dioxide capture have been considered in general terms, but has not yet been significantly reflected in management	Fair	✓		
There are active measures in place to reduce carbon loss from the TR, but no conscious measures to increase carbon dioxide capture	Good			
There are active measures in place both to reduce carbon loss from the TR and to increase carbon dioxide capture	Very good			

Management Effectiveness Evaluation (MEE) of Kalakad-Mundanthurai Tiger Reserve

1. Context

1.1 Are the values of the TR well documented, assessed and monitored?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Values not systematically documented, assessed and monitored.	Poor		Discussion with CWLW, FD, information from TCP(para 1.3.2) and other documents and field visit.	<p>Kalakad Mundanthurai Tiger Reserve (KMTR) represents the tropical moist evergreen forests and is the part of the Inter-state (Kerala and Tamil Nadu) Agasthiyarmalai Biosphere Reserve. It serves as a benchmark of wide range of endemic, endangered and vulnerable species of fauna and flora and has been declared as one of the 35 mega hotspots of biodiversity. The values of TR are well documented in TCP (Para 1.3.2, page 9-19) in the form of (1) Economic value,(2) Biological/ Ecological value, (3) Religious and Cultural value,(4) Scientific value, (5) Tourism and Aesthetic values (6) Human values through various research studies carried out by the TR management, Research institutions, NGOs etc with respect to KMTR.</p> <p>Further the values have been scaled for different levels, such as, Global, National, State, Regional and Local levels.</p> <p>The reserves hosts 11 type of forests out of 14 forests type found in India and have steep undulating terrain beginning from 40 m MSL to 1866 m MSL. All the 5 primates of Peninsular India are found in KMTR. Amazing facts are 9 spp of Pisces, 27 spp of Amphibians, 39 spp of Reptiles, 14 spp of Aves and 14 spp of Mammals are endemic to KMTR.</p> <p>14 rivers flowing through three major watersheds in the Reserve provide water to the wild animals as well as cater the agricultural needs of four neighbouring districts. The reserve encompasses three major watersheds and has three hydro-electric power stations. Periodically the values are assessed through Annual Reports and routine wildlife census reports, regular monitoring and various study reports of different agencies.</p>
Values generally identified but not systematically assessed and monitored.	Fair			
Most values systematically identified, assessed and monitored.	Good			
All values systematically identified, assessed and monitored.	Very good	✓		

1.2 Are the threats to TR values well documented and assessed*?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Threats not systematically documented or assessed.	Poor		Discussion with CWLW, FD, information from TCP(Para 6.5.4), other documents and field visit.	<p>Most of threats have been identified and well documented in the Tiger Conservation Plan in a systematic way. Chief threats are fire, encroachment, poaching, illicit fuel wood collection, animal diseases and pilgrims. Threats are due to enclosures / settlements of (1) of religious places which attracts large number of pilgrims, (2) five inhabitants of tribal settlements, (3) Electricity Boards, (4) Private Estates and (5) due to settlements established at the fringes within 5 km from the reserve boundary. Out of 241 villages in 5 km belt, 228 villages are already part of the Eco-development activities and as such this factor does not pose significant threats but help in improving the status of flora and fauna. With the help of</p>
Threats generally identified but not systematically assessed.	Fair			
Most threats systematically identified and assessed.	Good			
All threats systematically identified and assessed.	Very good	✓		

				<p>veterinary department, 21 veterinary camps were conducted in 2013-14, in which, 12024 cattle were vaccinated in the fringe villages. Preventive action against Canine Distemper Virus was also initiated in TR. For excellent co-existence and buffer management, KMTR was awarded by NTCA in 2012. Considering the Successful Implementation of the Eco Development Project, the World Bank has chosen "KMTR as Role model and for establishing Field Learning Center in 2011". Fire incidences affected 45.35 ha in 2011, 61.95 ha in 2012 and 19.5 ha in 2013. From 2006 to 2009 and 2010 to 2013, 93 and 36 cases of head load were booked. 4 cattle were booked each year in 2011, 2012 and 2013. Thus the degree and quantum of threat has been assessed.</p>
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***This assessment should be based on number, nature and extent of threats**

1.3 Is the 'Core Area' of TR free from human and biotic interference?

Assessment criteria*				
Condition	Category	(Tick ✓)	Reference document(s)	Remarks
The 'Core Area' has extensive human and biotic interference.	Poor		Discussion with CWLW, FD, Security Plan (Threat, page 29), EDC records, Crime records FD office and field visit.	<p>The human settlements in Core area consists of 4 Kani settlements (129 families spreading over 29.52 ha), 3 non Kani forest dwellers' settlements (105 families spreading over 10.15 ha), colonies of Electricity Board and few tea-states. Traditionally tribal villagers were totally dependent on forest resources within the core area. In addition to this, 241 villages are situated at the fringe area in 5 km width around the TR. All the factors are responsible for the human and biotic interference by some way or other. TR management has made the commendable efforts in mitigating the human and biotic interference by constituting the 226 VFCs and 2 EDCs from the villages. Some of these committees endeavor to enhance their livelihood through micro-credit in a sustainable way so as to make them more independent of the forest resources in terms of grazing, head loads, felling of timber, poaching and hunting. World Bank has also appreciated the sustainable work of VFCs of KMTR in June 2002.</p> <p>Tea states are running in accordance with the lease agreement of 99 yrs from the year 1929. Awareness generation and entry point activities in Kani settlements have created positive impact to some extent for reducing use of the forest resources as the sole means of livelihood. KMTR was awarded by NTCA in 2012 for excellent co-existence and Buffer Management. Thus the level of the human and biotic interference has reduced drastically due to vibrant functioning of the Committees and TR management.</p>
The 'Core Area' has some human and biotic interference.	Fair			
The 'Core Area' has little human and biotic interference.	Good	✓		
The 'Core Area' has no human and biotic interference.	Very good			

***This assessment should be based on existence and the efforts made by TR management to address issues related to human settlements/ villages inside the core area; livestock grazing, cultivation, encroachments etc, resource extraction/ livelihood dependence of local communities and should reflect the overall interference due to all the above factors. The issue of 'Unified Control' of the 'Core' and 'Buffer' zones under the Field Director would also be taken into account.**

1.4 Has the TR complied with the four Statutory* Requirements (SR) along with Tripartite MoU and three Standard Operation Procedures (SOP)?

Assessment criteria				
Condition	Category	(Tick ✓)	Reference document(s)	Remarks
None of the four SR, no compliance of Tripartite MoU and three SOPs met	Poor		Government orders and FD office records.	<p>1-The Govt. of Tamil Nadu in their order (MS). No.145 E&F (FR V) department dt 28.12.2007 have notified the 895 Sq.km area of KMTR as Critical Tiger habitat (Core). The Government in G.O (MS) No. 201 Environment and Forests (FRV) department dated 13.08.2012 have declared 706.542 Sq.km as buffer area of KMTR. But the area of Veerapuli RF (14136 ha) and Kilamalai RF (6.00 ha) of Kanyakumari forest division and Courtallam RF (3528 ha) of Tirunelveli forest division included in the buffer of KMTR, is yet to be handed over to the FD. Necessary proposal for handing over the area has been sent by the PCCF (Head of Forest Force), TamilNadu by reference no. WL5/59746/2008 dated 25.10.2012. to the Government.</p> <p>2- KMTRC Foundation, TamilNadu Trust, Tirunelveli has been formed on 25.03.2010 and is functioning well.</p> <p>3- A Draft TCP has been prepared. After examining the draft TCP of KMTR, the NTCA has issued certain comments to incorporate in the plan. The details as per remarks of NTCA was incorporated Further, a meeting was held at New Delhi on 11th and 12.03.2014 to discuss the TCP. It was also reported that on the basis of summary records of the meeting, Revised draft TCP is under preparation incorporating revisions and will be sent soon to NTCA through proper channel.</p> <p>4- The Government has formed State level Steering Committee vide GO (MS) No. 10 Environment and Forests (FRV) department dt 15.02.2008 but the State level Steering committee meeting has not been conducted so far.</p> <p>5- No incidents of straying of Tigers or Tiger mortality has been reported in the recent past. Deep freeze is not available in TR.</p>
Two of the four SR, 50% conditions of the Tripartite MoU and SOPs complied	Fair			
Three of the four SR, 75% conditions of the Tri-partite MoU and SOPs complied	Good	✓		
All four SR, 100% conditions of the Tripartite MoU and SOPs complied	Very good			

***Statutory requirements are (1) Legal delineation and notification of Core and Buffer Areas; (2) Establishment of Tiger Conservation Foundation; (3) Development of a Tiger Conservation Plan; and (4) Constitution of a State-level Steering Committee under the Chairmanship of the Chief Minister. TA refers agreement between Field Director, State Government and NTCA. The 3 SOPs are on (i) Straying of Tiger in human dominated landscape, (ii) Tiger Mortality and (iii) Disposal of Carcasses**

2. Planning

2.1 Status of Tiger Conservation Plan (TCP)*?

Assessment criteria				
Condition	Category	(Tick ✓)	Reference document(s)	Remarks
No TCP in place.	Poor		Discussion with CWLW&FD, field visit and office records	<p>While preparing the TCP, two meetings were initially held at Chennai on dated 03.01.2011 & 04.01.2011 to discuss the various issues by PCCF, TamilNadu. Further, APCCF, (Project Tiger), Coimbatore conducted meeting on 27.03.2013. TCP prescriptions were also discussed in relation to strengthening the VFCs in Village Forest Committees meetings dt 24.06.2011 and 04.03.2013. Two meetings with the Local Advisory Committee (local stake holders) have been conducted on 04.12.2012 and 02.03.2013 for regulation of tourism activities in the core area of the TR. Executive committee meeting of KMTC Foundation, TamilNadu Trust, Tirunelveli was held on 26.03.2014 and certain issues were discussed in the</p>
TCP is under preparation	Fair			
TR has a relevant TCP	Good	✓		
TR has a comprehensive and relevant TCP, duly approved by the NTCA	Very good			

				meeting. The draft TCP was prepared incorporating all the issues raised in meetings and inputs obtained from scientific researches and sent to NTCA which suggested certain modifications by letter no-F.N. I-2/2011-NTCA dt 20-11-2013 to be incorporated in the TCP. After incorporating the points/issues raised with respect to core zone, revised TCP was sent through APCCF (Project Tiger), Coimbatore. However, for further refining several other issues were also discussed in Delhi on 11.03.2014 and 12.03.2014 for inclusion in TCP. It was reported that necessary modifications will be made accordingly and TCP will be resubmitted thereafter.
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***The scientific content and the participatory processes used in preparation of the TCP will be taken into account in assessing the quality of TCP.**

2.2 Does the TR safeguards the threatened biodiversity values?

Assessment criteria*				
Condition	Category	(Tick ✓)	Reference document(s)	Remarks
TR does not safeguard the threatened biodiversity values.	Poor		Discussion with CWLW, FD, Security plan(page 14-20,30-34,41-43) and field visit.	The 'core/critical tiger habitat' has been duly notified. The TR management suitably safeguards the threatened biodiversity through protection and carrying out habitat management activities, like control burning of fire-lines, removal of invasive species, creation and maintenance of water-hole, water harvesting structures, plantation for species recovery programmes. Eco-development activities are carried out to make TR safe for the endangered Tiger, Leopard, Bison, Nilgiri Langur, Thar, Lion Tailed Macaque (LTM), Asiatic Elephant, and Malabar Giant Squirrel etc. Security plan is also in place. Considering rugged topography of KMTR, 849.5 km patrolling path has been created and maintained and 245.5 km path has been proposed. To control the fire, fire fighting equipments has been arranged and 687 km fire –lines are created and maintained. 27 anti-poaching sheds and 5 check-posts are established and 110 anti-poaching watchers are deployed. For free movement of the wild animals, corridors are identified and corridor protection plan has been prepared. 228 institutionalized VFC/EDC around the TR are established. They help in intelligence gathering, fire fighting and rescuing stranded animals. TR is managing Endemic RET species recovery programmes for <i>Elaocarpus tuberculatus</i> (Rudraksh), <i>Gluta travancorica</i> (Senkurinji), <i>Pamburus missionis</i> , etc through plantation. TR has been included into the Nilgiri Biosphere Reserve to protect the threatened biodiversity value.
TR safeguards a few threatened biodiversity values.	Fair			
TR safeguards a large number of threatened biodiversity values.	Good			
TR safeguards all threatened biodiversity values.	Very good	✓		

***Remarks need to elaborate on the kind of safeguards and how they work or are intended to work.**

2.3 Are stakeholders given an opportunity to participate in planning process?

Assessment criteria*				
Condition	Category*	(Tick✓)	Reference document(s)	Remarks
Little, if any opportunity for stakeholder participation in planning.	Poor		Discussion with CWLW, FD, Minutes of LAC meetings dt 4-12-2012, 2-3-2013, Minutes of village level meetings dated 26-01-2010 & Eco development records and field visit.	<p>As per the guidelines, a Local Advisory Committee has been formed with the local stakeholders (Fringe villagers, Tribals, Electricity Board, Private Estates, Transport Authority, HR and CE Department) as members to regulate tourism activities in TR. Two meetings of LAC dated 4-12-2012 and 2-3-2013 has been conducted so far.</p> <p>For preparing TCP the proposed prescriptions were discussed in relation to strengthening the VFCs in Village Forest Committees meetings dt 24.06.2011 and 04.03.2013. VFC/EDC level meetings were conducted in many villages on 26.01.2010 for involving the people in planning process and they have passed the resolution for supporting the developmental activities under Eco-development programme in KMTR buffer area.</p> <p>In addition to this, in several village meetings which are frequently conducted with VFCs members, important issues are discussed and included into TCP.</p> <p>It was reported that Field Level Co-ordination Committee meeting also involves line department and entire activities are discussed.</p> <p>Executive committee meeting of KMTC Foundation is being held every month. Thus most of the stake-holders directly or indirectly had been taken into confidence in planning process.</p>
Stakeholders participate in some planning.	Fair			
Stakeholders participate in most planning processes.	Good	✓		
Stakeholders routinely and systematically participate in all planning processes.	Very good			

*The result of participation must show in the field and not merely reported as a routine exercise.

2.4 Are habitat management programmes systematically planned, relevant and monitored, and contribute effectively to Tiger and other endangered species conservation?

Assessment criteria*				
Condition	Category*	(Tick✓)	Reference document(s)	Remarks
Habitat management programmes are entirely adhoc.	Poor		Discussion with CWLW & FD, TCP, (Pg.No. 155-164 VOL-I), FD office records and field visit.	<p>The TCP has spelt out detailed strategy and action plans for restoration of habitat ecologically as well as for providing better shelters. Habitat management activities, like removal of invasive species (lantana/eupatorium) before flowering, control burning of fire-lines, creation and maintenance of water holes and water harvesting structures, endemic species recovery programme through plantation etc along with various protection measures are undertaken systematically as per prescriptions of TCP /ABP. As a result, the chital population has increased considerably.</p> <p>An LTM corridor called as "one mile width corridor" connecting Kalakad Sanctuary and Mundanthurai Sanctuary, which is situated in between Manjolai Tea division and Kakkachi Tea division of Bombay Burma Trading Corporation, has been identified. It is a typical LTM habitat and to protect this, a condition had been laid in the subsequent lease agreements of the companies that this area shall be maintained as a corridor and no activities will be permitted. A separate plan has been prepared for the conservation of Nilgiri Tahr under specific management scheme. To prevent the crop raiding by migratory elephants (between Kerala and Kanyakumari</p>
Limited planning and monitoring programmes are in place for habitat management.	Fair			
Habitat management programmes are generally planned and monitored.	Good	✓		
Habitat management programmes are thoroughly planned and monitored.	Very good			

			<p>via KMTR) solar power fencing has been created in many places in order to eliminate Man-animal conflicts. 15 endangered plant species (suggested by Dr V. Chelladurai. A researcher-2010) have been planted in Kodamadi area-Mundanthurai range during 2010-11 under Agasthiyarmalai Biosphere Scheme to recover the species.</p> <p>Dr. A.J.T. Johnsingh has presented a Research report during 2008 on identifying corridors for landscape level Tiger Conservation in the Western Ghats. A new World Bank project proposal has been submitted for Landscape mode of management with biodiversity/ conservation mapping and eco-development activities in PAs (KMTR, Kanyakumari, Sriviliputtur & Meghamalai) and forest divisions (Theni & Tirunelveli).</p> <p>The entire eastern boundary of the KMTR is rain shadow and to augment water available, water holding structures like check dams(59), percolation ponds(11), water trough(7), bore well(20) and permanent water storage (12) were constructed/ desilted and repaired periodically. Innovatively, this year solar energized bore wells have also been installed on a pilot basis to provide water to wild animals.</p> <p>However, systematic Monitoring mechanisms need improvement. Indicators and parameters should be spelt out for carrying out monitoring in fixed intervals.</p>
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***This assessment should be primarily based on habitat management programmes in relation to habitats for species that are threatened (IUCN categories), are habitat specialists, subjected to seasonal movements, wide ranging with emphasis on the breeding and rearing habitat and may include factors such as food, water, shelter (all connotations).Habitat structure, composition, unique patches of vegetation and sensitive sites, sources of water and their distribution are integral. Corridors within buffer zone are critically important. For example, all riparian habitats. Have these been addressed? Is their a planning process in place? The management practices dealing with invasive species such as Lantana, Michania etc. would be examined.**

2.5 Does the TR has an effective Protection Strategy (PS)* and Security Plan and Security Audit (SA) in place?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR has little or no PS and SA.	Poor		Discussion with FD,TCP (Pg.No. 180-185 - Vol & 352-368 - Vol II) Security plan & Fire Action Plan and field visit.	Because of highly undulating terrain and laddered topography, road network is unavailable in vulnerable areas. 849.5 Km patrolling path are under existence and 254.5 km are proposed in sensitive areas. 27 permanent anti-poaching sheds at strategic locations are established with basic amenities. Considering the terrain, the extent of area and presence of labour camps in Coffee/ Tea Estates Considering the terrain, the extent of area and presence of labour camps in Coffee/ Tea Estates more no. of permanent anti poaching camps are required. More than 10 additional anti-poaching sheds are proposed. One FG, one Forest watcher and 4 anti-poaching watchers are deployed at each camp and patrolling is carried out on foot only. Anti-poaching watchers have been engaged from VFC/EDC villages ensuring peoples participation. The varied Eco-developmental activities with micro-credit and participatory forest management including Eco-tourism has greatly enabled to control the illegal activities to a great extent. This is evident from the crime report of the last 10 years. VFC members help in intelligence gathering in poaching cases. Details of cases in last 3 years are as under:
TR has an adhoc PS and SA.	Fair			
TR has a generally relevant PS and SA but is not very effective.	Good	✓		
TR has a comprehensive and very effective PS and SA.	Very good			

Year	No. of cases	Persons arrested	Status
2011	1	1	Pending in court
2012	1	1	Pending in court
2013	3	13	Pending in court

All the above cases are in buffer / RF. No cases in core.

Each VFC/EDC village has Fire Brigades with fire fighting equipments to combat fire occurrence in the forest. Fire-line of 687 km has been established to prevent the spread of fire. Emergency fire squads are deployed at each Range HQ. Wireless network is established for speedy communication of information.

A draft security plan has been prepared and submitted to APCCF (Project Tiger), Coimbatore.

***This assessment takes inter-alia into account the nature of threats, the number and location of patrolling camps and foot and mobile patrolling, needs that relate to available manpower, terrain difficulties, practicability of area coverage, readiness to contain specific threats with necessary support and facilities. The constitution and functioning of Special Tiger Protection Force (STPF), Number of offences reported, arrests made, prosecution initiated and conviction achieved will be taken into account.**

2.6 Has the TR been effective in the mitigation of human-wildlife conflicts?

Assessment criteria ⁺																												
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks																								
Human-wildlife conflicts are significant but poorly addressed.	Poor		Discussion with CWLW,FD ,FD office records & field visit.	The man-animal conflicts within last 3 years in KMTR are dominantly due to crop depredation by wild elephants and few due to wild boars and other herbivores. . Human injury by elephants and sloth bear and livestock damages by the leopard has been reported. Although no human killing took place in last 3 yrs, but crop damage cases were found to be 61 in 2011-12, 84 in 2012-13 & 89 in 2013-14. Details of compensation paid for man-animal Conflicts from 2011-12 to 2013-14 given below: <table><tr><th>Nature of Injury</th><th>No of Registered cases</th><th>No of paid cases</th><th>Compensation paid (in Rs)</th></tr><tr><td>Human Injury</td><td>8</td><td>6</td><td>46,000</td></tr><tr><td>Crop Damage</td><td>234</td><td>144</td><td>13,88,841</td></tr><tr><td>Live Stock Damage</td><td>14</td><td>14</td><td>1,02,300</td></tr><tr><td>Property Damage</td><td>3</td><td>3</td><td>29,000 -</td></tr><tr><td>Total</td><td>259</td><td>167</td><td>15,66,141</td></tr></table>	Nature of Injury	No of Registered cases	No of paid cases	Compensation paid (in Rs)	Human Injury	8	6	46,000	Crop Damage	234	144	13,88,841	Live Stock Damage	14	14	1,02,300	Property Damage	3	3	29,000 -	Total	259	167	15,66,141
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Property Damage	3	3	29,000 -																									
Total	259	167	15,66,141																									
TR has been able to mitigate few human-wildlife conflicts.	Fair																											
TR has been able to mitigate many human-wildlife conflicts.	Good	✓																										
TR has been effective in mitigating all human-wildlife conflicts.	Very good																											
				Funds of KMTCFoundation are used to pay compensation to avoid delay. Usually the delayed submission of claims in full proper format by claimant is the cause of delay. To reduce the Man-Animal conflict, solar powered electric fence in 61.625 km length and EPTs in 37.58 km have been created at the eastern boundary along the sensitive border and are maintained regularly.																								

***The assessment will take into account the number of incidences reported and payment of compensation made and its timeliness.**

2.7 Is the TR integrated into a wider ecological network/ landscape following the principles of the ecosystem approach?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR not integrated into a wider network/ landscape.	Poor		T C P. (Pg.No. 340 Vol II & 487-489 – Vol IV & Pg.No 228 – Vol II) Tiger Corridor Plan. Proposal under BCRLI Project for new Agasthyarmalai Landscape.	KMTR is surrounded by Tirunelveli territorial division in the north, forests of Kerala state in the west, Kanyakumari WLS in the south and fringe villages in the east. Thus except eastern boundary of KMTR, a contiguous stretch of forest ensures integrated protection of biodiversity of this landscape from three sides. Tiger Reserve has been included as a part of the Agasthiyarmalai Biosphere reserve and its scheme is already under implementation in KMTR. A “one mile width” corridor connecting the Kalakad and the Mundanthurai Sanctuary as LTM corridor. Shencottah corridor connecting KMTR & Periyar TR has been identified and a separate draft tiger Corridor Security Plan has been prepared & submitted to APCCF (Project Tiger), Coimbatore in reference no. 1371/2008/P dated 24.10.2013 to safeguard the corridor. New proposal has been submitted under World Bank aided Biodiversity Conservation and Rural Livelihood Improvement Project including the buffer areas of KMTR and other divisions viz. Kanyakumari, Tirunelveli, Srivilliputhur Wildlife sanctuary, Theni and Megamalai WL division which aims to address the issues and rationalize the land-use not of the entire Agasthiyarmalai Landscape creating continuity up to Periyar TR.
Some limited attempts to integrate the TR into a network/ landscape.	Fair			
TR is generally quite well integrated into a network/ landscape.	Good			
TR is fully integrated into a wider network/ landscape.	Very good	✓		

***Assessment needs to consider the scope of opportunities on the landscape scale that exist. Consider whether any attempts have been made and what are these? Have all the important corridors been identified? What actions are planned/implemented for their security? Have the Forest Working Plans and Forest Development Corporation Plans within the identified landscapes taken cognizance of such new requirement? These should have been reflected in TCPs. Is there is any effort to rationalize landuse around TR? Is any effort being made to plan and use ‘Smart Green Infrastructure’?**

3. Inputs

3.1 Are personnel adequate, well organized and deployed with access to adequate resources in the Tiger Reserve (TR)*?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Few, personnel explicitly allocated but poorly supported for TR management.	Poor		Discussion with FD and FD office records and TCP para-13.4.2	The Tiger Reserve has 177 sanctioned posts. At present 140 posts are occupied and 37 posts are vacant. In respect of sanctioned posts for the frontline staff , 4 temporary posts of Range Officer, 5 posts(including 1 temporary post) of forester, 8 posts(including 5 temporary posts) of forest guards , 3 temporary posts of forest watcher, 6 posts of assistant and 2 posts of driver are vacant. Strong office is very much necessary and out of 11 office assistant posts, 7 are vacant in the office itself. The staff strength is inadequate. There is shortage of field staff. For effective management area of beat should be between 1500 ha to 2000 ha. But at present in KMTR the average size of the beat is around 3000 ha. Some beats have an area even more than 8000 ha. These beats have to be bifurcated or trifurcated. The strength of the foresters should also be increased proportionately. Without reducing the beat size/ without increasing the number of forest guards and foresters strength it is very difficult to ensure effective protection in the Tiger Reserve.
Some personnel explicitly allocated for TR management but not adequately supported and systematically linked to management objectives.	Fair	✓		
Some personnel with fair support explicitly allocated towards achievement of specific TR management objectives.	Good			
Adequate personnel appropriately supported and explicitly allocated towards achievement of specific TR management objectives.	Very good			

				In addition Eco-development Officer, Range Officer, Assistants Officer, forester, FG, driver, Veterinary Officer, Lab technician, Research Officer, Research assistant, computer operator, Assistant draft-man etc as proposed in TCP should be sanctioned. However, no steps were taken so far to sanction these posts. In spite of vacancies and shortage of posts the TR Authority is managing and protecting the bio-diversity of the TR with the help of anti-poaching watchers and VFC members
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***This assessment should inter-alia be based on number of personnel allocated for attainment of TR objectives at the Range , Round, Beat and Patrolling camps levels or as relevant to the needs (sanctioned posts vis- a- vis existing personnel and needs beyond the sanctioned strengths. It is possible that posts have last been sanctioned several years back that do not now account for the current needs)**

3.2 Are resources (vehicle, equipment, building etc.) adequate, well organized and managed with desired access?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Few, if any, resources explicitly allocated for TR management.	Poor		Discussion with FD and FD office records and field visit.	The road net work in KMTR consists of 72 km of earthen road , 35 km of metalled road and 849.5 km patrolling path which are distributed through-out the TR. The Reserve has 5 check posts, 19 anti-poaching sheds and 10 watch towers. Residential buildings are available for all staff. Eco-buildings are managed by the Eco-development committees. FRHs are situated at strategic locations. KMTR also has 13 jeeps, 3 mini vans, 1 mini lorry, 6 motorcycles and 2 boats on record but out of these, 6 motorcycles, 2 boats, 2 jeeps, 1 van & 2 boats are off- road /unusable. Though the no of vehicles are adequate for fire protection and anti-poaching raids but their operational cost is too high because of old conditions and hence new vehicles are needed to replace old ones. Wireless network is instituted with 1 repeater, 9 base and 12 mobile stations for communicating the information regarding the protection. Weapons include 3 nos 410 muskets, 5 nos. of 0.32 revolvers, 7 nos. of 0.315 rifles, 5 nos. of 9 mm pistols, 14 nos. of 0.762 bolt action rifles, 1 no. tranquilizing gun and 2 nos. of 12 bore DBBL guns with sufficient ammunitions excepting 410 muskets and 0.762 rifles for which no ammunition is available. These weapons are used for the effective patrolling of the TR. Thus although some resources are available for some essential needs, for achieving all specific TR management objectives more resource allocation is desirable.
Some resources explicitly allocated for TR management but not systematically linked to management objectives.	Fair			
Some resources explicitly allocated towards achievement of specific TR management objectives.	Good	✓		
Adequate resources explicitly allocated towards achievement of specific TR management objectives.	Very good			

*** These form a variety of resources. These may be segregated into immovable (structures) and movable categories and each further may be considered under the essential and desirable categories. It is best to start with what are the minimum needs to attain each objective, what is available and manner of use/deployment. The proportions of the 'essentials' and 'desirables' along the importance gradient of objectives would serve as pointers for score categories. Specific remarks would be vitally important.**

3.3 Are financial resources other than those of the State linked to priority actions and are funds adequate, released timely and utilized?

Assessment criteria*																																																																										
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks																																																																						
Resource allocation is adhoc, funds are inadequate and seldom released in time and not utilized.	Poor		Discussion with FD and FD office records.	Financial resources of KMTR other than those of State linked schemes are from- (a)Project Tiger Scheme (b)Agasthiyarmalai Biosphere Reserve Scheme & (c) Project Elephant Scheme and all are linked to priority actions to meet the management objectives. Fund received and utilized by the KMTR during last 3 years are given below. <div>(Amount in lakh rupees)</div> <table><thead><tr><th>Scheme</th><th>Amt./ (Sanctin date)</th><th>Amt./ (Release date)</th><th>Amt./ Utilized</th><th>Balance</th></tr></thead><tbody><tr><td colspan="5">Year 2010-11</td></tr><tr><td>Project Tiger</td><td>194.33 (28. 8.10)</td><td>194.33 (8.12.10)</td><td>184.02</td><td>10.31</td></tr><tr><td>PT-AI-Tiger Estimation (Revalidation of 09-10)</td><td>3.27</td><td>3.27 (31.8.10)</td><td>3.27</td><td>0.00</td></tr><tr><td>Agasthiyar-malai BR</td><td>84.00 (20.07.10)</td><td>58.00 (25.8.10)</td><td>57.98</td><td>0.02</td></tr><tr><td>Project Elephant</td><td>10.00 (21.07.10)</td><td>10.00 (15.9.10)</td><td>10.00</td><td>0.00</td></tr><tr><td colspan="5">Year 2011-12</td></tr><tr><td>Project Tiger</td><td>316.13 (23.09.11)</td><td>202.26 (31.10.11)</td><td>202.22</td><td>0.04</td></tr><tr><td>Agasthiyar-malai BR</td><td>83.65 (03.11.11)</td><td>83.65 (1.12.11)</td><td>83.63</td><td>0.02</td></tr><tr><td>Agasthiyar-malai BR</td><td>26.00 (20.07.10)</td><td>26.00 (15.4.11)</td><td>25.02</td><td>0.98</td></tr><tr><td colspan="5">Year 2012-13</td></tr><tr><td>Project Tiger</td><td>214.94 (18.08.12)</td><td>186.13 (25.9.12)</td><td>185.48</td><td>0.65</td></tr><tr><td>Project Tiger (Revalidation of 11-12)</td><td>----</td><td>105.64 (8.11.12)</td><td>104.71</td><td>0.93</td></tr><tr><td>Project Tiger (Revalidation of 12-13)</td><td>28.81 (07.03.13)</td><td>28.81 (27.3.13)</td><td>27.83</td><td>0.98</td></tr></tbody></table>	Scheme	Amt./ (Sanctin date)	Amt./ (Release date)	Amt./ Utilized	Balance	Year 2010-11					Project Tiger	194.33 (28. 8.10)	194.33 (8.12.10)	184.02	10.31	PT-AI-Tiger Estimation (Revalidation of 09-10)	3.27	3.27 (31.8.10)	3.27	0.00	Agasthiyar-malai BR	84.00 (20.07.10)	58.00 (25.8.10)	57.98	0.02	Project Elephant	10.00 (21.07.10)	10.00 (15.9.10)	10.00	0.00	Year 2011-12					Project Tiger	316.13 (23.09.11)	202.26 (31.10.11)	202.22	0.04	Agasthiyar-malai BR	83.65 (03.11.11)	83.65 (1.12.11)	83.63	0.02	Agasthiyar-malai BR	26.00 (20.07.10)	26.00 (15.4.11)	25.02	0.98	Year 2012-13					Project Tiger	214.94 (18.08.12)	186.13 (25.9.12)	185.48	0.65	Project Tiger (Revalidation of 11-12)	----	105.64 (8.11.12)	104.71	0.93	Project Tiger (Revalidation of 12-13)	28.81 (07.03.13)	28.81 (27.3.13)	27.83	0.98
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Project Tiger	194.33 (28. 8.10)	194.33 (8.12.10)			184.02	10.31																																																																				
PT-AI-Tiger Estimation (Revalidation of 09-10)	3.27	3.27 (31.8.10)			3.27	0.00																																																																				
Agasthiyar-malai BR	84.00 (20.07.10)	58.00 (25.8.10)			57.98	0.02																																																																				
Project Elephant	10.00 (21.07.10)	10.00 (15.9.10)			10.00	0.00																																																																				
Year 2011-12																																																																										
Project Tiger	316.13 (23.09.11)	202.26 (31.10.11)			202.22	0.04																																																																				
Agasthiyar-malai BR	83.65 (03.11.11)	83.65 (1.12.11)			83.63	0.02																																																																				
Agasthiyar-malai BR	26.00 (20.07.10)	26.00 (15.4.11)	25.02	0.98																																																																						
Year 2012-13																																																																										
Project Tiger	214.94 (18.08.12)	186.13 (25.9.12)	185.48	0.65																																																																						
Project Tiger (Revalidation of 11-12)	----	105.64 (8.11.12)	104.71	0.93																																																																						
Project Tiger (Revalidation of 12-13)	28.81 (07.03.13)	28.81 (27.3.13)	27.83	0.98																																																																						
Some specific allocation for management of priority action. Funds are inadequate and there is some delay in release, partially utilized.	Fair																																																																									
Comprehensive planning and allocation that meets the most important objectives. Generally funds released with not much delay and mostly utilized.	Good	✓																																																																								
Comprehensive planning and allocation of resources for attainment of most objectives. Funds generally released on-time and are fully utilized.	Very good																																																																									
Although generally funds released without much delay in some ocasions delay in release of Central Fund by the State of Tamil Nadu has been noticed. Fund released by Central Govt under Agasthiyarmalai BR scheme during 2010-11 was not released by the State in same year and latter on the rest of the fund Rs 26.00 lakh was released in the next year (2011-12).																																																																										

*Obtain details of funds released by NTCA and their utilization by TR in the last 3 years and indicate them under 'Remarks'. Also comment on the problems associated with fund allocations and their utilization.

3.4 Are financial resources from the State linked to priority action and funds adequate, timely released and utilized for the management of Tiger Reserve?

Assessment criteria*																																																																
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks																																																												
Resource allocation is adhoc, funds are inadequate and seldom released in time and not utilized.	Poor		Discussion with FD and FD office records.	State funds linked to priority actions released by State and their utilization by KMTR in the last 3 years are given below: (Amount in lakh rupees)																																																												
Some specific allocation for management of priority action. Funds are inadequate and there is some delay in release, partially utilized.	Fair			<table><tr><th>Name of scheme</th><th>Amount Sanction/Release</th><th>Amount Utilized</th></tr><tr><td colspan="3">Year 2010-11</td></tr><tr><td>13th Finance Commission</td><td>11.02</td><td>11.00</td></tr><tr><td>IFM</td><td></td><td>3.00</td></tr><tr><td>Medicinal Plants Conservation Area</td><td>11.00</td><td>0.88</td></tr><tr><td>Refurnishing</td><td>1.00</td><td>1.00</td></tr><tr><td>TAP</td><td>0.04</td><td>0.04</td></tr><tr><td>Tiger Census</td><td>3.27</td><td>3.27</td></tr><tr><td colspan="3">Year 2011-12</td></tr><tr><td>13th Finance Commission</td><td>66.30</td><td>64.00</td></tr><tr><td>Medicinal Plants Conservation Area</td><td>0.88</td><td>0.88</td></tr><tr><td>Elephant proof trench</td><td>6.30</td><td>6.30</td></tr><tr><td>TAP</td><td>0.04</td><td>0.04</td></tr><tr><td>Western Ghats DP</td><td>48.05</td><td>48.01</td></tr><tr><td colspan="3">Year 2012-13</td></tr><tr><td>13th Finance Commission</td><td>48.22</td><td>46.84</td></tr><tr><td>TAP</td><td>0.12</td><td>0.12</td></tr><tr><td>Western Ghats DP</td><td>84.886</td><td>84.832</td></tr><tr><td>Asian Elephant Depredation and its mitigation measures</td><td>11.44</td><td>11.44</td></tr><tr><td>Compensation State Fund</td><td>5.00</td><td>5.00</td></tr></table>	Name of scheme	Amount Sanction/Release	Amount Utilized	Year 2010-11			13 th Finance Commission	11.02	11.00	IFM		3.00	Medicinal Plants Conservation Area	11.00	0.88	Refurnishing	1.00	1.00	TAP	0.04	0.04	Tiger Census	3.27	3.27	Year 2011-12			13 th Finance Commission	66.30	64.00	Medicinal Plants Conservation Area	0.88	0.88	Elephant proof trench	6.30	6.30	TAP	0.04	0.04	Western Ghats DP	48.05	48.01	Year 2012-13			13 th Finance Commission	48.22	46.84	TAP	0.12	0.12	Western Ghats DP	84.886	84.832	Asian Elephant Depredation and its mitigation measures	11.44	11.44	Compensation State Fund	5.00	5.00
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sComprehensive planning and allocation that meets the most important objectives. Generally funds released with not much delay and mostly utilized.	Good	✓	State Govt. has released priority action linked fund timely and regularly. Fund is properly utilized and utilization certificate has been sent to higher ups. These funds helped a lot in achieving the management objectives.																																																													
Comprehensive planning and allocation of resources for attainment of most objectives. Funds generally released on-time and are fully utilized.	Very good																																																															

*Obtain details of funds released by State and their utilization by TR in the last 3 years and indicate them under 'Remarks'. Also comment on the problems associated with fund allocation and their utilization.

3.5 What level of resources are provided by NGOs?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
NGOs contribute nothing for the management of the TR.	Poor		Discussion with FD, research/study reports, documentation and field visit.	Long and steady relationship appeared to be prevailed between the local NGO's and the Department. None of the NGO has given support in kind to supplement the resource-need . ARUMBUGAL TRUST stationed at Tirunelveli has done appreciable work in eco development scheme in the fringes villages of KMTR by imparting training and supporting the EDCs to stand on their own feet by creating revolving fund and the same is still continuing. Another NGO named ATREE based at Bangalore and having a field center at Singampatty is associating with the Tiger Reserve, especially in Anti-plastic campaign during the festival seasons and also in post cleaning works after the festival is over which is a great work in keeping the KMTR clean. In addition to that some of the business organizations like Nalli Silks, Ramco cements, Hotel Aryaas, Pothys, Krishna mines who supply banners, awareness boards, cloth bags, T-shirts etc., during the festival seasons in and around the KMTR. Some of the medical institution such as Kidney care center, Tirunelveli Medical College etc., have provided services to the local people around the TR by conducting health camps every year in collaboration with the TR officials . Clubs such as Rotary, Lions, Inner-wheel etc., also co-operate with the department in creating awareness among various levels of people.
NGOs make some contribution to management of the TR but opportunities for collaboration are not systematically explored.	Fair			
NGOs contributions are systematically sought and negotiated for the management of some TR level activities.	Good	✓		
NGOs contributions are systematically sought and negotiated for the management of many TR level activities.	Very good			

4. Process

4.1 Does the TR have manpower resources trained in wildlife conservation for effective TR management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No trained officers and frontline staff in the TR.	Poor		Discussion with FD, research/study reports, documentation and field visit.	The Field Director is trained at WII (9 month diploma course). Other officers of TR have been trained in the essentials of wildlife conservation/ management during their professional courses in Forestry Colleges. The DD Ambai is also a veterinarian. Other front line staffs have also undergone likewise trainings in their Forestry Schools. Further training have been provided to the staff of all levels on population estimation, wildlife monitoring, Camera trapping and GPS for Phase I and IV data collection and monitoring. Apart from this, training on human-elephant conflict mitigation measures in January 14(no of participants-8), training under Tamil Nadu Biodiversity Greening Project in 2011-12(no of participants-14), GPS training in Sept/Oct 2012(no of participants-6) and wide level orientation training in Dec 12(no of participants-11) were organized by Tamil Nadu Forest Academy, Coimbatore, in which all level personnel participated. In addition to that, skill development training in March 14 at Attakatty (ABR) no of participants-6, survey training at Orathandu in March 14(no of participants-1) and TBGP training in 2013-14(no of participants -23) were organized by TNFTC. The DD Ambai being a veterinarian has also imparted training with help of others to the staff on first aid, tranquilizing, managing man-animal conflict, animal rescue, etc. .
Some trained officers and few trained frontline staff, posted in the TR.	Fair			
All trained officers and fair number of trained frontline staff posted in the TR.	Good	✓		
All trained officers and most of the trained frontline staff is posted in the TR.	Very good			

				28 anti-poaching watchers with 6 more personnels have been taken for a field visit to Mudumalai TR in Jan 14 to know about the fire protection, tourism regulation, anti-poaching strategies and knowledge sharing with peer group. Necessary steps are being taken to develop "Staff development Plan" in near future.
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***Indicate % of trained staff in various categories. The number and thematic areas of the 'Internal Training' programmes organized in the TR in the last 3 years may be taken into account. Has the TR prepared a 'Staff Development Plan'? Is it being implemented?**

4.2 Is TR staff management performance linked to achievement of management objectives?

4.2

is FR staff management performance linked to achievement of management objectives?

Assessment criteria												
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks								
No linkage between staff management performance and management objectives.	Poor		Discussion with FD and FD office records.	<p>Performance evaluation at annual interval is being carried out for the front line staff on the basis of objectives achieved and other criteria as per service rule. The promotions are mostly on the basis of seniority subjected to rejection of unfit.</p> <p>The staff who has done extra-ordinary performance in achieving the management objectives, has been rewarded with Hon'ble Chief Minister's Award for Gallantry & Outstanding Services to duty during 2012-13 and 2013-14. vide (G.O.(D) no. 354 Environment and Forests (FRV) department dated 21.10.2013.</p> <table><tr><td>201 12-13</td><td>Thiru.M.Elango – Forest Range Officer</td></tr><tr><td>1114 13-14</td><td>Thiru.D.Venkatesh. Dy-conservator of Forests</td></tr><tr><td></td><td>Thiru.S.Mohan, Forest Guard</td></tr><tr><td></td><td>Thiru.K.Petchimuthu, Forest Guard</td></tr></table>	201 12-13	Thiru.M.Elango – Forest Range Officer	1114 13-14	Thiru.D.Venkatesh. Dy-conservator of Forests		Thiru.S.Mohan, Forest Guard		Thiru.K.Petchimuthu, Forest Guard
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	Thiru.S.Mohan, Forest Guard											
	Thiru.K.Petchimuthu, Forest Guard											
Some linkage between staff management performance and management objectives, but not consistently or systematically assessed.	Fair											
Management performance for most staff is directly linked to achievement of relevant management objectives.	Good	✓										
Management performance of all staff is directly linked to achievement of relevant management objectives.	Very good											

4.3 Is there effective public participation in TR management* and does it show in making a difference?

Assessment criteria				
Condition	Category	(Tick ✓)	Reference document(s)	Remarks
Little or no public participation in TR management.	Poor		Discussion with CWLW& FD, FD office records & documentations and field visit.	<p>During the course of interaction with VFCs/EDCs in the field visit as well as from the documents provided, effective public participation in TR management has been observed. The public volunteer from NGOs and fringe villagers helped TR enthusiastically during annual Wildlife population estimation and rescue operations.</p> <p>Arumbugal Trust has helped in creating awareness in EDC/VFC through cultural programmes, trainings to EDC watchers on leadership, VFC strengthening and monitoring, Alternate livelihood activities, etc. Consequently, 21960 red members (fully dependent on forests) got shifted into green and yellow category and 10336 yellow members (partially dependent on forests) got shifted into the category of green(not dependent on forests) which is evident from FD records. This is a commendable task in achieving the objectives of management by the TR authority in KMTR.</p> <p>ATREE, another NGO, is associating with the TR, especially in Anti-plastic campaign during the festival</p>
Opportunistic public participation in some of the relevant aspects of TR management.	Fair			
Systematic public participation in most of the relevant aspects of TR management.	Good			
Comprehensive and systematic public participation in all important and relevant aspects of TR management.	Very good	✓		

				<p>seasons which resulted a neat and clean TR in spite of big religious festivals every year.</p> <p>46 Fire Executive Committees from the public has been given sickles, bags ,T-shirts, shoes, 5-litre water can and caps as fire equipments. 126 VFC members helped a lot in extinguishing fire in KMTR during 2011 to 2013 confining the fire occurrence in 45.35 ha, 61.95 ha and 19.50 ha area respectively which is very less in comparison to earlier years.</p> <p>Secret information about 21 forest crimes was passed on by the VFC members in 2012-13. Micro-credit given to the VFC members and their engagement in forest protection and habitat management works has enhanced their livelihood and living status. Thus the TR received overwhelming support by the participation of villagers. This is evident by way of less poaching, less tree felling and zero staff assault cases.</p>
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of NGOs/ NGLs in population estimation may be taken into account)

4.4 Is there a responsive system for handling complaints and comments* about TR management?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Ad-hoc approach to handling complaints.	Poor		Discussion with FD and FD office records & field visit.	<p>Register of petitions and Register of petitions under Right to Information Act are maintained. Petitions were received from CM level, PCCF level, District Collector level and from the public directly. 15 petitions in 2010, 22 petitions in 2011 and 32 petitions in 2012 were received in the office and all the petitions were disposed off in prescribed period. During 2013-14 total 68 petitions were received and up to the end of the year 58 petitions were disposed off by taking necessary action and remaining 13 petitions were remained undisposed due to enquiry at various stages. Petitions received under RTI are promptly replied within the stipulated time.</p> <p>Visitors note books in the important Guest houses and feed-back / complaint boxes at all check-posts are kept where guest record their views and suggestions. Phone numbers being prominently displayed at tourist places, anyone is able to directly contact the Field Director and other officers for grievances/suggestions which are fairly frequent redressal is done at once. However, an institutionalized system/ protocol to routinely record complaints and feed backs on management issues, their regular periodical review and expeditious corrective actions with provision of information to aggrieved persons should be introduced for more transparency.</p>
Complaints handling system operational but not responsive to individual issues and with limited follow up.	Fair			
Coordinated system logs and responds effectively to most complaints.	Good	✓		
All complaints systematically logged in coordinated system and timely response provided with minimal repeat complaints.	Very good			

***Does the TR maintains 'Suggestions Register'? What actions are taken to deal with suggestions?**

4.5 Does TR management addresses the livelihood issues* of resource dependent communities, especially of women?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No livelihood issues are addressed by TR management.	Poor		Discussion with CWLW & FD, FD office records, EDC-Records and field visit .	<p>Outstanding works has been done by KMTR management to address the livelihood issues of forest resource dependent communities, especially of Women. For choosing their livelihoods, various training programmes have been conducted for the VFC/EDC members for numerous items like bakery, milch cow rearing, sweet stall, hotel, agriculture, dry cleaning, brick making, two wheeler mechanic, fish sale, vegetable sale, cloth sale, wire bag making, general store, cycle repairing shop, grocery shop, flower stall, mutton stall, poultry, fire wood shop, fruit sale, detergent making , royal blue making , weaving, groom making, idly sale, mud pot making , tailoring , soda making etc. Out of trained members, 922 members are engaged in some kind of jobs.</p> <p>Micro credit for sustainable alternate livelihood needs and certain livelihood issues were given to 28339 members from 228 VFC/EDC amounting Rs 55,09,43,476 (fifty five crore nine lakh forty three thousand four hundred and seventy six only) with 1% interest. Loan recovery was found to be 95%. Due to successful implementation of these programmes, there has been overall improvement in standard of living of the targeted community. It is evident from the records of EDC that 10336 yellow members (partially dependent on forests) , got shifted into the category of green members(not dependent on forests) and 21960 red members(fully dependent on forests) , got shifted into green and yellow category by now.</p> <p>Daily wagers were employed in various schemes of TR and for them 13947, 10180 & 12249 man-days were created in 2011-12, 2012-13 & 2013-14 respectively. This is appreciable achievement by the TR management in KMTR.</p> <p>For empowering women, partnership of women in enterprises has been increased in the KMTR Project. Women membership in VFC is 26663 (74%), Women membership in EDC is 1367 (85%) and Women chairman in VFC/EDC is 160 (71%). In addition to this, 843 SHGs has been formed consisting of exclusively women in which 11945 women are the beneficiary and they have generated 10.264 crore as corpus fund for the SHGs. Although no fund has been directly received from district agency but to enhance the living standard of the forest dependent community, TR manager has done the convergence with other Govt. Schemes in the district. Rural Development Schemes (Indira Awaaz Yojana, IAY, Pasumai Kudil Yojana and MNREGA) have benefitted 228 VFCs in which 17534 members were the gainers. 27 VFCs were provided sewing machines by the Social Welfare Dept. and 17 VFCs were benefitted due to distribution of fingerlings by State Fisheries Dept.</p> <p>MEE team also participated and interacted with the VFC/EDC members in two VFC meetings, in which most of the women were found to be participating. Women</p>
Few livelihood issues are addressed by TR management.	Fair			
Substantial livelihood issues are addressed by TR management.	Good			
Livelihood issues of resource dependent communities especially of women are addressed effectively by TR managers.	Very good	✓		

				<p>members were found very satisfied with the TR schemes and their living standard has increased enormously due to suitable Training, Micro-credit and Transparency combined with arrangements for market availability. These have played a major role in enhancing the income of the forest dependent community and they have completely stopped taking fire-wood from the forest and not allowing animals to graze in the forest. They are also helping the Department in poaching cases as an informer.</p> <p>For excellent co-existence and buffer management, KMTR was awarded by NTCA in 2012. Considering the Successful Implementation of the Eco Development Project, the World Bank has chosen KMTR as Role model and for establishing Field Learning Center in 2011.</p>
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***The number of mandays generated in the last 3 years may be taken into account. Are funds received from District Agencies and other sources? Provide details of funds received in last 3 years.**

4.6 Has the TR planned and implemented the voluntary 'Village Relocation' from the Core/ Critical Tiger Habitat (CTH)?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No planning and no implementation	Poor		Relocation plan, Draft TCP para- and FD office record.	The human settlements in the core of the TR consists of 129 families of Kani Tribe inhabited in 4 settlements occupying 29.52 ha area and 105 families of Non-Kani forest dwellers inhabited in 3 settlements occupying 10.15 ha area in Core zone. It was reported by the TR authorities that although many of the Kani tribe refused to accept the packages of voluntary relocation, TR authority is still continuing negotiations with them. Under Recognition of Forest Right Act 2006, no right is settled so far in TamilNadu due to pending litigation at High Court. At present 129 claims have been received by the Forest Right Committee and it is lying under consideration at District Level Committee. Several non Kani encroachers have given consent in writing to accept the relocation package and to settle down outside the TR, area. It was further informed that until the rights of the Scheduled tribes and other traditional forest dwellers are finalized or settled, TR authority find it difficult to relocate these tribes and encroachers. However, a comprehensive relocation plan has been drawn and sent to NTCA for release of funds.
Plans have been made but no implementation	Fair	✓		
Plans have been made and some implementation is in progress	Good			
Plans have been made and are being actively implemented/ no human habitation in the CTH	Very good			

***Assessment will look into the village relocation planning process including availability of manpower, financial resources and NGO support, if any. Is there a mechanism to address the complaints received in respect of relocation process? Effort must be made to assess post-relocation success or otherwise.**

5. Output

5.1 Is adequate information on TR management publicly available?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no information on TR management publicly available.	Poor		Official websites and various other websites, Brochures and News letters	Information on the Tiger Reserve is available in the Tamil Nadu Forest department official website (www.forests.tn.nic.in) and the official website of the Kalakad Mundanthurai Tiger Conservation Foundation (www.kalakadtigerfoundation.org) and other websites (www.projecttiger.nic.in). A website proposal has been made under the Biodiversity Conservation and Rural Livelihood Improvement Project, which will also be containing the information on the Kalakad Mundanthurai Tiger Reserve. Apart from this, 4 issues of Newsletter has been published during July 2011, October 2011, December 2013, March 2014 from the Kalakad Mundanthurai Tiger Conservation Foundation which contains the updated information and the events happening in the Tiger Reserve. Hoardings also created to disseminate information to the public at different places inside and outside KMTR. Excellent brochures about Eco-Tourism in KMTR, January 2012, about Medicinal Plants in KMTR 2014 and about KMTR (General Information) 2014 are available at important places in KMTR. In addition to that one brochures about Butterflies and Moths of Kalakad Mundanthurai Tiger Reserve, 2013 is also available.
Publicly available information is general and has limited relevance to management accountability and the condition of public assets.	Fair			
Publicly available information provides detailed insight into major management issues and condition of public assets.	Good	✓		
Comprehensive reports are routinely available in public domain on management and condition of public assets.	Very good			

5.2 Are visitor services and facilities appropriate and adequate?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Visitor services and facilities do not exist.	Poor		Discussion with CWLW and FD, TCP(para 11.3.3), FD office record and visit to tourist centre.	Most of the tourists are locals and come only to worship in temples and enjoy bathing in water falls and restrict themselves to the extent where road network is available. An Interpretation center is available at Papanasam but the exhibits & information boards are not up to the mark. One museum is available at Kalakad which is equipped with stuffed models of several animals and few displays but the quality of services needs up-gradation. A small library with a collection of books is attached to this museum. Field guide, published by ATREE, brochures, nature guides, garbage bins and signage are available at entry ticket issuing centre. Watch towers have been constructed. Sufficient care is taken for maintenance of sanitation. Eco-watchers are engaged for monitoring and preventing littering (poly bags, liquor bottles etc) and periodically garbage is removed by the volunteers. Most of the visitors leave the TR with a satisfied feeling which is evident from the register kept at Manimuthra check-post. High end tourists do not frequently visit the TR. Basic facility maintained for the visitors need up-gradation.
Visitor services and facilities are very basic.	Fair	✓		
Visitor services and facilities are monitored from time to time and are fairly effective.	Good			
Visitor services and facilities are conscientiously maintained, regularly upgraded and monitored for visitor satisfaction	Very good			

**Include the existence and quality of visitor and interpretation centers, including skills and capabilities of personnel manning these, TR related publications, films, videos; arrangements of stay (including places serving refreshments and food owned and managed by TR), watch towers and hides including safety factors, vehicles assigned for visitors including riding elephants, if any and their deployment, drinking water, rest rooms, garbage disposal, attended and self guided services in the field, visitor feed back on the quality of wilderness experience.*

5.3 Are research/ monitoring related trends systematically evaluated and routinely reported and used to improve management?

Assessment criteria*				
Condition	Category*	(Tick)	Reference document(s)	Remarks
Little or no systematic evaluation or routine reporting of trends.	Poor		Discussion with CWLW & FD, FD office records and field visit.	<p>Rich bio- diversity with high level of endemism has attracted many researchers in KMTR. The management related trends are evaluated through Annual reports, census reports etc and routinely reported to higher authorities. Research studies carried out for slender loris, king cobra, pilgrim effect during festivals, Nilgiri langur etc by the Forest Dept of TN and other scientific studies (on LTM by Dr Sushma and on RET species by Dr Gopalan & Dr Chelladurai) has formed the basis of RET species recovery programme.</p> <p>Action regarding weed removal and chital habitat recovery is also as per suggestion of Dr A J T Johnsingh. 54 research papers have been published in KMTR and outcome of researches have shaped the management prescriptions. Through research, new species of frog viz. <i>Raorchestes chalazode</i> or Chalazodes Bubble Nest Frog was recently recorded.</p> <p>Phase IV Tiger monitoring started in KMTR since 2012 and All India Tiger Estimation data were collected in 3rd fortnight of Dec 13. Ecologist of TR got trained in data entry software from WII and there- after computer operator & other staff were imparted training for data entry. However, data entry is incomplete so far. M-stripes entry is also not successfully done because of some technical faults. Removal of technical fault in entering M-stripes needs urgent attention.</p> <p>Monitoring of live-stock grazing, fires, weeds, sources of water, a variety of illegal activities typically associated with the reserve, wildlife health, epidemics, immunization of livestock regeneration and change in vegetation, visitors and their activities, offence cases, ex-gratia payments are being carried out in a traditional format.</p> <p>Monitoring protocol of M STRIPES should be launched to ensure monitoring parameters. Phase _IV daily monitoring protocol implementation needs improvement as per NTCA guidelines.</p>
Some evaluation and reporting undertaken but neither systematic nor routine.	Fair			
Systematic evaluation and routine reporting of trends undertaken.	Good	✓		
Systematic evaluation and comprehensive reporting of trends undertaken and attempts made at course corrections as relevant.	Very good			

***Not all TRs attract projects and researchers and with exceptions, little research takes place on the TRs own steam because of systemic limitations. However, monitoring of some critical issues is expected e.g. population of tiger, co-predators and prey with insights into their demography and distribution (some opportunistic sampling by sightings, signs and spatial distribution during assessment would be extremely useful in terms of expert impression and as a pulse), monitoring incidence of livestock grazing, fires, weeds, sources of water, a variety of illegal activities typically associated with the reserve, wildlife health (e.g. epidemics, immunization of livestock) regeneration and change in vegetation, visitors and their activities, offence cases, ex-gratia payments etc. Efforts must be made to assess the planning and implementation of Phase-IV monitoring protocols and the success of implementation of M-Stripes (wherever applicable). Are the 'Sykes and Horill' monitoring plots maintained and data analyzed?**

5.4 Is there a systematic maintenance schedule and funds in place for management of infrastructure/assets?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No systematic inventory or maintenance schedule.	Poor		Discussion with FD, FD office documents, TCP annexure and field visit.	Infrastructure related documents like FRH Register, Building Register, stores, vehicle sheds, anti-poaching sheds, water hole register, fire watch towers, solar pump-sheds, fire-lines, roads & patrolling paths, solar fences etc and Assets related documents like Store Register, Arms and ammunition registers, vehicle register, wireless register etc are properly maintained and recorded. The system of maintenance depends on the requirements of repair and maintenance. Based on this inventory, all the infrastructure/assets are systematically maintained/ repaired. It was evident in the field visit also. Water holding structures are repaired/ desilted to put back into use. All the office equipments, wireless sets, solar instruments, fences are being maintained systematically. Adequate funds are available for the effective management of infrastructure/assets in all centrally sponsored schemes and in state schemes.
Inventory maintenance is adhoc and so is the maintenance schedule.	Fair			
Systematic inventory provides the basis for maintenance schedule but funds are inadequate.	Good	✓		
Systematic inventory provides the basis for maintenance schedule and adequate funds are made available.	Very good			

6. Outcomes

6.1 Are populations of threatened species declining, stable or increasing?

Assessment criteria*				
Condition	Category	(Tick ✓)	Reference document(s)	Remarks
Populations of key threatened/ endangered species are declining.	Poor		Discussion with CWLW, FD, WII reports, Phase IV Tiger monitoring reports, census reports, Research papers presented and field visit.	Due to the protection measures, several plant species have come up profusely and biodiversity in the eco-system have increased. Similarly more frequent interaction of leopards, sloth bears, LTM, bisons, nilgiri langurs and great Indian hornbills etc to the visitors in the lower reaches are the evidences of the increase and dispersal of threatened species. According to the census report of 2012 and 2013, population density per sq km of elephant, Nilgiri Langur, Sambar and Gaur has increased from 1.05, 12.64, 8.86 and 4.05 to 1.87, 14.41, 9.11 and 7.34 respectively. Leopard population was found 38 in 2012. In camera trapping operations new individuals numbering 14 & 16 were found in year 2013 & 2014, respectively. This indicates the positive signal of increase. Research papers also ratify the increasing trend of the endangered species in KMTR.
Some threatened/ endangered species populations declining, some are increasing, most others are stable.	Fair			
Several threatened/ endangered species populations increasing, most others are stable.	Good			
All threatened/ endangered species populations either increasing or stable.	Very good	✓		

*This needs to practically relate to the natural ecosystem potential rather than being driven merely by numbers and visibility. The assessment score may be elaborated under remarks.

6.2 Is the population of tigers showing a declining, stable or increasing trend?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Population of tiger is showing a declining trend	Poor		Discussion with CWLW & FD , FD office records ,phase -iv data out-come and field visit.	Tiger monitoring was carried out in 2010 by WII and population estimation was found to be 6-8. Phase IV Tiger monitoring is being carried out every year since 2012. The data and camera trap pictures are used in analysis and protection. As per photo capture recapture data, 10 tigers were identified in year 2012 and 11 tigers in year 2013. With Identification of 12 th new tiger in 2014, it appears that Tiger population is showing increasing trend.
Population of tiger is stable	Fair			
Population of tiger is showing an increasing trend	Good	✓		
Population of tiger has significantly increased	Very good			

***This assessment should be based in the context of available population estimate (2010-11) and the outcomes of the currently ongoing Phase-IV analyses.**

6.3 Have the threats* to the TR being reduced/ minimized? Or is there an increase?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Threats to the TR have not abated but have enhanced.	Poor		Discussion with FD, FD office records, Draft Tiger conservation plan & other plans and field visit.	The threats to the TR from biotic pressure have been minimized through the successful implementation of VFC/EDC programmes with the excellent participation of the forest fringe villagers. Village committees have become very strong and programmes on income generating activities are institutionalized & they have generated self- sustainable livelihood without being dependent on forest resources. Records indicates that 21960 red members(fully dependent on forests) got shifted into green and yellow category and 10336 yellow members (partially dependent on forests) got shifted into the category of green(not dependent on forests) . This is an appreciable achievement of the TR management in KMTR. It is evident from the records that illegal cases of grazing, illicit felling, fuel collection by head load, MFP collection and poaching has been reduced to minimum. Fire occurrence has gone very low. 12024 cattle from the fringe villages were vaccinated during 2012-13 and no disease transfer case has been observed in recent years. Preventive action against Canine Distemper Virus was also initiated in TR.
Some threats to the TR have abated, others continue their presence	Fair			
Most threats to the TR have abated. The few remaining are vigorously being addressed	Good			
All threats to the TR have been effectively contained and an efficient system is in place to deal with any emerging situation	Very good	✓		

***Does the TR has a Disaster Risk Management Plan to deal with existing as well as emerging threats?**

6.4 Are the expectations of visitors* generally met or exceeded?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Expectations of visitors generally not met.	Poor		Discussion with CWLW and FD, Visitors note books and field visit.	Most of the visitors visiting Kalakad Mundanthurai Tiger Reserve leave with a satisfactory feeling. This is reflected in the notes left by them in the visitors notebook maintained in important tourist places. The tourist comes here to enjoy the wilderness enriched with biodiversity. Supreme Courts and NTCA guidelines are being followed. The total area under the tourism zone is much less than the upper limit of 20%. There are many religious & scenic places particularly the waterfalls which are frequently visited by local tourists and nominal charges are realized from the locals. KMTR has panoramic Landscapes and diverse vegetation due to which nature lovers enjoy them most. No of tourists had gone down in past two years because of issuance of Hon. Court's direction not to allow tourism in core area by the Irrigation Dept.
Expectations of many visitors are met.	Fair			
Expectations of most visitors are met.	Good	✓		
Expectations of all most all visitors are met.	Very good			

**What is the compliance status on Supreme Court/ NTCA Guidelines on Ecotourism in TRs?*

6.5 Are local communities supportive of TR management?

Assessment criteria*				
Condition	Category	(Tick ✓)	Reference document(s)	Remarks
Local communities are hostile.	Poor		Discussion with CWLW & FD, Eco-development records and field visit.	TR management has built up strong social fencing in and around the TR with the help of local people through Joint Forest Management System. The institutionalized and sustainable micro-credit system in Eco-development programmes has helped the local people in raising their income and standard of living in the society and in turn, movement of people for fuel wood is eliminated which has transformed the fuel consumption pattern of the people from fire wood to LPG. Head load exploitation for fire wood has been greatly reduced to very negligible amount with remarkable reduction in the livestock grazing in the forest. Local tribals and the communities have been engaged as anti-poaching watchers. Each EDC has a fire brigade provided with a fire fighting kit that helps the park staff during fire occurrences. The fringe dwellers help in rescue operations of stranded wild animals. Benefit derived from eco-tourism is also an incentive to the local people. They protect the TR and shares with the views of the Management. People feel proud in protecting the TR .Consequently, local communities are highly supportive to the TR Management.
Some are supportive.	Fair			
Most locals are supportive of TR management.	Good			
All local communities supportive of TR management.	Very good	✓		

**There could be many reasons for disenchantment. It could be real because of managerial neglect or the managerial efforts could be appropriate but there could be local elements/organizations who would like to keep the disaffection simmering for their own ulterior motives. Likewise success could be entirely because of the efforts of managers or they might be fortunate in striking partnerships with credible NGOs. Assessment may take the prevailing causes into account.*

7. MEE Score Card*

Framework Element Number	Framework Element Name	Number of Criteria (a)	Maximum Mark per question (b)	Total (a x b)	Marks obtained for the Element	Overall MEE Score and % age
1	Context	4	10	40	35	79.84%
2	Planning	7	10	70	57.5	
3	Inputs	5	10	50	35	
4	Process	6	10	60	47.5	
5	Outputs	4	10	40	27.5	
6	Outcomes	5	10	50	45	
Total		31		310	247.5	

**Efforts will be made by the NTCA-WII-MEE Team to address the issue of assigning 'differential' weightages to the 30 Assessment Criteria including 'normalization'.*

Assessment Criteria for addressing issues relating to Climate Change & Carbon capture in the Tiger Reserves (TRs)

1. *Additional Criteria on Climate Change: Is the TR being consciously managed to adapt to climate change?*

Condition	Category	(Tick ✓)	Comment/ Explanation	Next Steps
There have been no efforts to consider adaptation to climate change in management	Poor		Due to strict protection, there is an increase in biomass in the TR because of natural regeneration particularly in smaller plants which are more prone to climate change. Further the fire incidents are considerably reduced which also prevents biomass loss.	Guide lines should be issued at National Level for assessment of impacts and measures for adaptations so as to prepare specific plans and their integration with the TCP
Some initial thought has taken place about likely impacts of climate change, but this has yet to be translated into management plans	Fair	✓		
Detailed plans have been drawn up about how to adapt management to predicted climate change, but these have yet to be translated into active management.	Good			
Detailed plans have been drawn up about how to adapt management to predicted climate change, and these are already being implemented	Very good			

2. *Additional Criteria on Climate Change: Is the TR being consciously managed to prevent carbon loss and to encourage further carbon capture?*

Condition	Category	(Tick ✓)	Comment/ Explanation	Next Steps
Carbon storage and carbon dioxide capture have not been considered in management of the TR	Poor		Vehicles and Tourists restricted to the limit of carrying capacity to reduce carbon foot print since 2012. Fire incidents are considerably reduced which prevents carbon emission and biomass loss. . No tree felling, grazing is allowed inside the Tiger Reserve and due to strict protection massive natural regeneration comes up. These leads to increase in biomass resulting an increase in carbon capture.	It is necessary to issue guide lines at National level for adopting various measures in this direction without compromising the primary objectives of Wildlife habitat/ TR management to preserve the biodiversity of unique habitats/eco-systems.
Carbon storage and carbon dioxide capture have been considered in general terms, but has not yet been significantly reflected in management	Fair	✓		
There are active measures in place to reduce carbon loss from the TR, but no conscious measures to increase carbon dioxide capture	Good			
There are active measures in place both to reduce carbon loss from the TR and to increase carbon dioxide capture	Very good			

Management Effectiveness Evaluation (MEE) of Anamalai Tiger Reserve

1. Context

1.1 Are the values of the TR well documented, assessed and monitored?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Values not systematically documented, assessed and monitored.	Poor		Tiger Conservation Plan; Discussion with FD; Field visits	<p>The Anamalai Tiger Reserve (ATR) falls within the Western Ghats mountain chain, a region designated as one of 25 Global Biodiversity Hotspots.</p> <p>The important forest types of the Tiger Reserve are wet evergreen forests, semi evergreen forests, moist deciduous, dry deciduous, dry thorn and 529cumi forests. Other unique habitats like montane grasslands, savannah and marshy grasslands are also present. Tiger Reserve About 2500 species of Angiosperms with about 39 species of rare, endangered and threatened species have been reported in TR.</p> <p>The Wild fauna in the Tiger Reserve includes about 70 species Fishes, 70 species Amphibians, 120 species Reptiles, 300 species Birds and 80 species Mammals. The State animal of Tamilnadu, the Nilgiri tahr is found in sizeable number (600+). Tiger Reserve supports all the five primate species found in Tamilnadu viz. Lion Tailed Macaque, Nilgiri langur, Common langur, Bonnet macaque and Slender loris. In addition to Tiger Leopard, Asiatic Elephants and Gaur, the other important wild animals found in Anamalai are:- Sambhar, Spotted deer, Barking deer, Mouse deer, Wild pig, Jungle cat, Leopard cat, Rusty spotted cat, Fishing cat, Wild dog, Indian fox, Ruddy mongoose, Stripe-necked mongoose, Indian pangolin, Lagomorph, Madras hedge hog, Porcupine, Giant squirrels (both Malabar and the Grizzled), Two Flying Squirrels, Madras Tree Shrew etc.</p> <p>It is part of Anamalai-Parambikulam Elephant Reserve.</p> <p>All values of Anamalai Tiger Reserve 529cuminat529d as biological, conceptual, ecological, scientific, educational, recreational, economic, historical, religious and cultural values have been systematically identified, elaborated and assessed. Values important from the perspective of wildlife conservation; such as biological, scientific and recreational values etc are monitored.</p>
Values generally identified but not systematically assessed and monitored.	Fair			
Most values systematically identified, assessed and monitored.	Good			
All values systematically identified, assessed and monitored.	Very good	✓		

1.2 Are the threats to TR values well documented and assessed*?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Threats not systematically documented or assessed.	Poor		Tiger Conservation Plan	<p>All the threats, such as poaching, ganja cultivation, sandal wood smuggling, forest fire, human wild life conflict, protection, fragmentation of LTM habitat, electrocution of elephants by high voltage electric fencing around cultivation field, road kills of wild animals in Valparai plateau and demand of people to fence RF boundaries surrounding Valparai township, have been identified and assessed in Chapter-6, 7 and 8 of the draft TCP. Evaluation of threats has also been dealt in detail in relevant chapters.</p>
Threats generally identified but not systematically assessed.	Fair			
Most threats systematically identified and assessed.	Good			
All threats systematically identified and assessed.	Very good	✓		

*This assessment should be based on number, nature and extent of threats

1.3 Is the 'Core Area' of TR free from human and biotic interference?

Assessment criteria ⁺				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
The 'Core Area' has extensive human and biotic interference.	Poor		Documents provided by the Field Director; Discussion with Field Director	There are 36 tribal settlements within the Core area of the Tiger Reserve with a population of 5784 and number of families 1797. Nearly, 13 major villages have the influence on the core area. The human and cattle population of these villages exert various degrees of the biotic pressure on the adjoining core area of ATR. Grazing pressure remains a problem in some pockets. A Number of stray dogs have been removed from the settlement areas in core zone. A tentative proposals for relocation of the tribals in one settlement has been said to be sent to the National Tiger Conservation Authority, New Delhi, vide FD letter C. No.5247/2011/D, dt. 07.07.2012.(para 7.2.2.1 of Draft TCP).
The 'Core Area' has some human and biotic interference.	Fair	✓		
The 'Core Area' has little human and biotic interference.	Good			
The 'Core Area' has no human and biotic interference.	Very good			

⁺*This assessment should be based on existence and the efforts made by TR management to address issues related to human settlements/ villages inside the core area; livestock grazing, cultivation, encroachments etc, resource extraction/ livelihood dependence of local communities and should reflect the overall interference due to all the above factors. The issue of 'Unified Control' of the 'Core' and 'Buffer' zones under the Field Director would also be taken into account.*

1.4 Has the TR complied with the four Statutory* Requirements (SR) along with Tripartite MoU and three Standard Operation Procedures (SoP)?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
None of the four SR, no compliance of Tripartite MoU and three SOPs met	Poor		Documents provided by the Field Director; Discussion with Field Director	Vide GO (Ms.) No 199 E&F (FR V) Deptt. , dated 13.8.2012, an area of 958.59 sq. km. has been notified as critical tiger habitat or core and an area of 521.28 sq. km. as buffer area. The Tiger Conservation Foundation has been established by registering the Anamalai Tiger Conservation Foundation, Tamil Nadu Trust as a Trust on 25.03.2010. The Tiger Conservation Plan for core and buffer zones has been prepared. The views of the local scientists on draft TCP have been obtained and suitable correction/ addition / deletion were made in the TCP. The TCP in final shape has been submitted for approval. A State level Steering Committee under the Chairmanship of Honourable Chief Minister has been constituted as per GO (Ms.) No. 10 E&F (FR V) Deptt. , dated 15.2.2008. This Committee will be reconstituted and action is being taken by PCCF and Chief Wildlife Warden, TN. The compliance report on Tripartite MoU has been prepared and submitted to the NTCA upto 2013-2014. No incident of straying of tiger in human settlements happened in ATR. The postmortem and disposal of carcasses of three tigers were carried out as per SOPs issued by the NTCA.
Two of the four SR, 50% conditions of the Tripartite MoU and SOPs complied	Fair			
Three of the four SR, 75% conditions of the Tri-partite MoU and SOPs complied	Good	✓		
All four SR, 100% conditions of the Tripartite MoU and SOPs complied	Very good			

⁺*Statutory requirements are (1) Legal delineation and notification of Core and Buffer Areas; (2) Establishment of Tiger Conservation Foundation; (3) Development of a Tiger Conservation Plan; and (4) Constitution of a State-level Steering Committee under the Chairmanship of the Chief Minister. TA refers agreement between Field Director, State Government and NTCA. The 3 SOPs are on (i) Straying of Tiger in human dominated landscape, (ii) Tiger Mortality and (iii) Disposal of Carcasses*

2. Planning

2.1 Status of Tiger Conservation Plan (TCP)?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No TCP in place.	Poor		Draft TCP (Plan for core, buffer and adjoining areas providing connectivity); compliance report of Tripartite Agreement, Discussion with Field Director	The Tiger Conservation Plan for core and buffer zones has been prepared. The views of the local scientists on draft TCP have been obtained and suitable correction/ addition / deletion were made in the TCP. After approval of draft Tiger Conservation plan for Core and Buffer zone by the Principal Chief Conservator of Forests and Chief Wildlife Warden (vide ref. No. WL5/ 60727 /2010, dt. 28.02.2011), meeting to review the Tiger Conservation Plan was held at the National Tiger Conservation Authority, New Delhi on 20.4.2012. The committee had offered some comments for incorporating in the Tiger Conservation Plan which is said to have been carried out. Supplementary guidance document, has been received for incorporation, vide National Tiger Conservation Authority, New Delhi Lr. No. 1-14/2011/NTCA (Part I), dt. 2.4.2014. The required details have been incorporated in the plan and the revised draft Tiger Conservation Plan is sent to NTCA, New Delhi for approval. The approval of NTCA has not been accorded so far.
TCP is under preparation	Fair			
TR has a relevant TCP	Good	✓		
TR has a comprehensive and relevant TCP	Very good			

*The scientific content and the participatory processes used in preparation of the TCP will be taken into account in assessing the quality of TCP.

2.2 Does the TR safeguards the threatened biodiversity values?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR does not safeguard the threatened biodiversity values.	Poor		Draft TCP (Plan for core, buffer and adjoining areas providing connectivity); Discussion with Field Director	As per draft TCP, West coast tropical wet evergreen forests, significant population of tigers, Asian elephants, lion-tailed macaques (LTM), Nilgiri tahr, and great hornbills, first time discovery of distinct plant species Musa 531cuminata (2 varieties), Garcinia cowa, six different fish species new from the area, unique amphibians Rhacophorus pseudomalabaricus, Nasikabatrachus sahayadrensis, shrews, new bat species, floral diversity – more than 2000 flowering plants, more than 120 species of orchids, 30 species of balsams, wild genetic resources of several crops of agricultural horticultural and medicinal importance, endemic/ endangered plant/ animal species, occurrence of rare and threatened wild animal species like Cochin forest cane turtle, king cobra etc., have been listed as biological values of ATR. These have been detailed in Chapter-7 dealing with Management Strategies, under the "Section 7.2.1. Zone plan for Unique Habitats". The safeguards for Tourism have been detailed out in "Section 7.3. Eco-Tourism". In chapter-8 dealing with Theme plans measures has been prescribed for Addressing Man-animal Conflicts (8.1), Animal population Management (8.2.1), Fire Protection (8.3), Wildlife monitoring protocol for Tiger, Co-Predator and prey species (8.4) and Monitoring for Vegetation, Elephant and other animals (8.5). Well established protection mechanism prescribed in Chapter-8 under "Security Plan (section 8.8 of draft TCP) is able to deal with the threats to biodiversity. These details are provided in remarks under item/ element no. 2.5 below.
TR safeguards a few threatened biodiversity values.	Fair			
TR safeguards a large number of threatened biodiversity values.	Good			
TR safeguards all threatened biodiversity values.	Very good	✓		

*Remarks need to elaborate on the kind of safeguards and how they work or are intended to work

2.3 Are stakeholders given an opportunity to participate in planning process?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little, if any opportunity for stakeholder participation in planning.	Poor		Draft TCP (Plan for core, buffer and adjoining areas providing connectivity); Documents provided by Field Director; Discussion with Field Director	<p>Stakeholders have been identified and are provided enough opportunities to participate in planning process.</p> <p>The Nature Conservation Foundation (NCF), working in Valparai, is carrying out scientific research in various management aspects such as:</p> <ul style="list-style-type: none"> • Monitoring of LTM • Monitoring of Nilgiri tahr • Monitoring of hornbills • Monitoring of fishes • Vegetation monitoring <p>These research findings and assessment reports have been taken into consideration and incorporated in the draft Tiger Conservation Plan.</p> <p>The tribal school at Topslip is being managed by involving Wildlife Wing Trust, an NGO. With the help of this NGO, facility of video conferencing is being used for the students to get best resource persons while sitting at Topslip.</p> <p>For conducting and monitoring eco-tourism activities, NGOs and NGLs have been involved.</p> <p>The private estate authorities, other departmental officials, media persons and politicians are also consulted in important management issues such as human-wildlife conflicts.</p>
Stakeholders participate in some planning.	Fair			
Stakeholders participate in most planning processes.	Good	✓		
Stakeholders routinely and systematically participate in all planning processes.	Very good			

*The result of participation must show in the field and not merely reported as a routine exercise.

2.4 Are habitat management programmes systematically planned, relevant and monitored, and contribute effectively to Tiger and other endangered species conservation?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Habitat management programmes are entirely adhoc.	Poor		Draft TCP (Plan for core, buffer and adjoining areas providing connectivity); Documents provided by Field Director; Discussion with Field Director	<p>The draft TCP provides details of various habitat management programmes which are required to safeguard different values of ATR. These have been detailed in Chapter-7 dealing with Management Strategies, under the "Section 7.2.1. Zone plan for Unique Habitats". The programmes include:</p> <ul style="list-style-type: none"> • Management of teak plantations • Management of eucalyptus plantations • Management of natural regeneration • Control of Invasive Alien Plant Species • Shola-Grassland Ecosystem Management • Restoration of Degraded Natural Forests • Management of Vayals • Management of Water Resources • Swamp Management • Habitat Enrichment Plan • Bamboo Flowering Management Plan • Conservation Plan for RET, Wild Relatives, Medicinal Plants • Lion-Tailed Macaque Management • Nilgiri Tahr Management • Grizzled Giant Squirrel Management • Hornbill Populations Management • Shola-grassland bird conservation <p>The management prescriptions provided for these programmes are scientific, based on scientific studies and field knowledge of officers. All biodiversity values are taken care of in these prescriptions.</p>
Limited planning and monitoring programmes are in place for habitat management.	Fair			
Habitat management programmes are generally planned and monitored.	Good			
Habitat management programmes are thoroughly planned and monitored.	Very good	✓		

*This assessment should be primarily based on habitat management programmes in relation to habitats for species that are threatened (IUCN categories), are habitat specialists, subjected to seasonal movements, wide ranging with emphasis on the breeding and rearing habitat and may include factors such as food, water, shelter (all

connotations).Habitat structure, composition, unique patches of vegetation and sensitive sites, sources of water and their distribution are integral. Corridors within buffer zone are critically important. For example, all riparian habitats. Have these been addressed? Is there a planning process in place? The management practices dealing with invasive species such as Lantana, Michania etc. would be examined.

2.5 Does the TR has an effective Protection Strategy (PS)* and Security Plan and Security Audit (SA) in place?

Assessment criteria*

Condition	Category*	(Tick ✓)	Reference document(s)	Remarks																				
TR has little or no PS and SA.	Poor		Draft TCP (Plan for core, buffer and adjoining areas providing connectivity); Documents provided by Field Director; Discussion with Field Director; Field Observations	<p>In draft TCP, a very detailed security plan has been incorporated in section 8.8, covering almost every possible aspect related to the security of ATR. Some of them will be implemented in due course of time. At present, ATR has a well developed system of protection based on proactive informer network and regular field patrolling through a well-knit web of anti-poaching camps. This result in timely detection of offences as well as prosecution of offenders. Some of the highlights of this system are:</p> <ul style="list-style-type: none">▪ Surprise raids and Monsoon patrolling▪ 37 well distributed Anti-Poaching Camps (APC) spread over in 6 Ranges with 140 Anti-Poaching Watchers equipped with weapons, binoculars, cell phones, wireless handsets, torches, etc.▪ Daily observation Register is being maintained in each APC and monthly reports submitted▪ The day to day patrolling activities are recorded in the Control Room at headquarters through wireless▪ Daily monitoring of tiger and co-predators through patrolling▪ Camera traps have been placed at vantage points to monitor the movement of tiger, other animals and also of the offenders▪ Highway patrolling is done along Pollachi – Valparai and Pollachi – Palakad Roads to monitor the movement of smugglers, poachers, etc.▪ Steps are taken by frontline staff to prevent entry of poachers from outside the State, following the receipt of information about possible entry of traditional poachers from Rajasthan belonging to the Bawariya community.▪ Persons possessing arms license under Arms Act and residing within 10 km. of the NP/WIS boundary have been registered under the provisions of Wildlifw (Protection) Act, 1972 and are frequently monitored.▪ The details of number of offences reported, arrests made, prosecution initiated and conviction achieved are as follows: <table><tr><th>Year</th><th>No. of cases</th><th>No. of accused</th><th>No.of accused convicted by court</th><th>No. of accused whose offence compounded</th></tr><tr><td>2011-12</td><td>237</td><td>388</td><td>--</td><td>366</td></tr><tr><td>2012-13</td><td>288</td><td>310</td><td>--</td><td>299</td></tr><tr><td>2013-14</td><td>373</td><td>384</td><td>15</td><td>336</td></tr></table> <ul style="list-style-type: none">▪ During last three years, out of total 1055 offence cases, 909 cases were disposed off and 146 remained pending as on 1-4-2014. Out of these 146, 35 cases pertains to wildlife related offences and 92 related to sandalwood offences.	Year	No. of cases	No. of accused	No.of accused convicted by court	No. of accused whose offence compounded	2011-12	237	388	--	366	2012-13	288	310	--	299	2013-14	373	384	15	336
Year	No. of cases	No. of accused			No.of accused convicted by court	No. of accused whose offence compounded																		
2011-12	237	388			--	366																		
2012-13	288	310			--	299																		
2013-14	373	384	15	336																				
TR has an adhoc PS and SA.	Fair																							
TR has a generally relevant PS and SA but is not very effective.	Good																							
TR has a comprehensive and very effective PS and SA.	Very good	✓																						

**This assessment takes inter-alia into account the nature of threats, the number and location of patrolling camps and foot and mobile patrolling, needs that relate to available manpower, terrain difficulties, practicability of area coverage, readiness to contain specific threats with necessary support and facilities. The constitution and functioning of Special Tiger Protection Force (STPF), Number of offences reported, arrests made, prosecution initiated and conviction achieved will be taken into account.*

2.6 Has the TR been effective in the mitigation of human-wildlife conflicts?

2.0

Has the TR been effective in the mitigation of human-wildlife conflicts?

Assessment criteria*																								
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks																				
Human-wildlife conflicts are significant but poorly addressed.	Poor		Draft TCP (Plan for core, buffer and adjoining areas	In Anamalai Tiger Reserve, human-wildlife conflict (HWC) situation is prevalent in most part of the Tiger Reserve. It is more pronounced and reported frequently in Valparai region, where elephant and leopard are conflict animals. In draft TCP, the issue of HWC has been dealt in detail as a separate theme plan. The highlights of management of HWC in ATR are: <ul style="list-style-type: none">♦ Round the clock toll free number has been installed in the office of the Field Director at Pollachi and also another number at Rottikadai of Valparai to enable the public to convey messages regarding HWC.♦ A Rapid Action Team is also formed comprising of field staff. They are provided with one vehicle fitted with powerful search light, wireless mobile system, GPS, fire arm, fire crackers etc. Whenever they get message on elephant movement they rush to the spot and help the local public. The toll free number is also installed here. A Disaster Management cum Anti-depredation center is also created by the department at Iyerpadi.♦ Anti-Depredation Squad alongwith 3 vehicles has been established at vantage points in Valparai area.♦ ATR with Nature Conservation Foundation is conducting awareness program in and around Valparai plateau♦ Early warning light and sound systems have been installed in Valparai area and an SMS is also sent to the group. This system is triggered by a missed call or by sending an SMS to the SIM card fixed in the system.♦ Proximity alarm system in about thirty locations will be installed which will detect elephant movement through a sensor and trigger light and sound warning system automatically.♦ E-surveillance camera has been installed to monitor live movement of man, elephant and other animals.♦ Staff have been trained in tackling HWC situation like driving strayed animals safely into the forest areas, tranquilizing equipments and relocating the problematic animals♦ Rapid Action Force is deployed with technical and safety system support to combat the human-wildlife conflicts♦ Police and local administration is very supportive during HWC situations.♦ Due to various mitigation measure, a downward trend in HWC cases is observed <table><tr><th>Year</th><th>No. of HWC Cases</th></tr><tr><td>2011-12</td><td>113</td></tr><tr><td>2012-13</td><td>126</td></tr><tr><td>2013 -14</td><td>46</td></tr></table> <ul style="list-style-type: none">♦ Adequate compensation for affected people is given as early as possible in accordance with the instruction of the state government. <table><tr><th>Year</th><th>No. of Cases</th><th>Amount in Lakhs</th></tr><tr><td>2011-12</td><td>85</td><td>15.60</td></tr><tr><td>2012-13</td><td>88</td><td>25.35</td></tr><tr><td>2013-14</td><td>35</td><td>6.36</td></tr></table>	Year	No. of HWC Cases	2011-12	113	2012-13	126	2013 -14	46	Year	No. of Cases	Amount in Lakhs	2011-12	85	15.60	2012-13	88	25.35	2013-14	35	6.36
Year	No. of HWC Cases																							
2011-12	113																							
2012-13	126																							
2013 -14	46																							
Year	No. of Cases	Amount in Lakhs																						
2011-12	85	15.60																						
2012-13	88	25.35																						
2013-14	35	6.36																						
TR has been able to mitigate few human-wildlife conflicts.	Fair		providing connectivity); Documents provided by Field																					
TR has been able to mitigate many human-wildlife conflicts.	Good		Director; Discussion with Field																					
TR has been effective in mitigating all human-wildlife conflicts.	Very good	✓	Director; Field Observations																					

				♦ Time taken in payment of HWC death cases:			
				Year	Within 2 days	Within 1 Month	Within 2 Month
				2011-12	3		
				2012-13	2	3	
				2013-14			1

***The assessment will take into account the number of incidences reported and payment of compensation made and its timeliness.**

2.7 Is the TR integrated into a wider ecological network / landscape following the principles of the ecosystem approach?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR not integrated into a wider network / landscape.	Poor		Draft TCP (Plan for core, buffer and adjoining areas providing connectivity); Documents provided by Field Director; Discussion with Field Director;	<p>The Anamalai Tiger Reserve falls within the Western Ghats mountain chain of South West India, a region designated as one of 25 Global Biodiversity Hotspots. The TR has important connectivity value of ATR in wider Western Ghat Landscape. The following 7 important corridors have been identified for gaur, elephant and larger carnivores:</p> <p>(1)Navamalai Corridor near Monkey falls, (2)Punachi Corridor, (3)Waterfall corridor, (4)Siluvaimedu corridor, (5)Sethumadai – Nemmara corridor, (6)Nadu Ar – Sholayar riverine system and (7)Forest fragment connectivity</p> <p>To improve habitat connectivity for LTM within ATR, an extent of 208.764 ha. of private estate has been identified for land acquisitionthe.</p> <p>To secure vital corridors for elephants and other bigger mammals about 15048.44 Ha. of forest areas from Kodaikanal and Dindigul division adjacent to ATR has been included in the Buffer Zone vide notification issued by Government of Tamil Nadu in GO (Ms.) No 199 E& F dt.13.08.2012.</p> <p>To maintain the sensitive corridors in the Anamalai – Parambikulam landscape, joint patrolling interstate coordination meetings are being conducted periodically.</p> <p>1414.142 ha of leased area given to TANTEA has been identified as unutilized land and the land has been taken back from the user agency for elephant corridor.</p> <p>However, there is problem with corridors especially for elephants at Valparai Plateau which is broken because of tea estates and also leads to lot of man-animal conflicts.</p> <p>A systematic plan for management of the corridors has been drawn in the corridor plan.</p>
Some limited attempts to integrate the TR into a network / landscape.	Fair			
TR is generally quite well integrated into a network / landscape.	Good	✓		
TR is fully integrated into a wider network/ landscape.	Very good			

***Assessment needs to consider the scope of opportunities on the landscape scale that exist. Consider whether any attempts have been made and what are these? Have all the important corridors been identified? What actions are planned / implemented for their security? Have the Forest Working Plans and Forest Development Corporation Plans within the identified landscapes taken cognizance of such new requirement? These should have been reflected in TCPs. Is there is any effort to rationalize landuse around TR? Is any effort being made to plan and use 'Smart Green Infrastructure'?**

3. Inputs

3.1 Are personnel adequate, well organized and deployed with access to adequate resources in the Tiger Reserve (TR)*?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Few, personnel explicitly allocated but poorly supported for TR management.	Poor		Draft TCP (Plan for core, buffer and adjoining areas providing connectivity); Documents provided by Field Director; Discussion with Field Director;	The present staff strength available for protection of ATR is not adequate. There are vacancies in various categories of frontline staff; namely Forest Guard – 44 out of 98 (45%), Forester – 24 out of 45 (53%) and Forest Watcher – 17 out of 56 (30%). Overall, out of total 359 sanctioned posts in all staff categories, 119 posts are vacant which amounts to 33%. There are several vacancies in the ministerial staff as well which causes difficulty in day-to-day functioning of the office. Out of 129 front line staff 52 (40%) are above 50 years and 43 (33%) are between 40 to 50 years. In draft TCP, creation of 133 new posts under 35 different categories of staff has been proposed which include inter-alia frontline and ministerial staff. However, instructions have been issued by competent authority to fill up 20 posts of Forest Guard by direct recruitment. The process of recruitment has been initiated. A proposal has also been submitted to Principal Chief Conservator of Forests (Head of Forest Force) for creation of one new Range, 5 sections and 26 beats. As a stop-gap measure to overcome the shortage of workforce, the ATR Authorities has engaged sufficient number tribal youths as Anti-Poaching Watchers, Anti-Depredation Squad members, manpower to control tourism, elephant <i>mahaout</i> and <i>cavady</i> etc.
Some personnel explicitly allocated for TR management but not adequately supported and systematically linked to management objectives.	Fair	✓		
Some personnel with fair support explicitly allocated towards achievement of specific TR management objectives.	Good			
Adequate personnel appropriately supported and explicitly allocated towards achievement of specific TR management objectives.	Very good			

*This assessment should inter-alia be based on number of personnel allocated for attainment of TR objectives at the Range, Round, Beat and Patrolling camps levels or as relevant to the needs (sanctioned posts vis- a- vis existing personnel and needs beyond the sanctioned strengths. It is possible that posts have last been sanctioned several years back that do not now account for the current needs)

3.2 Are resources (vehicle, equipment, building etc.) adequate, well organized and managed with desired access?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Few, if any, resources explicitly allocated for TR management.	Poor		Documents provided by Field Director; Discussion with Field Director;	The TR has 11 lorry/ buses/ vans, 21 Jeeps/cars and 5 motor bikes. The number of buildings in the TR is reported to be 245. Wireless net work includes 22 base sets, 11 mobile sets and 7 walkie talkies. There are also 245 camera traps, 66 range finders, 76 GPS instruments, 50 binoculars, 65 compass, 14 digital cameras, 2 metal detectors and some other equipments. Arms include 12 nos. .315 Rifle, 7 nos. 410 Musket, 3 nos.12 Bore DBBL Gun, 19 nos. 7.62 Rifle, 4 nos. .303 Rifle, 7 nos. Glock 17 Pistol and 3 nos. DBBL guns. Thus vehicles, buildings, equipments and guns etc., are adequate in ATR. All these resources have been properly deployed and utilized for achieving management objectives of ATR.
Some resources explicitly allocated for TR management but not systematically linked to management objectives.	Fair			
Some resources explicitly allocated towards achievement of specific TR management objectives.	Good			
Adequate resources explicitly allocated towards achievement of specific TR management objectives.	Very good	✓		

* These form a variety of resources. These may be segregated into immovable (structures) and movable categories and each further may be considered under the essential and desirable categories. It is best to start with what are the minimum needs to attain each objective, what is available and manner of use/deployment. The proportions of the 'essentials' and 'desirables' along the importance gradient of objectives would serve as pointers for score categories. Specific remarks would be vitally important.

3.3 Are financial resources other than those of the State linked to priority actions and are funds adequate, released timely and utilized?

Released timely and utilized.

Assessment criteria*																																												
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks																																								
Resource allocation is adhoc, funds are inadequate and seldom released in time and not utilized.	Poor		Documents provided by Field Director; Discussion with Field Director	ATR receives adequate central funding in different Gol schemes. The details of central funding received during last three years is given below: <div>(Rupees in Lakhs)</div> <table><tr><th>Year</th><th>Name of the scheme</th><th>Allotment</th><th>Utilisation</th></tr><tr><td rowspan="4">2011-12</td><td>Project Tiger</td><td>341.84</td><td>290.70</td></tr><tr><td>Project Elephant</td><td>4.94</td><td>4.94</td></tr><tr><td>WGDP</td><td>28.340</td><td>28.340</td></tr><tr><td>Intensification of Forest Management</td><td>6.170</td><td>6.170</td></tr><tr><td rowspan="3">2012-13</td><td>Project Tiger</td><td>246.684</td><td>239.262</td></tr><tr><td>Project Elephant</td><td>10.448</td><td>8.440</td></tr><tr><td>WGDP</td><td>24.442</td><td>24.442</td></tr><tr><td rowspan="2">2013-14</td><td>Project Tiger</td><td>526.66</td><td>421.32</td></tr><tr><td>Project Elephant</td><td>6.45</td><td>6.45</td></tr><tr><td></td><td></td><td></td><td>WGDP</td><td>11.095</td><td>11.095</td></tr></table>	Year	Name of the scheme	Allotment	Utilisation	2011-12	Project Tiger	341.84	290.70	Project Elephant	4.94	4.94	WGDP	28.340	28.340	Intensification of Forest Management	6.170	6.170	2012-13	Project Tiger	246.684	239.262	Project Elephant	10.448	8.440	WGDP	24.442	24.442	2013-14	Project Tiger	526.66	421.32	Project Elephant	6.45	6.45				WGDP	11.095	11.095
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			WGDP	11.095	11.095																																							
Some specific allocation for management of priority action. Funds are inadequate and there is some delay in release, partially utilized.	Fair																																											
Comprehensive planning and allocation that meets the most important objectives. Generally funds released with not much delay and mostly utilized.	Good	✓																																										
Comprehensive planning and allocation of resources for attainment of most objectives. Funds generally released on-time and are fully utilized.	Very good																																											

*Obtain details of funds released by NTCA and their utilization by TR in the last 3 years and indicate them under 'Remarks'. Also comment on the problems associated with fund allocations and their utilization.

3.4 Are financial resources from the State linked to priority action and funds adequate, timely released and utilized for the management of Tiger Reserve?

utilized for the management of Tiger Reserve.

Assessment criteria*																		
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks														
Resource allocation is adhoc, funds are inadequate and seldom released in time and not utilized.	Poor		Documents provided by Field Director;	<div>The details of funds released and utilized under different schemes of the State Government is as below: <div>(Rupees in lakhs)</div><table><tr><th>Year</th><th>Name of the scheme</th><th>Allotment</th><th>Utilisation</th></tr><tr><td>2011-12</td><td rowspan="3">27 different schemes of the State Government</td><td>472.595</td><td>471.685</td></tr><tr><td>2012-13</td><td>200.807</td><td>196.269</td></tr><tr><td>2013-14</td><td>196.269</td><td>195.975</td></tr></table><div>These schemes supplement the Gol schemes and as such adequate funds remain available for all management activities.</div></div>	Year	Name of the scheme	Allotment	Utilisation	2011-12	27 different schemes of the State Government	472.595	471.685	2012-13	200.807	196.269	2013-14	196.269	195.975
Year	Name of the scheme	Allotment	Utilisation															
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2013-14		196.269	195.975															
Some specific allocation for management of priority action. Funds are inadequate and there is some delay in release, partially utilized.	Fair		Discussion with Field Director;															
Comprehensive planning and allocation that meets the most important objectives. Generally funds released with not much delay and mostly utilized.	Good																	
Comprehensive planning and allocation of resources for attainment of most objectives. Funds generally released on-time and are fully utilized.	Very good	✓																

*Obtain details of funds released by State and their utilization by TR in the last 3 years and indicate them under 'Remarks'. Also comment on the problems associated with fund allocation and their utilization.

3.5 What level of resources are provided by NGOs?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
NGOs contribute nothing for the management of the TR.	Poor		Documents provided by Field Director; Discussion with Field Director;	The NGOs are involved in various awareness activities related to conservation and protection of ATR and their cooperation in providing resources are adequate. There are mainly 11 NGOs, starting from local to national to international levels, which are actively supporting ATR Management in research, awareness creation, plantation activities, micro-planning, providing resources (such as vehicles, first aid kits, torches, back packs, steel almirahs, winter jockets, cycles etc.), tribal welfare programmes, training for employment generation activities, use of plastic waste training, organization of medical camps, e-learning arrangement in Tribal School at Topslip, skill development training for eco-tourism, camera trap deployment, wireless network establishment, participation in census estimation data collection, plastic-free campaigns etc.
NGOs make some contribution to management of the TR but opportunities for collaboration are not systematically explored.	Fair			
NGOs contributions are systematically sought and negotiated for the management of some TR level activities.	Good	✓		
NGOs contributions are systematically sought and negotiated for the management of many TR level activities.	Very good			

4. Process

4.1 Does the TR have manpower resources trained in wildlife conservation for effective TR management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No trained officers and frontline staff in the TR.	Poor		Documents provided by Field Director; Discussion with Field Director;	No frontline staff and no officer presently posted in ATR have any formal training in wildlife management. However, the field staff are imparted periodical training related to wildlife matters at the Forestry Training College at Vaigaidam and Tamil Nadu Forest Academy at Coimbatore. During 2013-14, training center has been established in Valparai to impart various trainings to the Field staff and different stakeholders of ATR. In 2013-14, staffs were provided training of 1 to 3 day duration on Wildlife (Protection) Act, 1972, weapon training, anti-poaching activities, wildlife management, population estimation of wild animals, captive elephant management, forest fire disaster management, tranquilization and Phase-IV monitoring. A concrete staff training programme on issues related to various management aspects of ATR should be prepared by carrying out Training need assessment in consultation with Tamilnadu Forest Academy as mentioned in section 7.3.45 of draft TCP.
Some trained officers and few trained frontline staff, posted in the TR.	Fair	✓		
All trained officers and fair number of trained frontline staff posted in the TR.	Good			
All trained officers and most of the trained frontline staff is posted in the TR.	Very good			

*Indicate % of trained staff in various categories. The number and thematic areas of the 'Internal Training' programmes organized in the TR in the last 3 years may be taken into account. Has the TR prepared a 'Staff Development Plan'? Is it being implemented?

4.2 Is TR staff management performance linked to achievement of management objectives?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No linkage between staff management performance and management objectives.	Poor		Documents provided by Field Director; Discussion with Field Director; Field observations	Performance evaluation at annual interval is being carried out for the front line staff on the basis of objectives achieved and other criteria as per service rule. The promotions are mostly on the basis of seniority subjected to rejection of unfit. Confidential reports of the staff are used to judge their performance and promotion is linked to performance and fulfillment of the other eligibility criteria for the post, especially the number of years spent in the current post. However, there is state level Chief Minister Award scheme for outstanding devotion to duty and by GO. dated 04.06.2012, the following staff got the award: (1)S. Arokkiya Raj Xavier, FRO; (2)K. Ganesh Ram,FRO; (3)S.Thangavel,Forester; (4)R. Sivakumar, Forest Guard
Some linkage between staff management performance and management objectives, but not consistently or systematically assessed.	Fair	✓		
Management performance for most staff is directly linked to achievement of relevant management objectives.	Good			
Management performance of all staff is directly linked to achievement of relevant management objectives.	Very good			

4.3 Is there effective public participation in TR management and does it show in making a difference?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no public participation in TR management.	Poor		Information provided by Field Director; Office records; Discussion with Field Director; Field observations	During 2012-13 and 2013-14, the estimation of wildlife population had been carried out by involving NGOs, doctors, engineers, teachers, students etc., as volunteers (60 and 74 participants respectively). Participation of public is also ensured in activities like eco-awareness programme, wildlife week celebration, World Environment Day and World Earth Day Celebrations. NGOs, students of schools and colleges are also involved in creating awareness messages from time to time. One NGO is involved in imparting E-education and hostel facilities for Tribal Children and they are satisfied and as FD reported that because this tribal communities are very co-operative in TR management and in providing the informations against poacher/illicit fellers etc. These activities have resulted better protection of the Reserve and created awareness in the public However, there still is scope to further enhance public participation in ATR management.
Opportunistic public participation in some of the relevant aspects of TR management.	Fair			
Systematic public participation in most of the relevant aspects of TR management.	Good	✓		
Comprehensive and systematic public participation in all important and relevant aspects of TR management.	Very good			

*The involvement of NGOs/ NGIs in population estimation may be taken into account)

4.4 Is there a responsive system for handling complaints and comments about TR management?

Assessment criteria																
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks												
Ad-hoc approach to handling complaints.	Poor		Information provided by Field Director; Office records; Discussion with Field Director;	For handling and redressal of complaints and receiving feedback different registers such as CM cell petition register, petition register, suggestion register, RTI register and suggestion box are systematically maintained. Deputy Directors of ATR are responsible for enquiry and disposal of complaints/ suggestions. Year-wise details of petitions received and disposed is as under: <table border="1"><thead><tr><th>Year</th><th>Petitions Received</th><th>Petitions Disposed</th></tr></thead><tbody><tr><td>2011</td><td>39</td><td>39</td></tr><tr><td>2012</td><td>65</td><td>65</td></tr><tr><td>2013</td><td>53</td><td>53</td></tr></tbody></table> In addition to this system, toll free helpline phone numbers have also been installed to address public grievances. Suggestions and feedback of visitors are considered and implemented. Registers is often checked by District Forests Officer and Deputy Director and Chief Conservator of Forests and Field Director during inspection. On the basis of suggestions, some of the improvement includes – (a) Usage of CFL bulb and solar lights in core area, (b)not allowing any tourists to venture in to the forest without guide, (c) incorporation in Eco- tourism plan of TCP.	Year	Petitions Received	Petitions Disposed	2011	39	39	2012	65	65	2013	53	53
Year	Petitions Received	Petitions Disposed														
2011	39	39														
2012	65	65														
2013	53	53														
Complaints handling system operational but not responsive to individual issues and with limited follow up.	Fair															
Coordinated system logs and responds effectively to most complaints.	Good	✓														
All complaints systematically logged in coordinated system and timely response provided with minimal repeat complaints.	Very good															

*Does the TR maintain 'Suggestions Register'? What actions are taken to deal with suggestions?

4.5 Does TR management addresses the livelihood issues* of resource dependent communities, especially of women?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No livelihood issues are addressed by TR management.	Poor		Information provided by Field Director; Office records; Discussion with Field Director;	<p>ATR Management is sensitive towards addressing the livelihood issues of communities with forest dependencies.</p> <p>During the last 3 years employment opportunity provided by ATR to the tribals in man days are as under:</p> <p>a. 2011-12 - 53000 (Total 81100)</p> <p>b. 2012-13 - 55000 (Total 83700)</p> <p>c. 2013-14 - 60500 (Total 91800)</p> <p>During 2014, comprehensive training on utilization of coconut fibre was provided to 20 women selected from Karattupathy tribal village by TRIFED with provision of stipend.</p> <p>These women were also selected for training to make toys and other items.</p> <p>70 tribal youths have been employed as Anti-Poaching Watchers</p> <p>Employment opportunities are provided under</p>
Few livelihood issues are addressed by TR management.	Fair			
Substantial livelihood issues are addressed by TR management.	Good	✓		
Livelihood issues of resource dependent communities especially of women are addressed effectively by TR managers.	Very good			

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
				<p>NREGA Scheme to 1050 tribals of 18 settlements. Skill development programmes are regularly conducted for the tribal settlements through ATR and other line departments.</p> <p>Eco-development Committees for tourism have been constituted in 10 tribal settlements providing livelihood opportunities to 1678 persons.</p> <p>From among tribal settlements of the Tiger Reserve tribal youths are trained in the natural history of Anamalai Tiger Reserve, Nature interpretation, art of communication, manners and etiquettes. These tribals are engaged as guide and accompany the visitors during safari trekking.</p> <p>E-education to Tribal Children and good arrangement for staying and fooding to the children.</p> <p>Maintenance of hospital complemented with the deployment of a qualified doctor / nurses equipped with basic facilities and basic medicines for the local people, staff and visitors</p>

***The number of mandays generated in the last 3 years may be taken into account. Are funds received from District Agencies and other sources? Provide details of funds received in last 3 years.**

4.6 Has the TR planned and implemented the voluntary 'Village Relocation' from the Core/ Critical Tiger Habitat (CTH)?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No planning and no implementation	Poor		Draft TCP 7.2.2, Copy of letter No. E2/ 7562/ 2008, dt. 13.07. 2010 to NTCA and discussion with Field Director;	A zone plan (Village Relocation) has been incorporated in draft TCP for voluntary relocation of around 1738 families of 33 tribal settlements located inside the core of ATR. Accordingly, a tentative proposal for relocation of 1 such settlement has been submitted to NTCA as per relocation guidelines. There is need of sincere efforts in this direction to make significant progress.
Plans have been made but no implementation	Fair	✓		
Plans have been made and some implementation is in progress	Good			
Plans have been made and are being actively implemented/ no human habitation in the CTH	Very good			

***Assessment will look into the village relocation planning process including availability of manpower, financial resources and NGO support, if any. Is there a mechanism to address the complaints received in respect of relocation process? Effort must be made to assess post-relocation success or otherwise.**

5. Output

5.1 Is adequate information on TR management publicly available?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no information on TR management publicly available.	Poor		Relevant document	<p>The following websites are available in public domain on management and status of the Anamalai Tiger Reserve</p> <ol style="list-style-type: none"> 1. www.anamalaitygerreserve.com 2. www.forests.tn.nic.in 3. www.projecttiger.nic.in <p>In addition to that the newsletters also published about Anamalai Tiger Reserve periodically.</p> <p>Posters about importance of species one displayed at strategic location. Forest Helpline board are displayed in public</p> <p>Number of pamphlets and leaflets are available in reception center at Pollachi and Topslip.</p>
Publicly available information is general and has limited relevance to management accountability and the condition of public assets.	Fair			
Publicly available information provides detailed insight into major management issues and condition of public assets.	Good	✓		
Comprehensive reports are routinely available in public domain on management and condition of public assets.	Very good			

5.2 Are visitor services and facilities appropriate and adequate?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Visitor services and facilities do not exist.	Poor		File No. 3433 / 2013 / D, (P.No.336)	<p>Tourism is confined to certain pockets like Topslip, Monkey falls within the Reserve. Only controlled and regulated tourism is allowed. Apart from Top Slip other tourism destinations of ATR are: - Attakatti, Aliyar, Thirumoorthy, Chinnar, Valparai, Manjampatti, Manambolli, varagaliar etc.</p> <p>Top Slip Medicinal Plant Conservation Area (MPCA) is one of the eleven centers in Tamill Nadu. A demo garden, an interpretation centre, a nature trail and medicinal plant nursery has been formed displaying about 130 rare, endangered and threatened floras of Top Slip and other MPCAs.</p> <p>Various Eco-Tourism Facilities in ATR are as under:-</p> <ul style="list-style-type: none"> • 24 Rest houses and Dormitory with 115 beds (inclusive of 7 Rest houses and 2 Dormitories in Topslip- accommodation for 74 persons) are available for for the stay of the touristsavailable for visitors to stay. • Advance and Current booking facilities over phone is available in the Reception centre at Pollachi and Topslip • Most of the Rest houses have been renovated and drinking water facilities are also provided • Centralized canteen is available for serving refreshment and food to the visitors • Two Elephant s are available for Elephant safari
Visitor services and facilities are very basic.	Fair			
Visitor services and facilities are monitored from time to time and are fairly effective.	Good			
Visitor services and facilities are conscientiously maintained, regularly upgraded and monitored for visitor satisfaction	Very good	✓		

				<ul style="list-style-type: none"> • Four vehicles consisting with 25 seats each are available for Vehicle Safari of visitors in the morning and evening hrs • Trekking in selected routes for the nature lovers and wildlife enthusiasts. Trekking route maps are available. • Tribals youths are engaged as guides after giving training to accompany the visitors during safari trekking • An Interpretation center in a spacious hall at the reception. It has a system called Jungle Symphony an audio visual presentation with pictures of various wild animals • Film shows are arranged for the visitors at interpretation center • Feedbacks from the visitors are also received on the quality of wilderness experience. • Visitor's complaints and suggestion registers are kept in Rest Houses and Reception Centre to record their feedback. • Brochures and leaflets with all information are being distributed to the visitors • Medical facilities are provided to the visitors in the Medical Health Center at Topslip • Wheel chair are provided to the visitors especially for Physically challenged and aged persons • A stretcher is kept in reception for emergency; similarly oxygen cylinder is also kept. • Eco-friendly garbage disposal is existing in tourist sports • The Local Panchyat has coordinated with the Tiger Reserve to clear the wastese on daily basis • 16 Nos Eco-Watchers, 16 Nos Eco-Sanitary Watchers and 14Nos of Vehicle and Trekking Guide are available for Tourism. <p>Precautionary measures are taken for the protection of TR from threats of Tourism.</p>
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**Include the existence and quality of visitor and interpretation centers, including skills and capabilities of personnel manning these, TR related publications, films, videos; arrangements of stay (including places serving refreshments and food owned and managed by TR), watch towers and hides including safety factors, vehicles assigned for visitors including riding elephants, if any and their deployment, drinking water, rest rooms, garbage disposal, attended and self-guided services in the field, visitor feedback on the quality of wilderness experience.*

5.3 Are research / monitoring related trends systematically evaluated and routinely reported and used to improve management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no systematic evaluation or routine reporting of trends.	Poor		List of Research studies undertaken from 2006 onwards , Draft TCP Sections: 7.2.1.12, 7.2.1.14, 8.5.1.2 and 8.5.1.6; Discussion and	From 2006 to 2013 the number of permission granted for Research and studies by CWLW was 55; out of which 12 permissions were in last 3 years (2011 to 2013). It was reported that on Completion of the Research studies, feedback report are received and reviewed and follow up action are taken wherever necessary.
Some evaluation and reporting undertaken but neither systematic nor routine.	Fair			The research reports received by the Field Director is said to have been analyzed and some of the findings of research projects relating to conservation of LTM, Hornbill, Birds communities Shola Grass land and Fishes have been incorporated in the relevant chapter of the Tiger Conservation Plan.
Systematic evaluation and routine reporting of trends undertaken.	Good			In partnership with tea and coffee plantation companies to restore degraded sites in twelve rainforest fragments lying within their estates more than 160 native tree and liana species were
Systematic evaluation and				

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
comprehensive reporting of trends undertaken and attempts made at course corrections as relevant.	Very good	✓	documents from FD	<p>raised in a rainforest plant nursery, planted out and monitored in this restoration effort. (source NCF)</p> <p>A study on climbers has resulted in the documentation of curative properties of 55 climbers belonging to 45 genera and distributed over 21 families (Source Divya K.R).</p> <p>As a part of Phase IV monitoring, prey base density estimation of tiger leopard and wild dog for summer season census was conducted between 20th May 2013 and 24th May 2013. From the data analysis trends are determined.</p> <p>Anamalai Tiger Reserve is designated by NTCA to implement the M-StrIPES programme. M-StrIPES training sponsored by NTCA on protection aspects have been imparted to the staff through the Wildlife Institute of India, Dehradun. However the implementation of the programme is only partial so far.</p> <p>Spatial analysis of Fire has minimized the fire hazards due to man power engaged in vulnerable areas.</p> <p>By habitat improvement programmes though identification of sites to create water body at vantage points and clearing invasive species in selective sites with monitoring, efforts are being made to stabilise/ increase the population of wild animals.</p> <p>The monitoring data from daily patrolling, M-Stripes and Anti Poaching Camps have been used in analysis of vulnerability of areas prone for Poaching, Ganja cultivation, Sandal wood felling etc. and the measures taken on that basis has resulted in total curtailment the illicit activities.</p>

***Not all TRs attract projects and researchers and with exceptions, little research takes place on the TRs own steam because of systemic limitations. However, monitoring of some critical issues is expected e.g. population of tiger, co-predators and prey with insights into their demography and distribution (some opportunistic sampling by sightings, signs and spatial distribution during assessment would be extremely useful in terms of expert impression and as a pulse), monitoring incidence of livestock grazing, fires, weeds, sources of water, a variety of illegal activities typically associated with the reserve, wildlife health (e.g. epidemics, immunization of livestock) regeneration and change in vegetation, visitors and their activities, offence cases, ex-gratia payments etc. Efforts must be made to assess the planning and implementation of Phase-IV monitoring protocols and the success of implementation of M-Stripes (wherever applicable). Are the 'Sykes and Horill' monitoring plots maintained and data analyzed?**

5.4 Is there a systematic maintenance schedule and funds in place for management of infrastructure / assets?

Assessment criteria																											
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks																							
No systematic inventory or maintenance schedule.	Poor		Asset Register; Register of Building, Roads, Check Dam and Percolation Pond, etc.; Information from FD	<div>Every year Annual Proposal has been forwarded to the competent authority under State and Centrally sponsored scheme for the maintenance and management of infrastructure / Assets. The expenditure in last 3 years are as under:</div> <table><tr><th rowspan="2">Name of Component</th><th colspan="3">Expenditure incurred</th></tr><tr><th>2011-12</th><th>2012-13</th><th>2013-14</th></tr><tr><td>Maintenance of Buildings (Non Plan)</td><td>4.95</td><td>5.55</td><td>7.83</td></tr><tr><td>Maintenance of Roads and Bridges (Non-Plan)</td><td>3.52</td><td>9.38</td><td>10.08</td></tr><tr><td>Maintenance of Buildings (Project Tiger)</td><td>16.75</td><td>21.00</td><td>58.25</td></tr><tr><td>Maintenance of Roads and Bridges (Project Tiger)</td><td>8.80</td><td>0.00</td><td>2.00</td></tr></table>	Name of Component	Expenditure incurred			2011-12	2012-13	2013-14	Maintenance of Buildings (Non Plan)	4.95	5.55	7.83	Maintenance of Roads and Bridges (Non-Plan)	3.52	9.38	10.08	Maintenance of Buildings (Project Tiger)	16.75	21.00	58.25	Maintenance of Roads and Bridges (Project Tiger)	8.80	0.00	2.00
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Inventory maintenance is adhoc and so is the maintenance schedule.	Fair																										
Systematic inventory provides the basis for maintenance schedule but funds are inadequate.	Good	✓																									

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Systematic inventory provides the basis for maintenance schedule and adequate funds are made available.	Very good			Accordingly receipt of the fund is utilized and systematic inventory is carried out in the Registers like, Stores, Roads, Buildings, Wells, etc., Further the annual maintenance are taken care of. Infrastructures like, Roads, Buildings, Check Dams, Percolation Pond, etc., have been updated upto 2013-14. In addition, separate Assets registers are also maintained.

6. Outcomes

6.1 Are populations of threatened species declining, stable or increasing?

Assessment criteria*																												
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks																								
Populations of key threatened/ endangered species are declining.	Poor		Census details for last three years provided by FD.	Due to varied climatic, edaphic factors and the range of rain fall the Tiger Reserve supports varied forest habitats. This in turn supports varieties of floral and faunal wealth which has direct bearing on the viable population of the Tiger and its co-predators. Hence this Tiger Reserve has potential to hold more number of threatened species with viable space for Tiger population.																								
Some threatened/ endangered species populations declining, some are increasing, most others are stable.	Fair			Bird communities are useful indicators of habitat alteration. Anamalai Tiger Reserve has diverse bird communities including 13 of the 16 endemic of the Western Ghats. Much of the diversity, especially endemics, occurs within the rain forest areas of Anamalai Tiger Reserve.																								
Several threatened/ endangered species populations increasing, most others are stable.	Good	✓		Mammals' persistence and abundance in rainforest remnants of Valparai. The study shows in a fragmented landscape with relatively low hunting pressures a majority of mammals continue to persist and maintain population density which may even increase over time.																								
All threatened/ endangered species populations either increasing or stable.	Very good			The population of some threatened species estimated in last 4 years is mentioned below :- <table><tr><th>Species Name</th><th>2011</th><th>2012</th><th>2013</th><th>2014</th></tr><tr><td>NilgiriTahr</td><td>166</td><td>250</td><td>300</td><td>310</td></tr><tr><td>Nilgiri Langur</td><td>4200</td><td>4000</td><td>4300</td><td>4500</td></tr><tr><td>Lion tailed macaque</td><td>308</td><td>350</td><td>450</td><td>523</td></tr><tr><td>Grizzled Giant Squirrel</td><td>57</td><td>63</td><td>75</td><td>84</td></tr></table>	Species Name	2011	2012	2013	2014	NilgiriTahr	166	250	300	310	Nilgiri Langur	4200	4000	4300	4500	Lion tailed macaque	308	350	450	523	Grizzled Giant Squirrel	57	63	75
Species Name	2011	2012	2013	2014																								
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Nilgiri Langur	4200	4000	4300	4500																								
Lion tailed macaque	308	350	450	523																								
Grizzled Giant Squirrel	57	63	75	84																								
				From above it appears that populations of several threatened/ endangered species are increasing, most others are stable. However, scientific and systematic evaluation of all threatened/ endangered species must be carried out at regular intervals.																								

***This needs to practically relate to the natural ecosystem potential rather than being driven merely by numbers and visibility. The assessment score may be elaborated under remarks.**

6.2 Is the population of tigers showing a declining, stable or increasing trend?

Assessment criteria																																				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks																																
Population of tiger is showing a declining trend	Poor		Draft TCP; Documents provided by Field Director; Discussion with Field Director and Field observations	<p>The various measures for improvement and development of favorable habitat is said to have increased the herbivores population considerably. In turn the carnivores especially the population of the key species, Tiger also has been increased. This has been documented by capturing in camera traps. Separate ID has been given to each individual tiger captured in camera traps. At present there are 4 breeding tigress which were directly sighted by staff. One tigress with three as two tigresses with two cubs and one with one cub. Reports are available. This shows the better trend due to strict policing and habitat improvement.</p> <p>The results of estimation in last 3 years are as under:-</p> <p>Density per 100 km²:</p> <table><tr><th>Species</th><th>2011</th><th>2012</th><th>2013</th></tr><tr><td>Tiger</td><td>1.6</td><td>1.8</td><td>2.8</td></tr><tr><td>Panther</td><td>10.43</td><td>12</td><td>15</td></tr><tr><td>Wild dog</td><td>8.3</td><td>10</td><td>12</td></tr></table> <p>Population estimate in numbers:</p> <table><tr><th>Species</th><th>2011-12</th><th>2012-13</th><th>2013-14</th></tr><tr><td>Tiger</td><td>15</td><td>18</td><td>26</td></tr><tr><td>Panther</td><td>100</td><td>115</td><td>130</td></tr><tr><td>Wild dog</td><td>80</td><td>75</td><td>90</td></tr></table> <p>From the figures of phase IV monitoring it is evident that the increase in no. of tigers in the ATR is 73 % in 2 years and 44% in last year. This is a significant increase.</p>	Species	2011	2012	2013	Tiger	1.6	1.8	2.8	Panther	10.43	12	15	Wild dog	8.3	10	12	Species	2011-12	2012-13	2013-14	Tiger	15	18	26	Panther	100	115	130	Wild dog	80	75	90
Species	2011	2012			2013																															
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Tiger	15	18	26																																	
Panther	100	115	130																																	
Wild dog	80	75	90																																	
Population of tiger is stable	Fair																																			
Population of tiger is showing an increasing trend	Good																																			
Population of tiger has significantly increased	Very god	✓																																		

**This assessment should be based in the context of available population estimate (2012-13) and the outcomes of the currently ongoing Phase-IV analyses.*

6.3 Have the threats+ to the TR being reduced / minimized? Or is there an increase?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Threats to the TR have not abated but have enhanced.	Poor		Draft TCP; Documents provided by Field Director; Discussion with Field Director and Field observations	<p>The threats like Man-animal conflict, Forest Fire, Poaching, illicit cutting of trees, interferences of human and cattle into the tiger reserve and ganja cultivation have been totally controlled.</p> <p>The invasive species <i>Lantana camera</i>, <i>Chromolia odorata</i>, <i>Prosopis juliflora</i> etc., have been removed to allow the natural under fodder growths. In all areas the herbivore population is sighted commonly. Further most of the water bodies have been developed by construction of Check dams, Percolation pond, Bore wells and de-silting check dams. In addition, drinking water facilities have been created by transporting water to the vantage points during summer season. The various measures for improvement and development of favorable habitat is said to have</p>
Some threats to the TR have abated, others continue their presence	Fair			
Most threats to the TR have abated. The few remaining are vigorously being addressed	Good	✓		

All threats to the TR have been effectively contained and an efficient system is in place to deal with any emerging situation	Very good		<p>increased the herbivores population considerably. In turn the carnivores especially the population of the key species, Tiger also has been increased. This has been documented by capturing in Camera traps. At present there are 4 breeding tigress which were directly sighted by staff. One tigress with three as two tigresses with two cubs and one with one cub. This shows the better trend due to strict policing and habitat improvement.</p> <p>The Rescue and Disaster Management Centre have been setup in Valparai to tackle the emergence situation like Human-Animal Conflict, Fire disaster and disasters due to natural calamities. Further the proposal for disasters and risk Management plans have also been drawn and submitted to the Principal Chief Conservator of Forests to implement throughout the state especially protected areas.</p> <p>In Addition to that a separate contingency plan to meet emergency situation on Human-Animal Conflict also drawn and included in the TCP.</p> <p>Disaster plan on Fire is already available. Disaster plan for drought, nature calamities, and epidemic is under process and it will be included in the TCP.</p> <p>Fire incidents in last three years:</p> <table><tr><td>2012</td><td>44 Nos</td><td>323.81 Ha</td></tr><tr><td>2013</td><td>17 Nos</td><td>140.42 Ha</td></tr><tr><td>2014</td><td>27 Nos</td><td>143.26 Ha</td></tr></table>	2012	44 Nos	323.81 Ha	2013	17 Nos	140.42 Ha	2014	27 Nos	143.26 Ha
2012	44 Nos	323.81 Ha										
2013	17 Nos	140.42 Ha										
2014	27 Nos	143.26 Ha										

***Does the TR have a Disaster Risk Management Plan to deal with existing as well as emerging threats?**

6.4 Are the expectations of visitors+ generally met or exceeded?

Q.7. Are the expectations of visitors generally met or exceeded?

Assessment criteria																
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks												
Expectations of visitors generally not met.	Poor		Suggestion Register	<p>The Anamalai Tiger Reserve is conducting controlled Eco-tourism especially in Topslip area. Visitor's expectations are generally met by providing basic amenities in the Rest Houses.</p> <p>Detailed Eco-Tourism plan has been prepared keeping in view the direction of Supreme Court and NTCA guide lines in section 7.3 of TCP.</p> <p>The extent of tourism area identified is 5998.34 Ha., which constitutes 6.60% of the Core area and is within the 20% norms prescribed in the Guidelines.</p> <p>Carrying capacity of area has been determined in the plan and no. of vehicles has been fixed.</p> <p>Local Advisory Committee has been formed for Anamalai Tiger Reserve as per G.O. Ms. No.252, E&F (FR V) dept. dt. 7.11.2012.</p> <p>However, little has been done regarding involvement of EDCs for income generation through eco-tourism activities, as envisaged in the guide line. Although some proposals are in the plan they need to be more elaborative with immediate implementation.</p> <p>The no of tourist visiting in last 3 years are as under:</p> <table border="1"> <thead> <tr> <th>Category</th> <th>2011-12</th> <th>2012-13</th> <th>2013-14</th> </tr> </thead> <tbody> <tr> <td>Domestic</td> <td>6,72,760</td> <td>3,69,789</td> <td>5,83,171</td> </tr> <tr> <td>Foreign</td> <td>775</td> <td>127</td> <td>73</td> </tr> </tbody> </table>	Category	2011-12	2012-13	2013-14	Domestic	6,72,760	3,69,789	5,83,171	Foreign	775	127	73
Category	2011-12	2012-13			2013-14											
Domestic	6,72,760	3,69,789			5,83,171											
Foreign	775	127			73											
Expectations of many visitors are met.	Fair															
Expectations of most visitors are met.	Good	✓														
Expectations of all most all visitors are met.	Very good															

***What is the compliance status on Supreme Court/ NTCA Guidelines on Ecotourism in TRs?**

6.5 Are local communities supportive of TR management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Local communities are hostile.	Poor		Micro plan for TBGP Villages	Generally, local communities are supportive of the Tiger Reserve Management. In the past three years no untoward incidents have taken place by the local communities since the local communities in various groups like, Farmers, Estate labours, Merchants, etc., have been involved through the NGOs to support the Tiger Reserve Management. In this concept 5 cluster villages consisting of 28 villages have been consulted through their grama sabhas and they have implemented the tree cultivation programme in their lands to cover the Green Forest through the TBGP. Due to support from the local communities. a) Intensive Fire into the Forest totally under control. b) No poaching cases during last three years. c) No grazing inside the core area from the periphery villages. d) 37 VFC supporting to the Tiger Reserve Management. e) No encroachment during last three years.
Some are supportive.	Fair			
Most locals are supportive of TR management.	Good	✓		
All local communities supportive of TR management.	Very good			

**There could be many reasons for disenchantment. It could be real because of managerial neglect or the managerial efforts could be appropriate but there could be local elements/organizations who would like to keep the disaffection simmering for their own ulterior motives. Likewise success could be entirely because of the efforts of managers or they might be fortunate in striking partnerships with credible NGOs. Assessment may take the prevailing causes into account.*

7. MEE Score Card*

Framework Element Number	Framework Element Name	Number of Criteria (a)	Maximum Mark per question (b)	Total (a x b)	Marks obtained for the Element	Overall MEE Score and % age
1	Context	4	10	40	32.5	79.84%
2	Planning	7	10	70	62.5	
3	Inputs	5	10	50	40	
4	Process	6	10	60	37.5	
5	Outputs	4	10	40	35	
6	Outcomes	5	10	50	40	
Total		31		310	247.5	

**Efforts will be made by the NTCA-WII-MEE Team to address the issue of assigning 'differential' weightages to the 30 Assessment Criteria including 'normalization'.*

Assessment Criteria for Addressing Issues Relating to Climate Change & Carbon Capture in the Tiger Reserves (TRs)

1. *Additional Criteria on Climate Change: Is the TR being consciously managed to adapt to climate change?*

Condition	Category*	(Tick ✓)	Comment / Explanation	Next Steps
There have been no efforts to consider adaptation to climate change in management	Poor		A plan under the heading "Theme plan for mitigating the effect of climate change in Anamalai Tiger Reserve" has been provided in Draft TCP in section 8.9. Proposals has been submitted to the Principal Chief Conservator of Forests to Connecting protected areas though buffer zones of Kodaikanal and Dindugal Reserve Forests in to Anamalai Tiger Reserve since the corridors will allow species to shift ranges and improves resilience, enhancing climate change adaptation responses.	Detailed strategies have to be prescribed about, how to adapt management to predicted climate change as the prescriptions are too generalized. For clear cut strategy a detailed assessment of various adverse effects, likely to arise, has to be carried out. Guide lines should be issued at National Level for assessment of impacts and measures for adaptations so as to prepare specific plans and their integration with the TCP
Some initial thought has taken place about likely impacts of climate change, but this has yet to be translated into management plans	Fair			
Detailed plans have been drawn up about how to adapt management to predicted climate change, but these have yet to be translated into active management.	Good	✓		
Detailed plans have been drawn up about how to adapt management to predicted climate change, and these are already being implemented	Very good			

2. Additional Criteria on Climate Change: Is the TR being consciously managed to prevent carbon loss and to encourage further carbon capture?

Condition	Category*	(Tick ✓)	Comment / Explanation	Next Steps
Carbon storage and carbon dioxide capture have not been considered in management of the TR	Poor		Strategies adopted to prevent Forests fires in entire Anamalai Tiger Reserve through Fire Disaster Management Center based on spatial analysis of Forest Fire vulnerability. Significant measures have been taken to reduce carbon loss from the TR and to increase carbon dioxide capture by effective conservation measures of all eco-systems in the Tiger Reserve.	Although the various measures have been taken as part of the holistic conservation measures to prevent the carbon loss, clear prescriptions are required to be incorporated in TCP for reducing carbon emission/ effecting carbon capture in planning various activities / operations.
Carbon storage and carbon dioxide capture have been considered in general terms, but has not yet been significantly reflected in management	Fair	✓	The Cycle squads were introduced for patrolling the periphery of Tiger Reserve in Udumalpet instead of vehicle patrolling to prevent the emission. The fuel wood burning creates more atmosphere Co ₂ than biodegradation of wood is a forest because by the time the bark of a dead tree has rotted, the log has already been occupied by other plants and micro-organisms which continue to sequester the Co ₂ by integrating the hydrocarbons of the wood into their own life cycle. Re-introducing LPG connection to the elephant camp for cooking. Usage fuel was stopped completely. use is Co ₂ emissions retrieval.	It is necessary to issue guide lines at National level for adopting various measures in this direction without compromising the primary objectives of Wildlife habitat/ TR management to preserve the biodiversity of unique habitats/ eco-systems.
There are active measures in place to reduce carbon loss from the TR, but no conscious measures to increase carbon dioxide capture	Good			
There are active measures in place both to reduce carbon loss from the TR and to increase carbon dioxide capture	Very good		As per assessment report in Anamalai Tiger Reserve (Poornima Ravishankar) 500 Kgs / per day of fire wood was being used for cooking food to elephants in departmental elephant camp (182.500 MT p/a) after reintroduction of LPG during 2012 an approximate quantity of 350 MT fuel wood has been saved in last two years and in the result it has prevented the huge quantum of carbon loss.	

Management Effectiveness Evaluation (MEE) of Mudumalai Tiger Reserves

1. Context

1.1 Are the values of the TR well documented, assessed and monitored?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Values not systematically documented, assessed and monitored.	Poor		Draft TCP Chapter- 1,2,6, 7,11; documents & reports from Director ; Information from discussions and field visits	<p>Mudumalai Tiger Reserve (MTR), situated on the North eastern and North Western slopes of Nilgiris region descending to the Mysore plateau, propitiously placed at tri-junction of Kerala, Karnataka and Tamil Nadu. Being a key Tiger Conservation Unit, the erstwhile Mudumalai WLS Sanctuary and National Park was notified as Mudumalai Tiger Reserve during 2007.</p> <p>The TR is part of the Nagarahole -Mudumalai- Bandipur-Wayanad –Satyamangalam Tiger Conservation Landscape. The connectivity with the Eastern Ghats through Moyar valley is significant for tiger dispersal to BRT and Kaveri WLS. Further connectivity with Mukkurthi and Silent valley National parks and Nilgiri North forest division makes it a vital constituent of a larger landscape (ca 12.000 km²) in the Western Ghat landscape complex. TR is part of Nilgiri Biosphere Reserve. This Landscape is home to single largest Asian Elephant population in the world.</p> <p>The vegetation types, as per Champion & Seth 1968 classification are: Southern Tropical dry thorn forest, Southern tropical dry deciduous forest, Southern Tropical moist deciduous forest, Southern Tropical semi evergreen forests, Moist bamboo brakes and Riparian fringing forest.</p> <p>There are about 50 species of fishes, 21 species of amphibians, 34 species of reptiles, 227 species of avifauna and 55 species of mammals in 9 orders are found in Mudumalai Tiger Reserve. There are several species of rare plants, invertebrates, fishes, amphibians, reptiles, birds and mammals.</p> <p>The ecological/ biological values of TR have been identified under the head "Statement of Significance" in TCP and are assessed and monitored. Some others are given elsewhere. A list of values, under themes - Local, Hydrological, Geographical, Nature education & Interpretation, Historical, National and Global etc. provided to MEE Team by the authority. All values should be listed appropriately in TCP with assessment and criteria for monitoring.</p>
Values generally identified but not systematically assessed and monitored.	Fair			
Most values systematically identified, assessed and monitored.	Good			
All values systematically identified, assessed and monitored.	Very good	✓		

1.2 Are the threats to TR values well documented and assessed*?

Assessment criteria ⁺				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Threats not systematically documented or assessed.	Poor		Draft TCP Chapter-6 & 7; documents & reports from Director ; Information from discussions and field visits	<p>The various threats to TR values have been well documented in SWOT Analysis in Chapter 6 of TCP. Further they have been well assessed in the chapter 7 of TCP under "Security Plan". The important threats are as under:</p> <p>(1) Spread of exotic /invasive weeds like Lantana and Eupatorium</p> <p>(2) Opportunistic cattle grazing in Masina gudi area- a threat with possibility of loss to biodiversity and spread of wild life disease.</p> <p>(3) Clandestine removal of fuel wood by local communities</p> <p>(4) Unplanned development along the fringe of the core area interrupting of migratory corridors and consequent human-wildlife conflict</p> <p>(5) Heavy vehicular traffic through MTR- average 1000 vehicles pass daily</p> <p>(6) Mushrooming of ecologically incompatible private resorts around MTR,</p> <p>(7) Human induced forest fires and its adverse impact on habitats. . 37 fire incidents were reported during last three years to an extent of about 205.00Ha.</p> <p>(8) Extensive TNEB infrastructure including high-tension cables, flume channel (originating from Singara), settlements and power-generation units</p> <p>(9) Encroachment of forest lands especially on the Western boundary (Gudalur forest division)</p>
Threats generally identified but not systematically assessed.	Fair			
Most threats systematically identified and assessed.	Good			
All threats systematically identified and assessed.	Very good	✓		

⁺This assessment should be based on number, nature and extent of threats

1.3 Is the 'Core Area' of TR free from human and biotic interference?

Assessment criteria ⁺				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
The 'Core Area' has extensive human and biotic interference.	Poor		Draft TCP (Core) chapter 4 & 7; Chapter-2 (Buffer); Documents & reports from Director ; Information from discussions and field visits	<p>There are 7 revenue settlements inside the core area. Interference from the seven revenue villages which are not part of the core area is said to be not very substantial. However, action is being taken to relocate the people from these villages to alternate land at Ayyankolli of Gudalur Forest Division. Out of 756 applicants 527 families have been found to be eligible and 238 persons in eligible for relocation.</p> <p>Due to intervention by TR, the state Government had supplied LPG connections to the tribal settlement within the core area and the villages in the fringe area which reduce dependence on fire wood.</p> <p>Biotic interference emanates through increase of cattle grazing inside the reserve area from peripheral human habitation in fringe villages lying just outside the Core apart of collection of other livelihood requirement and other developmental activities in the fringes. Survey by the WWF India AREAS-TN Forest Program estimated the cattle population at 4,593 during 2001. After the implementation of the incentive schemes for the grazers, there was a decline in</p>
The 'Core Area' has some human and biotic interference.	Fair			
The 'Core Area' has little human and biotic interference.	Good	✓		
The 'Core Area' has no human and biotic interference.	Very good			

*Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

				the overall cattle population in almost all the villages. Between 2001 and 2005 (up to November 2005), there were 2,706 cattle removed from target villages. The Buffer area, though notified, is yet to be brought under the unified command of the Field Director. However the matter is under active consideration.
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***This assessment should be based on existence and the efforts made by TR management to address issues related to human settlements/ villages inside the core area; livestock grazing, cultivation, encroachments etc, resource extraction/ livelihood dependence of local communities and should reflect the overall interference due to all the above factors. The issue of 'Unified Control' of the 'Core' and 'Buffer' zones under the Field Director would also be taken into account.**

1.4 Has the TR complied with the four Statutory* Requirements (SR) along with Tripartite MoU and three Standard Operation Procedures (SOP)?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
None of the four SR, no compliance of Tripartite MoU and three SOPs met	Poor		Copy of relevant notifications; documents & reports from Director ; Information from discussions	<p>(1)Government of Tamilnadu had issued notification vide, G. O. Ms. No. 145, Environment and Forests (FR-5) 28th December 2007 notifying 321 km² (Entire Mudumalai WLS and National Park) as the Core/ CTH. Subsequently, the Govt. vide G.O. (Ms) No. 200, E&F (FR.5) dated 13.8.2012 notified Mudumalai Tiger Reserve under section 38 V of WL (P) Act, declaring an area of 367.59 km² (365.16 km² and 2.43km² of two hamlets of revenue area) as buffer in addition to the earlier notified 321 km² area of core/ CTH.</p> <p>(2)Tiger Conservation Foundation was constituted on 25th of March, 2010. Governing Body and Executive Committee has also been constituted.</p> <p>(3)Draft Tiger Conservation Plans for Core, Buffer has been prepared and has been discussed in NTCA meeting, after which it has been further revised. It has not yet been approved.</p> <p>(4)A State level Steering Committee under the Chairmanship of Honorable Chief Minister has been constituted as per GO (Ms.) No. 10 E&F (FR V) Deptt. , dated 15.2.2008. This Committee will be reconstituted and action is being taken by PCCF and CWLW, TN.</p> <p>Most of the conditions of MOU are being complied.</p> <p>There was no straying incident of tiger.</p> <p>The other two SOPs relevant to tiger mortality and destruction of tiger carcass / parts have been complied with by the TR management? There has been one case each for which the SOP's have been complied with during last two years. However, as instructed in SOP a deep freeze should be procured immediately.</p>
Two of the four SR, 50% conditions of the Tripartite MoU and SOPs complied	Fair			
Three of the four SR, 75% conditions of the Tri-partite MoU and SOPs complied	Good	✓		
All four SR, 100% conditions of the Tripartite MoU and SOPs complied	Very good			

***Statutory requirements are (1) Legal delineation and notification of Core and Buffer Areas; (2) Establishment of Tiger Conservation Foundation; (3) Development of a Tiger Conservation Plan; and (4) Constitution of a State-level Steering Committee under the Chairmanship of the Chief Minister. TA refers agreement between Field Director, State Government and NTCA. The 3 SOPs are on (i) Straying of Tiger in human dominated landscape, (ii) Tiger Mortality and (iii) Disposal of Carcasses**

2. Planning

2.1 Status of Tiger Conservation Plan (TCP)*?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No TCP in place.	Poor		Copy of relevant documents & reports from Director ; Information from discussions	<p>Draft Tiger Conservation Plan of Mudumalai Tiger Reserve (Core and Buffer Zones areas) was discussed by the NTCA on 20-04-2012. Subsequent to the discussion by the committee of the NTCA as stated above certain comments were forwarded to TR authorities for incorporation. Accordingly, revised Tiger Conservation Plan for Mudumalai Tiger Reserve for both Core and Buffer Zone areas were sent to the NTCA for approval during March, 2013. Again certain suggestions were forwarded during July, 2013 for incorporation. It has been reported that the suggestions of NTCA have been incorporated, as appropriate. It is also reported that as per the advice Indicative Plan for Corridors and the revised Tiger Conservation Plan has been prepared for a period of 5 years from 2012-13 to 2016-17. The TCP has not yet been Approved.</p> <p>Relevant scientific material and the participatory processes followed while preparing the Plan.</p> <p>Fire vulnerability map , drainage map, distribution and management of exotic weeds (Lantana), etc. by involving Indian Institute of Science, Bangalore, Biologist Dr. Siva Ganesan, Dr. Ramakrishnan, Department of Wildlife Biology, Government Arts College, Ooty</p>
TCP is under preparation	Fair			
TR has a relevant TCP	Good	✓		
TR has a comprehensive and relevant TCP, duly approved by the NTCA	Very good			

***The scientific content and the participatory processes used in preparation of the TCP will be taken into account in assessing the quality of TCP.**

2.2 Does the TR safeguards the threatened biodiversity values?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR does not safeguard the threatened biodiversity values.	Poor		Draft TCP; documents & reports from Director ; Information from discussions and field visits	<p>For safeguarding threatened biodiversity values, Strategy has been spelt out in Zone Plans and Theme Plans in Chapter 7 & 10 of draft TCP. The highlights of important measures are as follows:</p> <p>Protection measures, such as Anti-poaching operations: 21 camps; Smart patrolling (observations on illicit activities, mortalities, phenology of vegetation, abundance status of animals) ; highway patrolling (prevent road kills, disturbance to wildlife, littering); gathering intelligence etc. have been elaborated under theme plan for protection in TCP with security plan.</p> <p>Vulture monitoring squad: recording observations of vulture nests, breeding, feeding etc; spreading awareness regarding hazards of diclofenac.</p> <p>Central Control room: manned by 5 personnel on 24X7 basis is functioning at Theppakadu. Help line number to receive messages; radio and mobile connectivity provided; stationing of Rapid Response Unit vehicle with adequate dry food, water, and other equipments. Mock drill are being conducted. For example one such mock drill has been</p>
TR safeguards a few threatened biodiversity values.	Fair			
TR safeguards a large number of threatened biodiversity values.	Good			
TR safeguards all threatened biodiversity values.	Very good	✓		

				<p>conducted on 26.01.2014.</p> <p>EDCs : participatory protection; livelihood options; capacity building;</p> <p>Removal of exotics: invasive plants like Lantana, Eupatorium, Parthenium, Tithonia, Opuntia, Cassia spectabilis being removed and sowing of native grasses.</p> <p>Fire Protection has been dealt in chapter 10. Fire vulnerability study has been carried out and protection measures have been prescribed.</p>
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***Remarks need to elaborate on the kind of safeguards and how they work or are intended to work**

2.3 Are stakeholders given an opportunity to participate in planning process?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little, if any opportunity for stakeholder participation in planning.	Poor		Draft TCP; documents & reports from Director ; Information from discussions and field visits	<p>Some Meetings with stakeholders have been reported. One such meeting was reported to have been conducted with the public in fringe villages of Mavanallah and Moyar on 10.03.2014 towards fire awareness and protection etc. Recent meetings with local tribal communities meetings were said to have been conducted on 26.01.2013, 01.05.2013 and 26.01.2014.</p> <p>District level meetings headed by the District Collector, on inter departmental coordination on every month.</p> <p>Co-ordination with transport authority has been ensured for safe tourism of the visitors in private jeeps. Regulation of traffic at night hours along the high ways through the reserve has been ensured through co operation of Transport Authority and District Administration.</p> <p>Local Advisory Committee for Eco Tourism has been constituted and meetings were conducted on 15.11.2012 and during December 2013.</p>
Stakeholders participate in some planning.	Fair			
Stakeholders participate in most planning processes.	Good	✓		
Stakeholders routinely and systematically participate in all planning processes.	Very good			

***The result of participation must show in the field and not merely reported as a routine exercise.**

2.4 Are habitat management programmes systematically planned, relevant and monitored, and contribute effectively to Tiger and other endangered species conservation?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Habitat management programmes are entirely ad hoc.	Poor		Draft TCP; documents & reports from Director ; Information from discussions and field visits	<p>Habitat Management plans have been dealt in Zone Plans and Theme plans in chapter 7 of TCP. Management Strategy has been given under Zone Plans for high rainfall areas, low rainfall areas, relocation and vulture conservation. Theme Plans for protection tiger monitoring and wild life health monitoring have also been dealt in. Plans for Fire Protection have been given in chapter 10.</p> <p>Removal of exotic weeds, especially Lantana, Opuntia, Eupatorium etc. for creating pasture land of prey species and elephants is being dealt in a scientific manner. The methodology is elaborated in TCP under zone plan</p> <p>Since MTR faces acute water scarcity during dry periods planning process is in place to create water holes in areas facing water deficit and also ensure even distribution. During last three years 36 (Check dam -6, Ponds and water troughs-30 nos. were created.</p> <p>Corridors for dispersal of wild animals, especially threatened (IUCN) species like tigers, elephants, and Dhole and other mammals, are well managed by giving</p>
Limited planning and monitoring programmes are in place for habitat management.	Fair			
Habitat management programmes are generally planned and monitored.	Good			
Habitat management programmes are thoroughly planned and monitored.	Very good	✓		

				<p>adequate importance in maintaining the corridors within the landscape. Corridors identified are: "Moyar corridor" and "Mudumalai-Mukurthi-Silent valley corridor".</p> <p>Tiger Population and Habitat Assessment Protocols have been described in Chapter 9. Phase IV monitoring effectively implemented since 2012 to monitor and take remedial action based on the population estimates and trends thereon.</p> <p>Special efforts are being taken in Vulture conservation program given the highly threatened status of these birds. This has been effectively addressed in the TCP There are about 486 nos. of vulture distributed along eastern part of MTR and fringe areas as per the research report by Arulagam (NGO) carried out during 2013. APW's are engaged for monitoring vulture population in these areas.</p>
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****This assessment should be primarily based on habitat management programmes in relation to habitats for species that are threatened (IUCN categories), are habitat specialists, subjected to seasonal movements, wide ranging with emphasis on the breeding and rearing habitat and may include factors such as food, water, shelter (all connotations).Habitat structure, composition, unique patches of vegetation and sensitive sites, sources of water and their distribution are integral. Corridors within buffer zone are critically important. For example, all riparian habitats. Have these been addressed? Is their a planning process in place? The management practices dealing with invasive species such as Lantana, Michania etc. would be examined.***

2.5 Does the TR has an effective Protection Strategy (PS)* and Security Plan and Security Audit (SA) in place?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR has little or no PS and SA.	Poor		Draft TCP; documents & reports from Director ; Information from discussions and field visits	Protection Strategy (PS) is well planned through anti-poaching camps /APW's, by smart patrolling system on specified routes and based on the intelligence gathered. There are 21 A.P. camps within the core area.
TR has an adhoc PS and SA.	Fair			Through anti-poaching camp the Forest protection in Mudumalai is ensured.
TR has a generally relevant PS and SA but is not very effective.	Good			One of the unique protection mechanisms in MTR is by anti-poaching operation involving the local tribes. Anti-poaching camps established in most sensitive locations
TR has a comprehensive and very effective PS and SA.	Very good	✓		Camps are manned by 4-8 persons including Watchers and beat subordinates. Daily patrol over foot covering 10-15 Sq.km. Basic amenities like cooking vessels, Gas connections, Arms and ammunition, and Improved water facilities have been provided to APC's in addition to regular supply of rations. Patrol monitoring is carried out by ensuring record maintenance in the camp, at least one night halt/ month By RF and passage of information on important events, animal sighted and area patrolled to FD/ designated Station. Smart Patrolling has been introduced in the TR. After the patrol the data sheets were maintained at range head quarters. Track logs are downloaded and blank areas identified for patrol. This makes patrolling very effective. Joint signature patrolling in vulnerable areas are organised by RFO. Captive elephants are used for patrolling in vulnerable areas during monsoon. Intelligence information is used to plan the patrol route. Two elephant patrol team each with 3 elephants and their mahouts and concern beat guard were used for patrol.

				<p>Since a National highway cuts across the Reserve two highway patrol teams carry out high way patrol. Night patrol is also carried out.</p> <p>A special Tiger squad having 17 APWs, specially trained by STF has been formed and kept under the leadership of the Range Officer, Theppakadu. The team moves inside the forest every day. They are utilised to monitor any illegal activities in and around the border areas.</p> <p>Random camping to monitor migration of animals, water holes, Forest Fire, Tigers movement. Are also carried out.</p> <p>To control Fire Arms around TR, NOC for holding fire arms are issued every year and monitored.</p> <p>A security map has been prepared for the TR.</p> <p>"Security plan" is in place and incorporated in the TCP. Necessary "Security audit" is also incorporated in this "Security plan". As a follow up action the Deputy Director has audited fire alertness on 30.03.2014. However, as provided in the plan, FD should carry out Security audit every 3 months.</p> <p>Poaching incidences and fire incidents have dramatically reduced over the last few years. There have been no cases of encroachments. Poaching (except one case of opportunistic securing of a dead lizard).</p>
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***This assessment takes inter-alia into account the nature of threats, the number and location of patrolling camps and foot and mobile patrolling, needs that relate to available manpower, terrain difficulties, practicability of area coverage, readiness to contain specific threats with necessary support and facilities. The constitution and functioning of Special Tiger Protection Force (STPF), Number of offences reported, arrests made, prosecution initiated and conviction achieved will be taken into account.**

2.6 Has the TR been effective in the mitigation of human-wildlife conflicts?

Has the TR been effective in the mitigation of human-wildlife conflicts?

Assessment criteria*																									
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks																					
Human-wildlife conflicts are significant but poorly addressed.	Poor		Draft TCP; documents & reports from Director ;	Crop damage by elephants and wild pigs were noticed in the enclosure villages. Cattle lifting cases also were reported in the eastern side of the reserve (Masinagudi Range) by Tigers, Leopards and Wild dogs.																					
TR has been able to mitigate few human-wildlife conflicts.	Fair		Information from discussions and field visits	Elephant proof trenches have been dug in vulnerable border areas to a length of 37.55km during last three years.																					
TR has been able to mitigate many human-wildlife conflicts.	Good	✓		A dedicated Anti- depredation Centre has been established in Masinagudi for public. Anti-depredation squad formed with 2nos of APW's during vulnerable season for driving crop raiding elephants and invasion of snakes in human habitations. This squad also helps in preventing various human wildlife conflicts.																					
TR has been effective in mitigating all human-wildlife conflicts.	Very good			Compensation for wildlife mortality and other damages caused are being paid in an average 15 days to 3 months time. Details of cattle killed around TR and compensation paid are as under (from Chapter-3 and documents given by TR): <table><tr><th>Year</th><th>Cattles Killed</th><th>Compensation (INR)</th></tr><tr><td>2008</td><td>9</td><td>18,000</td></tr><tr><td>2009</td><td>1</td><td>2,000</td></tr><tr><td>2010</td><td>1</td><td>10,000</td></tr><tr><td>2011</td><td>1</td><td>10,000</td></tr><tr><td>2012</td><td>1</td><td>10,000</td></tr><tr><td>2013</td><td>12</td><td>1,20,000</td></tr></table>	Year	Cattles Killed	Compensation (INR)	2008	9	18,000	2009	1	2,000	2010	1	10,000	2011	1	10,000	2012	1	10,000	2013	12	1,20,000
Year	Cattles Killed	Compensation (INR)																							
2008	9	18,000																							
2009	1	2,000																							
2010	1	10,000																							
2011	1	10,000																							
2012	1	10,000																							
2013	12	1,20,000																							

				<p>Loss of life and injury caused by Elephants in the last 10 years in the study area of buffer had been analyzed. 7 people were killed and 6 injured during attacks by Elephants. Statistics show is that 1 in 14 villages is prone for an attack by wildlife annually with a high probability of someone losing life.</p> <p>Cattle lifting by carnivores (Tiger, Leopard and Wild dog) have increased over the period of time in the Buffer zone areas</p> <p>Monitoring mechanism through Camera traps are ensured as per the SOP. About 20 nos. of camera traps are being used for monitoring.</p>
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***The assessment will take into account the number of incidences reported and payment of compensation made and its timeliness.**

2.7 Is the TR integrated into a wider ecological network/ landscape following the principles of the ecosystem approach?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR not integrated into a wider network/ landscape.	Poor		Draft TCP; documents & reports from Director ; Information from discussions and field visits	<p>The TR is part of the Nagarahole -Mudumalai- Bandipur- Wayanad –Satyamangalam Tiger Conservation Landscape. The connectivity with the Eastern Ghats through Moyar valley is significant for tiger dispersal to BRT and Kaveri WLS. Further connectivity with Mukkurthi and Silent valley National parks and Nilgiri North forest division makes it a vital constituent of a larger landscape in the Western Ghat landscape complex. TR is part of Nilgiri Biosphere Reserve.</p> <p>Landscape approach in the tract of Mudumalai tiger reserve has been well defined in TCP.</p> <p>Working plan of adjoining forest division (Nilgiri North forest division) has been proposed to be integrated into the Buffer Area TCP.</p> <p>Major corridors such as Moyar valley corridor and Mudumalai – Mukurthi – Silent Valley Corridor have been identified and Indicative corridor plan has been prepared.</p> <p>Buffer Area Management has not yet been brought under the control of FD. However some capacity building training to the adjoining personnel of the Buffer area has been undertaken.</p> <p>It is necessary to notify Eco sensitive zone under EP Act for rationalization of land use around the TR. A committee has already been constituted.</p>
Some limited attempts to integrate the TR into a network/ landscape.	Fair			
TR is generally quite well integrated into a network/ landscape.	Good	✓		
TR is fully integrated into a wider network/ landscape.	Very good			

***Assessment needs to consider the scope of opportunities on the landscape scale that exist. Consider whether any attempts have been made and what are these? Have all the important corridors been identified? What actions are planned/implemented for their security? Have the Forest Working Plans and Forest Development Corporation Plans within the identified landscapes taken cognizance of such new requirement? These should have been reflected in TCPs. Is there is any effort to rationalize landuse around TR? Is any effort being made to plan and use 'Smart Green Infrastructure'?**

3. Inputs

3.1 Are personnel adequate, well organized and deployed with access to adequate resources in the Tiger Reserve (TR)*?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Few, personnel explicitly allocated but poorly supported for TR management.	Poor		Draft TCP; documents & reports from Director ; Information from discussions	The Field Director with the headquarters at Udhagamandalam is the Administrative head of the Tiger Reserve. A Deputy Director for Mudumalai Tiger Reserve has been posted to assist the Field Director.
Some personnel explicitly allocated for TR management but not adequately supported and systematically linked to management objectives.	Fair			There are presently six territorial Ranges and two Special Ranges one for Reception and another Technical Range in this unit including Mukurthi National Park. The entire MTR reserve has been divided into 18 Beats and 10 sections, which are working under five territorial Rangers.
Some personnel with fair support explicitly allocated towards achievement of specific TR management objectives.	Good	✓		The existing 18 beats are proposed to be bifurcated by forming 10 new beats (Total 28 Beats) for better management and protection of the Tiger Reserve. The Government have sanctioned for creation of 10 additional beats in five years @ 2 beats per year (G.O.Ms.No :98, Environment and Forests (FR-2) department,dated:28.03.2012). Accordingly, four beats have been created in 2013-14.
Adequate personnel appropriately supported and explicitly allocated towards achievement of specific TR management objectives.	Very good			The existing 8 sections in the TR have been proposed to be reorganized to 10 sections for better management in TCP. Additional Forest Guards for check post and other supporting office staff are said to be desirable. There is a Forest Veterinary Dispensary located at Theppakadu and is provided with Forest Veterinary Assistant Surgeon. He is assisted by two Livestock Attendants. A sub division headed by an Assistant Conservator of Forests with relocation Range has been specifically created with staff of 1 Ranger, 1 Forester, 2 assistants and 1 driver for the work of Rehabilitation. Overall, against total sanctioned posts of 252 in all staff categories, 182 posts are filled and 70 posts are vacant (vacancy 28%). Against 10, 11 and 37 sanctioned posts of Rangers, Foresters and Forest Guards only 6, 8 and 21 posts have been filled, respectively. Thus in respect of Front line staff of Ranger, Forester and Forest Guard the vacancy situation is 40 %. In case of Forest guards it is 43%. The front line staffs are in higher age group. Posting in vacant posts, especially Forest Guards and Rangers need special attention.

***This assessment should inter-alia be based on number of personnel allocated for attainment of TR objectives at the Range , Round, Beat and Patrolling camps levels or as relevant to the needs (sanctioned posts vis- a- vis existing personnel and needs beyond the sanctioned strengths. It is possible that posts have last been sanctioned several years back that do not now account for the current needs)**

3.2 Are resources (vehicle, equipment, building etc.) adequate, well organized and managed with desired access?

Assessment criteria*																												
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks																								
Few, if any, resources explicitly allocated for TR management.	Poor		Draft TCP; documents & reports from Director ; Information from discussions	<div>The following position about the resources in TR has been provided by the Authorities:</div> <table><tr><th>Resources</th><th>Essential</th><th>Available</th><th>Required</th></tr><tr><td>Buildings</td><td>230</td><td>202</td><td>28</td></tr><tr><td>Vehicles</td><td>30</td><td>26</td><td>4</td></tr><tr><td>Camera Trap</td><td>210</td><td>120</td><td>90</td></tr><tr><td>Fire arms</td><td>20</td><td>15</td><td>5</td></tr><tr><td>Tranq. guns</td><td>4</td><td>2</td><td>2</td></tr></table>	Resources	Essential	Available	Required	Buildings	230	202	28	Vehicles	30	26	4	Camera Trap	210	120	90	Fire arms	20	15	5	Tranq. guns	4	2	2
Resources	Essential	Available			Required																							
Buildings	230	202			28																							
Vehicles	30	26			4																							
Camera Trap	210	120			90																							
Fire arms	20	15	5																									
Tranq. guns	4	2	2																									
Some resources explicitly allocated for TR management but not systematically linked to management objectives.	Fair																											
Some resources explicitly allocated towards achievement of specific TR management objectives.	Good	✓																										
Adequate resources explicitly allocated towards achievement of specific TR management objectives	Very good																											

* These form a variety of resources. These may be segregated into immovable (structures) and movable categories and each further may be considered under the essential and desirable categories. It is best to start with what are the minimum needs to attain each objective, what is available and manner of use/deployment. The proportions of the 'essentials' and 'desirables' along the importance gradient of objectives would serve as pointers for score categories. Specific remarks would be vitally important.

3.3 Are financial resources other than those of the State linked to priority actions and are funds adequate, released timely and utilized?

Assessment criteria*																												
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks																								
Resource allocation is adhoc, funds are inadequate and seldom released in time and not utilized.	Poor		Documents & reports from Director ; Information from discussions	The status of sanction of APO, release and utilization of funds under Project Tiger in last 3 years is as under: <table><tr><th>Year</th><th>Total sanction with State Sare</th><th>Release</th><th>Utilisation</th></tr><tr><td>2011-12</td><td>343.420</td><td>247.624</td><td>247.624</td></tr><tr><td>2012-13</td><td>233.842</td><td>233.842</td><td>222.070</td></tr><tr><td>2013-14</td><td>444.540</td><td>355.632</td><td>355.632</td></tr></table>	Year	Total sanction with State Sare	Release	Utilisation	2011-12	343.420	247.624	247.624	2012-13	233.842	233.842	222.070	2013-14	444.540	355.632	355.632								
Year	Total sanction with State Sare	Release		Utilisation																								
2011-12	343.420	247.624		247.624																								
2012-13	233.842	233.842		222.070																								
2013-14	444.540	355.632		355.632																								
Some specific allocation for management of priority action. Funds are inadequate and there is some delay in release, partially utilized.	Fair		The status of other central assistance is furnished below: <table><tr><th>Year</th><th>Name of the scheme</th><th>Allotment</th><th>Achievement</th></tr><tr><td rowspan="2">2011-12</td><td>HADP</td><td>44.340</td><td>44.340</td></tr><tr><td>Nilgiri BR</td><td>2.450</td><td>2.450</td></tr><tr><td rowspan="2">2012-13</td><td>HADP</td><td>43.988</td><td>43.988</td></tr><tr><td>Nilgiri BR</td><td>-</td><td>-</td></tr><tr><td rowspan="2">2013-14</td><td>HADP</td><td>120.111</td><td>120.111</td></tr><tr><td>Nilgiri BR</td><td>7.550</td><td>7.550</td></tr></table>	Year	Name of the scheme	Allotment	Achievement	2011-12	HADP	44.340	44.340	Nilgiri BR	2.450	2.450	2012-13	HADP	43.988	43.988	Nilgiri BR	-	-	2013-14	HADP	120.111	120.111	Nilgiri BR	7.550	7.550
Year	Name of the scheme	Allotment	Achievement																									
2011-12	HADP	44.340	44.340																									
	Nilgiri BR	2.450	2.450																									
2012-13	HADP	43.988	43.988																									
	Nilgiri BR	-	-																									
2013-14	HADP	120.111	120.111																									
	Nilgiri BR	7.550	7.550																									
Comprehensive planning and allocation that meets the most important objectives. Generally funds released with not much delay and mostly utilized.	Good	✓		From above it is evident that in 2011-12 and 2013-14 the entire sanction amount of APO could not be released. In year 2012-13 about 12 lakh rupees remain unutilized. Further it is seen that the 1 st release from the GOI are in September to end of October. The time taken for the state govt. for release of the central share is about 15 days to 45 days and for state share 2 months to 4 months. This matter needs to be looked in to.																								
Comprehensive planning and allocation of resources for attainment of most objectives. Funds generally released on-time and are fully utilized.	Very good																											

*Obtain details of funds released by NTCA and their utilization by TR in the last 3 years and indicate them under 'Remarks'. Also comment on the problems associated with fund allocations and their utilization.

3.4 Are financial resources from the State linked to priority action and funds adequate, timely released and utilized for the management of Tiger Reserve?

Guidelines for the management of Tiger Reserve:

Assessment criteria*																				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks																
Resource allocation is adhoc, funds are inadequate and seldom released in time and not utilized.	Poor		Documents & reports from Director ; Information from discussions	<p>The Schemes relating to state linked resources are: 1)13th Fin. Commission 2)Intensification of Forest Management 3)Creation of Fodder Resources 4)Augmenting Drinking Water Supply to wildlife Mitigation 5) Asian Elephant Depredation and Measures The year wise release and utilization for last 3 years are as follows:</p> <table> <tr> <th>Year</th> <th>Name of the scheme</th> <th>Released</th> <th>Utilised</th> </tr> <tr> <td>2011-12</td> <td>Five different</td> <td>30.43</td> <td>30.43</td> </tr> <tr> <td>2012-13</td> <td>Schemes of the</td> <td>5.87</td> <td>5.87</td> </tr> <tr> <td>2013-14</td> <td>State Government</td> <td>23.06</td> <td>23.06</td> </tr> </table> <p>In general the sanctions are delayed and so also the release of funds. In such case Mudumalai Tiger Conservation Fund plays a major role in bridging the gap between the sanctions and actual release, thereby, hastening execution of sanctioned work in the proper season.</p>	Year	Name of the scheme	Released	Utilised	2011-12	Five different	30.43	30.43	2012-13	Schemes of the	5.87	5.87	2013-14	State Government	23.06	23.06
Year	Name of the scheme	Released			Utilised															
2011-12	Five different	30.43			30.43															
2012-13	Schemes of the	5.87			5.87															
2013-14	State Government	23.06			23.06															
Some specific allocation for management of priority action. Funds are inadequate and there is some delay in release, partially utilized.	Fair																			
Comprehensive planning and allocation that meets the most important objectives. Generally funds released with not much delay and mostly utilized.	Good	✓																		
Comprehensive planning and allocation of resources for attainment of most objectives. Funds generally released on-time and are fully utilized.	Very good																			

***Obtain details of funds released by State and their utilization by TR in the last 3 years and indicate them under 'Remarks'. Also comment on the problems associated with fund allocation and their utilization.**

3.5 What level of resources are provided by NGOs?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
NGOs contribute nothing for the management of the TR.	Poor		Documents & reports from Director ; Information from discussions	<p>As many as ten NGO's are being involved in various activities. Resources/services /supports provided by these NGOs include:</p> <ul style="list-style-type: none"> • The major equipments donated by the NGO named WCT, Mumbai are vehicles (6 jeeps and 3 motor cycles) uniforms / kits to Anti poaching camps/ one Rapid response unit ; • Capacity building programs (about 520 beneficiaries) for livelihood options run by NGO named Aide at action. • Free health checkup for forest subordinates (1camp involving 300 beneficiaries) & strengthening health centre under taken by the NGO named Chiguru, Bangalore. • Cleaning of major roads from litter thrown by the visitors is carried out by NGO named Green care trust, Masinagudi on fortnight basis. • Creating awareness programmes to school children is carried out by the NGO named MENC, Masinagudi Recent camp conducted during March-2014. • Livelihood options to the tribal communities through Moyer EDC by manufacturing lantana furniture are
NGOs make some contribution to management of the TR but opportunities for collaboration are not systematically explored.	Fair			
NGOs contributions are systematically sought and negotiated for the management of some TR level activities.	Good	✓		
NGOs contributions are systematically sought and negotiated for the management of many TR level activities.	Very good			

				<p>supported by the NGO named Shola trust, Gudalur from 2012.</p> <ul style="list-style-type: none"> • One tractor along with tanker has been donated during 2013 by the NGO named Sreenivasan service trust, Chennai to Foundation for supply of water to wild animals. • Mobile medical camps (75 nos) were organized by the NGO named Touch wood foundation, Bangalore benefiting 9000 people so far.
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4. Process

4.1 Does the TR have manpower resources trained in wildlife conservation for effective TR management?

Assessment criteria [*]				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No trained officers and frontline staff in the TR.	Poor		Draft TCP; documents & reports from Director ; Information from discussions	No frontline staff and no officer presently posted in MTR have any formal training in wildlife management. However, the field staff are imparted periodical training related to wildlife matters.
Some trained officers and few trained frontline staff, posted in the TR.	Fair	✓		Although no formal trainings courses have been undergone by the staff of TR in WII, following internal trainings are imparted from time to time.
All trained officers and and fair number of trained frontline staff posted in the TR.	Good			1. Skill development 2. Personality development 3. Wildlife law 4. Phase IV monitoring 5. Study tour to Anamalai TR
All trained officers and most of the trained frontline staff is posted in the TR.	Very good			6. Wire less 7. First Aid "Staff development plan" and capacity building with methodology on training need assessment has been elaborated and incorporated in the TCP. However, a concrete staff training programme on issues related to gaps in the knowledge for wildlife management aspects should be prepared with a detail time frame and be implemented.

^{*}Indicate % of trained staff in various categories. The number and thematic areas of the 'Internal Training' programmes organized in the TR in the last 3 years may be taken into account. Has the TR prepared a 'Staff Development Plan'? Is it being implemented?

4.2 Is TR staff management performance linked to achievement of management objectives?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No linkage between staff management performance and management objectives.	Poor		Draft TCP; documents & reports from Director ; Information from discussions	There is no direct linkage between staff management performance and their promotions.
Some linkage between staff management performance and management objectives, but not consistently or systematically assessed.	Fair	✓		Confidential reports of the subordinate staff are used to judge their fitness for promotion and are linked to fulfillment of the other eligibility criteria of integrity and no disciplinary proceedings/ penalties etc. those found fit with the criteria are promoted on the basis of their seniority, i.e., number of years spent in the post.
Management performance for most staff is directly linked to achievement of relevant management objectives.	Good			Protection is strengthened through various strategies to achieve the objective and the staff has been
Management performance of all staff is directly linked to achievement of relevant management objectives.	Very good			

				<p>motivated through rewards for their performance in followings:</p> <p>Persons involve in one of the wildlife offence has been rewarded suitably.</p> <p>Persons involved in tiger body parts seizure were rewarded.</p> <p>Recently, staffs have been rewarded in connection with capturing of three wild rampaging elephants from Thiruvannamalai in Tamil Nadu.</p>
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4.3 Is there effective public participation in TR management* and does it show in making a difference?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no public participation in TR management.	Poor		Documents & reports from Director ; Information from discussions and field visits	Public participation is ensured through following input mechanisms.
Opportunistic public participation in some of the relevant aspects of TR management.	Fair			Volunteers (Students) have been used in Census Operation / phase-IV tiger monitoring conducted by TR management on 13.12.2013 and 09.05.2014.
Systematic public participation in most of the relevant aspects of TR management.	Good	✓		Various nature education awareness programs are carried out among the public and students on the ecologically significant area of Mudumalai to obtain public support for conservation.
Comprehensive and systematic public participation in all important and relevant aspects of TR management.	Very good			There are 18 EDC's formed in the fringe villages (except one), where, Eco development initiatives undertaken by the TR management has secured good will from these communities.
				Intelligence gathered through informants on any illegal activity. One such evident is in recent bison case in Mudumalai Range on 16.01.2013.
				Fire brigades are formed and stationed at control room with local village people. At the outbreak of fire they act immediately in controlling fire.
				Drivers association based at the fringe of the reserve involved in fire fighting through awareness camps. Recent fire incidents were put off by these persons immediately on 17.03.2014.
				Plastic clearing has been done by the public recently during April-2014.

+ The involvement of NGOs/ NGLs in population estimation may be taken into account)

4.4 Is there a responsive system for handling complaints and comments* about TR management?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Ad-hoc approach to handling complaints.	Poor		Documents & reports from Director ; Information from discussions and field visits	<p>Suggestion registers are being maintained at various locations in the TR.</p> <p>Field level complaints are taken care by the concerned Forest range level. Few worthwhile suggestions are communicated to the DD for follow up.</p> <p>As an example, one such complaint regarding practice of tourism in open jeeps carried out by some operators outside the core has been addressed due to proactive action of the TR authorities after liaison with Transport authorities.</p> <p>Further, it is proposed by TR authorities to maintain a separate register in the head office for making an inventory of all suggestion for wide transparency and the inputs would be incorporated in the future plan for management.</p> <p>Special complaints (CM cell petition etc.) are supervised by the Head quarter, Ooty. No petition under CM cell is pending for want of reply from this office.</p> <p>Institutionalised responsive system should be in place for ensuring regular logging and timely processing of all grievances/ complaints/ feed backs to address the issues and taking corrective steps and inform the party. A suitable mechanism for getting regular feed backs including through websites should be introduced.</p>
Complaints handling system operational but not responsive to individual issues and with limited follow up.	Fair	✓		
Coordinated system logs and responds effectively to most complaints.	Good			
All complaints systematically logged in coordinated system and timely response provided with minimal repeat complaints.	Very good			

*Does the TR maintains 'Suggestions Register'? What actions are taken to deal with suggestions?

4.5 Does TR management addresses the livelihood issues* of resource dependent communities, especially of women?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No livelihood issues are addressed by TR management.	Poor		Draft TCP; Documents & reports from Director ; Information from discussions and field visits	<p>Following are initiatives taken by the TR management.</p> <ul style="list-style-type: none"> • Women are being extensively used for various activities in TR such as weed clearance , fire line clearing , running eco shops, EDC/SHG, vocational trainings, nursery operation and other employments and other activities. • About 50000 women days are generated out of total man days of about 1,20,000 on average per year. • Further, 80 nos. of tribal youth from the local communities are being engaged as Anti Poaching watchers along these lines to address livelihood concerns. • At present Eco Development activity is being carried out in the revenue hamlets of Sirur and Chokkanalli by formation of EDC's. There are 18 EDC's formed in the fringe villages (except one), where, Eco development initiatives undertaken by the TR management has secured good will from these communities. • Also, about 44 nos. of families (women) among resource dependent tribal communities have been given loans towards livelihood options during last two years. • Resources obtained from other District agencies: <ol style="list-style-type: none"> 1) Animal Husbandry department: Assistance towards poultry to 480 beneficiaries and towards providing sheep to 170 beneficiaries in Theppakdu and Masinagudi. 2) Assistance for raising mulberry plants to 15 beneficiaries in Moyar village by Sericulture department. <p>The EDC programmes need to be implemented as provided in section 7.2.2.12 and chapter 8 of the Indicative Plan for buffer for addressing livelihood issues. The buffer area has to be transferred to the FD of TR immediately for its proper implementation.</p>
Few livelihood issues are addressed by TR management.	Fair			
Substantial livelihood issues are addressed by TR management.	Good	✓		
Livelihood issues of resource dependent communities especially of women are addressed effectively by TR managers.	Very good			

*The number of mandays generated in the last 3 years may be taken into account. Are funds received from District Agencies and other sources? Provide details of funds received in last 3 years.

4.6 Has the TR planned and implemented the voluntary 'Village Relocation' from the Core/ Critical Tiger Habitat (CTH)?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No planning and no implementation	Poor		Draft TCP; Documents & reports from Director ; Information from discussions and field visits	<p>There are seven (7nos) revenue villages which are surrounded by the MTR (Core). However, since the entire core area has been declared as CTH, the MTR administration has extended the guidelines issued by the NTCA on relocation in order to secure the entire CTH as an inviolate area.</p> <p>All processes as mentioned in the guidelines have been complied with such as:</p> <p>District level committee headed by the District Collector meets and deliberates on these issues.</p> <p>Recent meeting was conducted on 05.02.2014. Cutoff date has been decided as on 31.12.2010 and subsequently extended up to 01.01.2014 for Master list of families which is under finalization by the Revenue department and thereafter by the District Level Committee for field implementation</p> <p>A village relocation plan has been formulated and sent to NTCA on 27.02.2013.</p> <p>Required funds have been sought from the NTCA through the APO for 2014-15</p> <p>Already 19 families have been relocated from three villages under Option – I as on 2012.</p> <p>The properties have been registered in favour of the Government and the land have been integrated with the department are now under the control of the department.</p> <p>A State Level Committee has also been constituted for monitoring the relocation process.</p>
Plans have been made but no implementation	Fair			
Plans have been made and some implementation is in progress	Good	✓		
Plans have been made and are being actively implemented/ no human habitation in the CTH	Very good			

***Assessment will look into the village relocation planning process including availability of manpower, financial resources and NGO support, if any. Is there a mechanism to address the complaints received in respect of relocation process? Effort must be made to assess post-relocation success or otherwise.**

5. Output

5.1 Is adequate information on TR management publicly available?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no information on TR management publicly available.	Poor		Documents & reports from Director ; Information from discussions and field visits	<ul style="list-style-type: none"> Following Websites have been launched for Mudumalai by the Mudumalai Tiger conservation Foundation to provide information to public: www.mudumalaitigerfoundation.in In addition information about the TR is available in following websites: www.forests.tn.nic.in www.projecttiger.nic.in Quarterly Newsletter is published by the TR. Brochures is available at reception for visitors
Publicly available information is general and has limited relevance to management accountability and the condition of public assets.	Fair			
Publicly available information provides detailed insight into major management issues and condition of public assets.	Good	✓		
Comprehensive reports are routinely available in public domain on management and condition of public assets.	Very good			

5.2 Are visitor services and facilities appropriate and adequate?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Visitor services and facilities do not exist.	Poor		Draft TCP; Documents & reports from Director ; Information from discussions and field visits	Following facilities are available for the visitors : <ul style="list-style-type: none"> • An innovative and interactive interpretation center is in place at Theppakadu elephant camp. Audio –Visual facilities and manned by skilled staff (Eco guides) for explaining the exhibits is in place. • Drinking water facilities available in the reception centre and Rest houses. • There are 10 rest houses and three dormitories (Total 120 beds) available for the visitors. • There are 6 nos. of mini buses available for undertaking safari rides within the core area. • Elephant safari is being provided to the visitors depending upon the weather conditions for about 40 minutes. • Visit to elephant camp at Theppakadu to witness feeding of elephants. • Garbage disposal bins have been provided at the Reception center and at rest houses. • Eco-toilets and rest room facilities have been provided near Reception center. • Wheel chairs have been provided for the physically impaired visitors including rest room and eco-toilet facilities. • TR related publications are available at reception center. • Feedback forms have been provided at the Reception center for evaluation and further action. The participation of EDC's in Eco Tourism activities is desirable.
Visitor services and facilities are very basic.	Fair			
Visitor services and facilities are monitored from time to time and are fairly effective.	Good			
Visitor services and facilities are conscientiously maintained, regularly upgraded and monitored for visitor satisfaction	Very good	✓		

**Include the existence and quality of visitor and interpretation centers, including skills and capabilities of personnel manning these, TR related publications, films, videos; arrangements of stay (including places serving refreshments and food owned and managed by TR), watch towers and hides including safety factors, vehicles assigned for visitors including riding elephants, if any and their deployment, drinking water, rest rooms, garbage disposal, attended and self guided services in the field, visitor feed back on the quality of wilderness experience.*

5.3 Are research/ monitoring related trends systematically evaluated and routinely reported and used to improve management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no systematic evaluation or routine reporting of trends.	Poor		Draft TCP; Documents & reports from Director ; Information from discussions and field visits	Mudumalai Tiger Reserve (MTR) is one of the well studied protected areas in India. Several research organizations and Academic Institutions like Bombay Natural History Society (BNHS), Indian Institute of Science (IISc), Salim Ali Centre for ornithology and Natural History (SACON), and Wildlife Institute of India (WII) have carried out Research in TR. Studies on Ecology and Social Behaviour of elephants using radio telemetry in MTR was studied by BNHS in the year 1985 to 1996. IISc has been monitoring large mammal density since 1985. IISc has also set up a 50 ha permanent plot to study the vegetation dynamics in the reserve on a long term basis. They have
Some evaluation and reporting undertaken but neither systematic nor routine.	Fair			
Systematic evaluation and routine reporting of trends undertaken.	Good			
Systematic evaluation and comprehensive reporting of trends undertaken and attempts made at course corrections as relevant.	Very good	✓		

				<p>also set up 19 one-hectare plots in different vegetation types.</p> <p>MTR fully implement all the protocols of Phase-IV monitoring right from the year 2012. Due to this implementation the TR is unique in maintaining the data base of all tigers photographed through camera traps from the year 2012. Also, the Phase-IV protocol has yielded valuable results in population trends of the prey species. Analysis of the data generated has been used in the TCP for calculating the carrying capacity of tigers as also define the management interventions with reference to Habitat management in the respective zone plan.</p> <p>The TCP has taken into account all the research findings which were evaluated and incorporated accordingly. Suggestion from the study was used in the management action as follows.</p> <ul style="list-style-type: none"> • Suggestion given by Indian Institute of Science, annual report, 2012-New anti-poaching camps were established to strengthen protection in the eastern part of the reserve (Kootrabarai), • Forest fires were successfully arrested following the suggestion given by the Consultancy report on forest fire vulnerability in Mudumalai – 2013. • DNA bar coding: Study on DNA bar-coding of tigers in the TR by the wildlife Biology wing of Govt. Arts college, Ooty has been integrated to the TCP for monitoring the tigers. • Long term monitoring of forest dynamics and elephant population, Fire and weed ecology (Indian Institute of Sciences) has been integrated into the TCP. • Wildlife health monitoring – FVA – Theppakadu. Disease outbreak register has been maintained since 1925.
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****Not all TRs attract projects and researchers and with exceptions, little research takes place on the TRs own steam because of systemic limitations. However, monitoring of some critical issues is expected e.g. population of tiger, co-predators and prey with insights into their demography and distribution (some opportunistic sampling by sightings, signs and spatial distribution during assessment would be extremely useful in terms of expert impression and as a pulse), monitoring incidence of livestock grazing, fires, weeds, sources of water, a variety of illegal activities typically associated with the reserve, wildlife health (e.g. epidemics, immunization of livestock) regeneration and change in vegetation, visitors and their activities, offence cases, ex-gratia payments etc. Efforts must be made to assess the planning and implementation of Phase-IV monitoring protocols and the success of implementation of M-Stripes (wherever applicable). Are the 'Sykes and Horill' monitoring plots maintained and data analyzed?***

5.4 Is there a systematic maintenance schedule and funds in place for management of infrastructure/assets?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No systematic inventory or maintenance schedule.	Poor		Documents & reports from Director ; Information from discussions and field visits	Following registers are being maintained for systematic maintenance of assets / infrastructure. 1) Register of Buildings. 2) Register of motor vehicles 3) Register of Roads 4) Register of wells and tanks 5) Register of check dams 6) Register of stores 7) Register of assets Based on the entries in these registers a detailed maintenance schedule is prepared by the Forest Range officers. Funds for maintenance of these assets is sourced from Non-plan Tiger Foundation Plan schemes
Inventory maintenance is adhoc and so is the maintenance schedule.	Fair			
Systematic inventory provides the basis for maintenance schedule but funds are inadequate.	Good	✓		
Systematic inventory provides the basis for maintenance schedule and adequate funds are made available.	Very good			

6. Outcomes

6.1 Are populations of threatened species declining, stable or increasing?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Populations of key threatened/ endangered species are declining.	Poor		Draft TCP; Documents & reports from Director ; Information from discussions and field visits	Population of threatened and endangered species is either increasing or stable in the reserve with effective anti-poaching operation and habitat protection. The results are based on Phase IV protocols being implemented since 2012. Following are the list of population trends found in some important species: <u>White Backed Vulture</u> : The population of White Backed Vulture during 1991 was 122 and only 6 vulture were observed in the year 2005 (Vibhu Prakash et al 2005). It has been increasing more than 486 in 2013 (Venkitachalam, 2013) through effective protection in the Riverine patches and awareness against the Diclofenac. <u>Asian Elephant</u> : The population of Asian elephants and their sex ratio has been showing increasing trend in the reserve. The elephant density was estimated 2.1 / sq. km using line transect in the year 1995, 4.9/ sq.km (Ramesh et al 2012). The present density of elephants is 5.9/sq.km (Phase IV monitoring, 2014). The adult elephant male:female sex ration was 1:29 (Baskaran and Udhayan, 2000), it has been improved as 1:10 (Annual Report, IISc, 2014). <u>Leopard</u> : The population of leopard also was showing the increasing trend. The density/100sq.km was 17.4 with 31 individual were captured (WII, report 2010). The current density was 28.3/100sq.km with 89 individuals was observed (Phase IV monitoring report, 2014). <u>Indian Gaur</u> : The population trends between 8/ sq.km to 14/ sq.km (Phase IV report, 2014). Even though, the population has increased from the density of 6.7/sq.km (Ramesh et al 2012) in the year 2012 to more than 8/ sq.km (phase IV report – 2014).
Some threatened/ endangered species populations declining, some are increasing, most others are stable.	Fair			
Several threatened/ endangered species populations increasing, most others are stable.	Good			
All threatened/ endangered species populations either increasing or stable.	Very good	✓		

***This needs to practically relate to the natural ecosystem potential rather than being driven merely by numbers and visibility. The assessment score may be elaborated under remarks.**

6.2 Is the population of tigers showing a declining, stable or increasing trend?

Assessment criteria*																								
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks																				
Population of tiger is showing a declining trend	Poor		Draft TCP; Documents & reports from Director ; Information from discussions and field visits	<table><tr><th>Year</th><th>2010</th><th>2013</th><th>2014</th></tr><tr><td>ETA in km²</td><td>458</td><td>360.8</td><td>355.3</td></tr><tr><td>Individuals captured</td><td>28</td><td>60</td><td>62</td></tr><tr><td>Population</td><td>54.8</td><td>65</td><td>67</td></tr><tr><td>Density/ 100 km²</td><td>12.1</td><td>18</td><td>19</td></tr></table> <p>The density of Tiger was 18/100sq.km in 2013 and 19/100sq.km in 2014. The carrying capacity of predator density using the prey biomass of the reserve has been worked out in Hayward et. al (2007) formula. The carrying capacity of predator density for available prey in the reserve is 19.4/100.sq.km. The present carrying capacity is matching to the current density of Tiger in the reserve. It is evident from the results of Phase IV tiger monitoring conducted in the year 2013 and 2014 that Population of tiger has significantly increased.</p>	Year	2010	2013	2014	ETA in km ²	458	360.8	355.3	Individuals captured	28	60	62	Population	54.8	65	67	Density/ 100 km ²	12.1	18	19
Year	2010	2013			2014																			
ETA in km ²	458	360.8			355.3																			
Individuals captured	28	60			62																			
Population	54.8	65			67																			
Density/ 100 km ²	12.1	18	19																					
Population of tiger is stable	Fair																							
Population of tiger is showing an increasing trend	Good																							
Population of tiger has significantly increased	Very good	✓																						

**This assessment should be based in the context of available population estimate (2010-11) and the outcomes of the currently ongoing Phase-IV analyses.*

6.3 Have the threats* to the TR being reduced/ minimized? Or is there an increase?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Threats to the TR have not abated but have enhanced.	Poor		Draft TCP; Documents & reports from Director ; Information from discussions and field visits	<p>Threats to the TR being reduced due to various activities implemented by the TR management as follows.</p> <ul style="list-style-type: none"> • Undertaking "Smart Patrolling" by assigning specific identified routes to the daily patrolling parties by the concerned Forest Range officers, which avoids bias. • By implementing the protocols of Phase-IV monitoring, including maintenance of daily chowki patrol register protection is very effective. • 24 x 7 manned control room is established with a toll free phone number, Rapid Response vehicle and wireless connectivity. <p>Due to these efforts poaching incidences and fire incidents have dramatically reduced over the last few years. There have been no cases of encroachments. Poaching (except one case of opportunistic securing of a dead lizard). There has been only 12 nos. of small fire incidents during 2012 involving less than 180ha. of forest land and 8 nos. of fire incidents during 2013 involving just 1.142ha. of forest land affected. This shows the effective action taken by the field staff coordinated by the control room in containing damage caused by the fire to the bare minimum.</p>
Some threats to the TR have abated, others continue their presence	Fair			
Most threats to the TR have abated. The few remaining are vigorously being addressed	Good			
All threats to the TR have been effectively contained and an efficient system is in place to deal with any emerging situation	Very good	✓		

**Does the TR has a Disaster Risk Management Plan to deal with existing as well as emerging threats?*

6.4 Are the expectations of visitors* generally met or exceeded?

Assessment criteria																			
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks															
Expectations of visitors generally not met.	Poor		Draft TCP; Documents & reports from Director ; Information from discussions and field visits	At present the tourism activities are being carried out in a specified zone classified as tourism zone. The area of above zone is about 20% of the core area.															
Expectations of many visitors are met.	Fair			Carrying capacity for the TR has been worked out. The Effective Permissible Carrying Capacity on any single day is fixed at 112 vehicles with 52 vehicles in Forenoon and 60 vehicles in Afternoon. This has been worked out @ 25 visitors per vehicle to be 2800 visitors/ day with an increased limit of 3200 visitors/ day during vacations. The increase of visitors on vacation days is based on the logic of deployment of 10% extra staff.															
Expectations of most visitors are met.	Good	✓		A Local Advisory Committee (LAC) has been formed. A sub-committee of this LAC has been constituted during December 2013 which is mandated with inspecting the facilities within the tiger reserve and submits report with suggestions for improvement.															
Expectations of all most all visitors are met.	Very good			The rest houses have been maintained to the expectation of the visitors. The no. of visitors from 2009-10 to 2011-12 is as follows: <table><tr><th>Year</th><th>Indian</th><th>Foreign</th><th>Total</th></tr><tr><td>2009-2010</td><td>164771</td><td>772</td><td>165543</td></tr><tr><td>2010-2011</td><td>192711</td><td>636</td><td>193347</td></tr><tr><td>2011-2012</td><td>204640</td><td>1621</td><td>206261</td></tr></table>	Year	Indian	Foreign	Total	2009-2010	164771	772	165543	2010-2011	192711	636	193347	2011-2012	204640	1621
Year	Indian	Foreign	Total																
2009-2010	164771	772	165543																
2010-2011	192711	636	193347																
2011-2012	204640	1621	206261																
				From above it is evident that pressure of tourism is very high. The logic of increasing no. of visitors in vacation days over and above the Effective Permissible Carrying Capacity by deployment of 10% extra staff needs to be looked into. Further as per the direction of Supreme Court and guide lines of NTCA the participation of EDC's in Eco Tourism activities has to be ensured.															

*What is the compliance status on Supreme Court/ NTCA Guidelines on Ecotourism in TRs?

6.5 Are local communities supportive of TR management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Local communities are hostile.	Poor		Draft TCP; Documents & reports from Director ; Information from discussions and field visits	<p>Most of local communities, especially tribal communities, are supportive of TR management in protection.</p> <p>There are 18 EDC's formed in the fringe villages (except one), where, Eco development initiatives undertaken by the TR management to secured good will from these communities.</p> <p>A "Health center" established at a fringe village named Mavanallah has been effective in securing good will from the surrounding communities towards management initiatives especially protection.</p> <p>Due to these initiatives incidents of poaching and fire have drastically come down as shown in the figures given below.</p> <p>Also, in a particular case involving offenders dealing with carnivore body parts (OR No78/2013OP) the local communities through the informants had communicated</p>
Some are supportive.	Fair			
Most locals are supportive of TR management.	Good	✓		
All local communities supportive of TR management.	Very good			

				<p>this information to the Forest Range officer, Masinagudi Range which leads to arrest of 4 offenders.</p> <p>Poaching incidences and fire incidents have dramatically reduced over the last few years. There have been no cases of encroachments.</p> <p>Poaching (except one case of opportunistic securing of a dead lizard). There has been only 18 nos. of small fire incidents during 2012 involving less than 180ha. of forest land and 8 no. of fire incidents during 2013 involving just 1.142ha. of forest land affected. This shows the effective action taken by the field staff coordinated by the control room in containing damage caused by the fire to the bare minimum.</p>
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**There could be many reasons for disenchantment. It could be real because of managerial neglect or the managerial efforts could be appropriate but there could be local elements/organizations who would like to keep the disaffection simmering for their own ulterior motives. Likewise success could be entirely because of the efforts of managers or they might be fortunate in striking partnerships with credible NGOs. Assessment may take the prevailing causes into account.*

7. MEE Score Card*

Framework Element Number	Framework Element Name	Number of Criteria (a)	Maximum Mark per question (b)	Total (a x b)	Marks obtained for the Element	Overall MEE Score and % age
1	Context	4	10	40	35	80.65%
2	Planning	7	10	70	60	
3	Inputs	5	10	50	37.5	
4	Process	6	10	60	37.5	
5	Outputs	4	10	40	35	
6	Outcomes	5	10	50	45	
Total		31		310	250	

**Efforts will be made by the NTCA-WII-MEE Team to address the issue of assigning 'differential' weightages to the 30 Assessment Criteria including 'normalization'.*

Assessment Criteria for addressing issues relating to Climate Change & Carbon capture in the Tiger Reserves (TRs)

1. *Additional Criteria on Climate Change: Is the TR being consciously managed to adapt to climate change?*

Condition	Category*	(Tick ✓)	Comment/ Explanation	Next Steps
There have been no efforts to consider adaptation to climate change in management	Poor		Rainfall data from 1990-2014 has been properly recorded in Masinagudi and Kargudi weather stations. Fire, wood and water management has been scheduled based on the climate change. Although Studies related to climate change have been given priorities and proposed in management plan, no concrete plans have been drawn up, except some suggesting for study and monitoring in general manner.	Guide lines should be issued at national level for assessment of impacts and measures for adaptations so as to prepare specific plans and their integration with the TCP.
Some initial thought has taken place about likely impacts of climate change, but this has yet to be translated into management plans	Fair	✓		
Detailed plans have been drawn up about how to adapt management to predicted climate change, but these have yet to be translated into active management.	Good			
Detailed plans have been drawn up about how to adapt management to predicted climate change, and these are already being implemented	Very good			

2. *Additional Criteria on Climate Change: Is the TR being consciously managed to prevent carbon loss and to encourage further carbon capture?*

Condition	Category*	(Tick ✓)	Comment/ Explanation	Next Steps
Carbon storage and carbon dioxide capture have not been considered in management of the TR	Poor		Forest protection ensures direct capture of carbon. Bamboo planting has been encouraged to capture the carbon. Fire incidents completely controlled to prevent carbon loss. LPG connection has been provided in all Anti-poaching camps, elephant camp and to families of fringe villages as well settlements within the core area. Although by adopting holistic conservation measures the carbon loss is generally prevented, there is no conscious effort management prescription in the plan for preventing its loss or capturing more carbon.	It is necessary to issue guidelines at National level for adopting various measures in this direction without compromising the primary objectives of Wildlife Habitat/ TR management to preserve the biodiversity of unique habitats/ eco systems.
Carbon storage and carbon dioxide capture have been considered in general terms, but has not yet been significantly reflected in management	Fair	✓		
There are active measures in place to reduce carbon loss from the TR, but no conscious measures to increase carbon dioxide capture	Good			
There are active measures in place both to reduce carbon loss from the TR and to increase carbon dioxide capture	Very good			

Management Effectiveness Evaluation (MEE) of Sathyamangalam Tiger Reserve

1. Context

1.1 Are the values of the TR well documented, assessed and monitored?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Values not systematically documented, assessed and monitored.	Poor		MP of Sathyamangalam Wildlife Sanctuary; Indicative TCP; Elephant Corridors of India; WTI Reports; Discussions with TR Officials	STR is a new Tiger Reserve which has recently been notified on 15 th March, 2013. Some major values were identified in the Management Plan (MP) of the sanctuary. The TCP is being prepared. There are some studies, carried out recently, which highlight the importance of this area as elephant corridor and also a habitat for tiger and its prey. Black bucks are distributed in Moyar Valley which is a unique habitat. Sandalwood is also widely distributed in the area. The area is also a major landscape component connecting Bandipur and Mudumali TRs to BRT and other adjoining TRs (Mudumalai-Tengumarhada-Sathyamangalam_BRT Tiger Corridor). A major portion of STR falls within Nilgiri Biosphere Reserve. STR is also a part of Nilgiri-Eastern Ghats Elephant Reserve. This Elephant Reserve is home to about 800-1000 elephants. Apart from biological values, this TR provide opportunity to establish an example where people may have to co-exist with tigers as there are 27 human settlements embedded in the TR which are not part of CTH.
Values generally identified but not systematically assessed and monitored.	Fair	✓		
Most values systematically identified, assessed and monitored.	Good			
All values systematically identified, assessed and monitored.	Very good			

1.2 Are the threats to TR values well documented and assessed*?

Assessment criteria ⁺				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Threats not systematically documented or assessed.	Poor		MP of Sathyamangalam Wildlife Sanctuary; Indicative TCP; Spatial Pattern of Forest Characteristics and Fire Susceptibility in the Sathyamangalam Landscape; Discussions with TR Officials	In the MP of Sathyamangalam Wildlife Sanctuary and Indicative TCP, the threats have not been properly listed and analyzed. However, based on the documents and discussion with the TR authorities, some of the major threats to the TR are biotic pressure of 27 embedded human settlements inside the core along with 140 fringe villages, fire, poaching, places of worship inside TR, invasion of Invasive Alien Species, low rainfall (around 800 mm annually), vacancies in sanctioned staff position and elephant-human conflict. The presence of large chunks of habitation inside the TR is definitely a major limitation as far as the contiguity of CTH and movement of tiger and elephants are concerned.
Threats generally identified but not systematically assessed.	Fair	✓		
Most threats systematically identified and assessed.	Good			
All threats systematically identified and assessed.	Very good			

⁺This assessment should be based on number, nature and extent of threats

1.3 Is the 'Core Area' of TR free from human and biotic interference?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
The 'Core Area' has extensive human and biotic interference.	Poor		G.O. (Ms.) No.41, E&F (FR V) Dept. dated 15.03.2013 issued by Govt. of Tamilnadu; Discussions with TR Officials	As per the notification of Sathyamangalam TR and discussion with TR officials, there is no habitation which is in core as all the human settlements have been excluded from the core. However, there are 9 tribal settlements and 18 revenue tribal settlements of Irulars, Sholagars, Ooralis and Kurumbas tribes inside the Tiger Reserve which have about 1705 families. The area under these settlements is around 12,800 ha. As all the human settlements inside the core have been excluded from the core area of the STR, legally they are not the part of the core. However their presence inside the core will not render the core inviolate. In addition there are also 140 fringe villages. This situation has also some challenges for TR authorities because the biotic pressure of these settlements is directly on core area. The TR Management has been providing LPG connections to villagers; the villagers have started replacing the scrub cattle by less number of better breed cattle; the outer boundaries of these settlements have been demarcated to prevent encroachment; and as a result of dialogue with the villagers, the incidences of fire are also reducing over the years. Apart from these embedded settlements, there are about 140 villages which have been identified as forest fringe villages and exert some sort of biotic pressure on core area.
The 'Core Area' has some human and biotic interference.	Fair	✓		
The 'Core Area' has little human and biotic interference.	Good			
The 'Core Area' has no human and biotic interference.	Very good			

***This assessment should be based on existence and the efforts made by TR management to address issues related to human settlements/ villages inside the core area; livestock grazing, cultivation, encroachments etc, resource extraction/ livelihood dependence of local communities and should reflect the overall interference due to all the above factors. The issue of 'Unified Control' of the 'Core' and 'Buffer' zones under the Field Director would also be taken into account.**

1.4 Has the TR complied with the four Statutory* Requirements (SR) along with Tripartite MoU and three Standard Operation Procedures (SOP)?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
None of the four SR, no compliance of Tripartite MoU and three SOPs met	Poor		1. G.O. (Ms.) No. 41, Env. and Forests (FR V) Dept. dt. 15-03-2013	Core and Buffer areas of Sathyamangalam Tiger Reserve have been legally notified vide G.O. (Ms.) No. 41, Environment of Forests (FR V) Dept. dt. 15-03-2013 and properly delineated. The notified area of core is 79349.331 ha. and of buffer is 61491.21 ha. Sathyamangalam Tiger Reserve Foundation was formed as per G.O. (Ms.) No. 182, Environment and Forests (FR V) Dept. dt. 11-11-2013. The indicative plan for Sathyamangalam Tiger Reserve was submitted to NTCA and comments have been received from NTCA vide letter No. F.No. 1-23/2013-NTCA, dated 20.11.2013. Based on the comments, Tiger Conservation Plan for STR is under preparation. The NTCA has extended the time limit for submission of the TCP by one year in
Two of the four SR, 50% conditions of the Tripartite MoU and SOPs complied	Fair		2. G.O. (Ms.) No. 182, Env. and Forests (FR V) Dept. dt. 11-11-2013	
Three of the four SR, 75% conditions of the Tri-partite MoU and SOPs complied	Good	✓	3. NTCA letter No. F.No. 1-23/2013-NTCA, dated 20.11.2013	
All four SR, 100% conditions of the Tripartite MoU and SOPs complied	Very good		4. Discussions with TR Officials	

				<p>meeting held in New Delhi on 12th May, 2014. However, Management Plan for Sathyamangalam Wildlife Sanctuary exists up to 2020.</p> <p>A State level Steering Committee under the Chairmanship of Chief Minister was constituted vide GO Ms No. 10 Environment and Forest (FR V) Department dated. 15.2.2008. However, for reconstitution proposal has been sent to Government vide Principal Chief Conservator of Forests and Chief Wildlife Warden letter No.WL5/18259/2013, dt.30-04-2013 and order from Government is awaited.</p> <p>With respect 3 SOPs, there has been only one occasion of a tiger death and the SOP was followed. There have been no cases of straying of tiger and disposal of carcasses of other animals. However, deep freezers, tranquilizing equipment and other essentials need to be procured as provided in the SOPs.</p>
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***Statutory requirements are (1) Legal delineation and notification of Core and Buffer Areas; (2) Establishment of Tiger Conservation Foundation; (3) Development of a Tiger Conservation Plan; and (4) Constitution of a State-level Steering Committee under the Chairmanship of the Chief Minister. TA refers agreement between Field Director, State Government and NTCA. The 3 SOPs are on (i) Straying of Tiger in human dominated landscape, (ii) Tiger Mortality and (iii) Disposal of Carcasses**

2. Planning

2.1 Status of Tiger Conservation Plan (TCP) *?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No TCP in place.	Poor		MP of Sathyamangalam Wildlife Sanctuary; Indicative TCP; Discussions with TR Officials; NTCA letter No. F.No. 1-23/2013-NTCA, dated 20.11.2013	The indicative plan for Sathyamangalam Tiger Reserve was submitted to NTCA and comments have been received from NTCA vide letter No. F.No. 1-23/2013-NTCA, dated 20.11.2013. Based on the comments, Tiger Conservation Plan for STR is under preparation. The NTCA has extended the time limit for submission of the TCP by one year in meeting held in New Delhi on 12 th May, 2014. However, Management Plan for Sathyamangalam Wildlife Sanctuary for the period 2010 to 2020 exists.
TCP is under preparation	Fair	✓		
TR has a relevant TCP	Good			
TR has a comprehensive and relevant TCP, duly approved by the NTCA	Very good			

***The scientific content and the participatory processes used in preparation of the TCP will be taken into account in assessing the quality of TCP.**

2.2 Does the TR safeguards the threatened biodiversity values?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR does not safeguard the threatened biodiversity values.	Poor		MP of Sathyamangalam Wildlife	<p>The major threat to all biodiversity values is from the biotic pressure of embedded settlements and fringe villages. To reduce the resource dependency, the network of VFCs/ EDCs is being broadened. At present, there are 113 such institutions. Efforts are being made to create alternate employment opportunities to reduce biotic pressure. Various line departments are also being engaged to mainstream their inputs for this purpose. NTFP value addition is also being promoted. Under Tamil Nadu Bio-diversity Conservation and Greening Project (TBGP), funds are being provided to EDCs as seed money for eco-development activities.</p> <p>Anti-poaching network has been strengthened by engaging 150 Anti-Poaching Watchers(APW) from fringe villages and making them stay in 15 AP camps at strategic locations with provision of ration, uniform, and other staying facilities. Regular monitoring, check post control, closing of forest roads, intelligence collection is done. Establishment of Wildlife Intelligence and Crime Control Unit has helped in detection of offences, keep an eye on previous offenders and has developed excellent intelligence network. The TR Authorities regularly receive intelligence information from good network of informers. Regular fire watchers, eco-watchers are also engaged from fringe villages. All previous offences are strictly followed for conviction. Phase IV monitoring of tigers is regularly undertaken in the TR with the association of WWF. The trend indicates a steady population in the TR. All temples without right of way closed and visit to other temples inside TR are highly regulated and discouraged with awareness. Awareness training has been conducted for Temple Priests to make them aware about TR regulations and ensuring no-plastic use. Invasion of Invasive Alien Species (IAS) is also a major threat. Approximately 37000 ha are infested with IAS as per study conducted under TBGP scheme: "Baseline Survey of Biodiversity prior to removal of Invasive alien Species" by Dept of Wildlife Biology, TNAU, Coimbatore. As per the study, <i>Prosopis</i> and <i>Lantana</i> are being removed from the core area. Separate study is being conducted to know the "Status and distribution of critical, endangered and data deficient taxa in Sathyamangalam Tiger Reserve" by SACON. This study may highlight the importance of such taxa for their conservation. Vulture conservation and population monitoring is one of the priority activities in the TR with</p>
TR safeguards a few threatened biodiversity values.	Fair		Sanctuary; Indicative TCP; Discussions with TR Officials;	
TR safeguards a large number of threatened biodiversity values.	Good	✓	Various studies conducted in STR;	
TR safeguards all threatened biodiversity values.	Very good		Records maintained in APCs; Interaction with EDC members	

				<p>periodical studies and research. Arulagam Trust is coordinating the activity with the Dept. Many White-backed Vulture nests along Moyar River Riparian Zone have been located and continuously monitored.</p> <p>Since the TR faces hostile weather for almost 5-6 months, water management planning is most important in the TR.</p> <p>A study on "Developing Water Management Strategy and Action Plan" was done by Care Earth Trust and accordingly number of check dams, percolation ponds and their desilting has been planned.</p>
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***Remarks need to elaborate on the kind of safeguards and how they work or are intended to work**

2.3 Are stakeholders given an opportunity to participate in planning process?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little, if any opportunity for stakeholder participation in planning.	Poor		Discussions with TR Officials; Interaction with EDC members	<p>As STR has been notified in March, 2013 and has come into existence in December, 2013, the process of taking the stakeholders into the planning process is in the preliminary stage. The preparation of TCP is also underway. The TR Officials informed that various stake-holders will be involved during the planning process.</p> <p>However, a total of 12 EDCs and 101 VFCs are functioning in STR. The welfare of members of these JFMCs is being taken care of by undertaking eco-development works by the STR Authorities.</p> <p>The members of these committees regularly attend the meetings with STR Management, District Administration and line departments in JFMC meetings and their grievances are attended to.</p>
Stakeholders participate in some planning.	Fair	✓		
Stakeholders participate in most planning processes.	Good			
Stakeholders routinely and systematically participate in all planning processes.	Very good			

***The result of participation must show in the field and not merely reported as a routine exercise.**

2.4 Are habitat management programmes systematically planned, relevant and monitored, and contribute effectively to Tiger and other endangered species conservation?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Habitat management programmes are entirely adhoc.	Poor		MP of Sathyamangalam Wildlife Sanctuary; Indicative TCP; Discussions with TR Officials; Various studies conducted in STR;	<p>The MP of Sathyamangalam Wildlife Sanctuary and the Indicative Plan for STR provide for weed management and water resource management under habitat management.</p> <p>Approximately 37000 ha is infested with Invasive Alien Species as per study conducted under TBGP scheme: "Baseline Survey of Biodiversity prior to removal of Invasive alien Species" by Dept of Wildlife Biology, TNAU, Coimbatore. As per the study, <i>Prosopis</i> and <i>Lantana</i> are being removed from the core area.</p> <p>Separate study is being conducted to know the "Status and distribution of critical, endangered and data deficient taxa in Sathyamangalam Tiger Reserve" by SACON. This study may highlight the</p>
Limited planning and monitoring programmes are in place for habitat management.	Fair			
Habitat management programmes are generally planned and monitored.	Good	✓		
Habitat management programmes are thoroughly planned and monitored.	Very good			

			<p>importance of such taxa for their conservation. Vulture conservation and population monitoring is one of the priority activities in the TR with periodical studies and research. Arulagam Trust is coordinating the activity with the Dept. Many White-backed Vulture nests along Moyar River Riparian Zone have been located and continuously monitored.</p> <p>There are 6 perennial and 28 semi-perennial rivers in the TR. There is however, no mention of management of riparian area in either plan. Water regulations have been provided in the MP and have been linked with conservation of elephants. Since the TCP of STR is under preparation, all relevant factors pertaining to habitat management programme should be included in planning.</p>
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***This assessment should be primarily based on habitat management programmes in relation to habitats for species that are threatened (IUCN categories), are habitat specialists, subjected to seasonal movements, wide ranging with emphasis on the breeding and rearing habitat and may include factors such as food, water, shelter (all connotations).Habitat structure, composition, unique patches of vegetation and sensitive sites, sources of water and their distribution are integral. Corridors within buffer zone are critically important. For example, all riparian habitats. Have these been addressed? Is their a planning process in place? The management practices dealing with invasive species such as Lantana, Michania etc. would be examined.**

2.5 Does the TR has an effective Protection Strategy (PS)* and Security Plan and Security Audit (SA) in place?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR has little or no PS and SA.	Poor		MP of Sathyamangalam Wildlife Sanctuary; Indicative TCP; G.O. (Ms) 167 dated 22.10.2013 E & F Deptt., Govt. of TN; Discussions with TR Officials; Inspection of APCs	<p>The STR is managed under two Divisions and 11 Ranges. The MP of Sathyamangalam Wildlife Sanctuary provide for an effective forest protection and anti-poaching activities. The strategy of protection is as follows:</p> <ul style="list-style-type: none"> • Strengthening of Check Post • Wildlife High Way Patrolling • Communication Net work • Field Patrolling and Surveillance • Anti-Poaching Camps • Intelligence Gathering • Joint Inter State Meeting • Capacity Buildings for the Field Staff • Co-ordination with Line Agencies for Better Protection • Special Strike Force <p>There is an internal intelligence collection and protection aid forum set up by the Field Director called WICCU; Wildlife Intelligence & Crime Control Unit helping in offence detection intelligence and punishment.</p> <p>There is also Forest Protection & Vigilance Squad functioning here under the control of CCF, Vigilance.</p> <p>Vehicles have been provided in all 11 Ranges which strengthened mobility for protection.</p> <p>Weapons are available for all beats as well as for FROs and DFOs.</p> <p>Anti-Poaching Watchers strength increased to 150 as sanctioned by the Government in lieu of</p>
TR has an adhoc PS and SA.	Fair			
TR has a generally relevant PS and SA but is not very effective.	Good	✓		
TR has a comprehensive and very effective PS and SA.	Very good			

				<p>permanent staff, who have been deputed at vulnerable locations.</p> <p>Additional DFO, Range and staff requirement as proposed has been sanctioned by the Government. This has added strength to protection.</p> <p>The road conditions are not very amicable for patrolling vehicles and need better maintenance. At present, the STR Authorities have not prepared the Security Plan and as such there have been no security audits as well.</p> <p>The details of number of offences reported, cases compounded and prosecution initiated are as follows:</p>																
				<table><tr><th>Year</th><th>No. of cases</th><th>Cases Compounded</th><th>No.of accused chargesheeted</th></tr><tr><td>2011-12</td><td>536</td><td>478</td><td>58</td></tr><tr><td>2012-13</td><td>526</td><td>483</td><td>42</td></tr><tr><td>2013-14</td><td>190</td><td>165</td><td>25</td></tr></table>	Year	No. of cases	Cases Compounded	No.of accused chargesheeted	2011-12	536	478	58	2012-13	526	483	42	2013-14	190	165	25
Year	No. of cases	Cases Compounded	No.of accused chargesheeted																	
2011-12	536	478	58																	
2012-13	526	483	42																	
2013-14	190	165	25																	

**This assessment takes inter-alia into account the nature of threats, the number and location of patrolling camps and foot and mobile patrolling, needs that relate to available manpower, terrain difficulties, practicability of area coverage, readiness to contain specific threats with necessary support and facilities. The constitution and functioning of Special Tiger Protection Force (STPF), Number of offences reported, arrests made, prosecution initiated and conviction achieved will be taken into account.*

2.6 Has the TR been effective in the mitigation of human-wildlife conflicts?

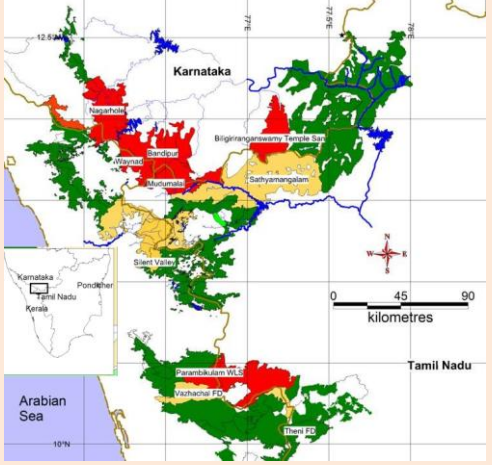
Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Human-wildlife conflicts are significant but poorly addressed.	Poor		MP of Sathyamangalam Wildlife Sanctuary; Indicative TCP; Discussions with TR Officials	<p>Human-Elephant conflict is the major conflict in STR and high conflict areas are Bhavanisagar followed by Talawady and Sathyamangalam Ranges.</p> <p>To reduce the conflict several measures have been taken up by the STR Management: 150 kms of EPT dug on priority during last 10 years out of which 50 kms was dug in last year itself; Anti-depredation Squad formed in Bhavanisagar and Talawady Ranges with local villagers and volunteers on wages and with provision of vehicle and fuel;</p> <p>Trained staff have been deployed for driving strayed elephants back into the forest areas; Regular Awareness programmes have been organized for villagers, school students, etc; Tranquilizing equipment, rescue equipments, trapping cage and medicines have been procured for emergency; Trip Alarm System & Elephant Early Warning Systems have been installed at sensible areas of Bhavanisagar and Talavadi Ranges; Waterholes, water troughs, de-silting of water holes and planting of fodder seedlings etc. have been done to keep elephants inside the forest areas; Local administration, Police, Elected Representatives have always been with the</p>
TR has been able to mitigate few human-wildlife conflicts.	Fair			
TR has been able to mitigate many human-wildlife conflicts.	Good	✓		
TR has been effective in mitigating all human-wildlife conflicts.	Very good			

			<p>department during such human-elephant crisis. In year 2013-14, an amount of 74.99 lakhs has been paid as compensation to crop damage, human injury & death, live-stock damage, etc. within a month of budget/ LoC allotment. Adequate compensation for affected people is given as early as possible in accordance with the instruction of the state government.</p> <table><tr><th>Year</th><th>No. of Cases</th><th>Compensation Paid (Rs.)</th></tr><tr><td>2011-12</td><td>21</td><td>1296700</td></tr><tr><td>2012-13</td><td>2</td><td>300000</td></tr><tr><td>2013 -14</td><td>88</td><td>5034800</td></tr></table> <p>Due to various reasons, the time period taken to pay compensation is large. This needs to be reduced.</p>	Year	No. of Cases	Compensation Paid (Rs.)	2011-12	21	1296700	2012-13	2	300000	2013 -14	88	5034800
Year	No. of Cases	Compensation Paid (Rs.)													
2011-12	21	1296700													
2012-13	2	300000													
2013 -14	88	5034800													

***The assessment will take into account the number of incidences reported and payment of compensation made and its timeliness.**

2.7 Is the TR integrated into a wider ecological network/ landscape following the principles of the ecosystem approach?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR not integrated into a wider network/ landscape.	Poor		Indicative TCP; NTCA letter No. F.No. 1-23/2013-NTCA, dated 20.11.2013; Right of Passage; Elephant corridors of India; P.S.Easa, R.Sukumar & Others 2005; Conservation of Asian Elephant in the Nilgiris Eastern Ghats Landscape, South India by WWF, India, 2004; Status of Tiger & Co-predators in Nilgiri North forest Division and Sathyamangalam Wildlife Sanctuary, WWF India, 2009-10; Discussions with TR Officials	Sathyamangalam Tiger Reserve is highly critical for movement of the spill over tiger population from Biligiri Rangasamy Temple (BRT) Tiger Reserve (Karnataka) on the Northern side of the core area. A length of 43 km is shared by the core area with BRT Tiger Reserve. The core area also shares the boundary with the Bandipur Tiger Reserve for a length of 14 km on the Western side. On the Southern side, the core area shares its boundary with Nilgiri North Division (Buffer area of Mudumalai Tiger Reserve) for a length of 40 km. The buffer area of STR shares its boundary with Erode and Cauvery Wildlife Sanctuary on the Eastern and Northern side for a length of 32 km and 24 km respectively. Mudumalai-Tengumalhada-Sathyamangalam-BRT Tiger corridor is also identified by WWF study during recent times. Thus STR serves as an important block of area accommodating spill over population of tiger and providing connectivity to major tiger bearing areas surrounding it.
Some limited attempts to integrate the TR into a network/ landscape.	Fair			
TR is generally quite well integrated into a network/ landscape.	Good	✓		
TR is fully integrated into a wider network/ landscape.	Very good			

				 <p>STR is acting as a bridge between two major landscapes i.e. Western Ghats and Eastern Ghats and thus ensures diversified prey base and a vast area for tigers for genetic exchange and their long time survival.</p> <p>A major portion of STR falls within Nilgiri Biosphere Reserve.</p> <p>STR is also a part of Nilgiri-Eastern Ghats Elephant Reserve. This Elephant Reserve is home to about 800-1000 elephants. It has the following important identified elephant corridor/ connecting paths</p> <ul style="list-style-type: none"> • Chamaraj nagar – Talamalai via Punjur • Chamaraj nagar – Talamalai via Muddahalli • Moyar valley Eastern Ghats between Tengumalhada & Kallampalayam. • Sujjalkuttai and Bannari • Kallampalayam and Uppupallam • Moyar and Avarahalla
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***Assessment needs to consider the scope of opportunities on the landscape scale that exist. Consider whether any attempts have been made and what are these? Have all the important corridors been identified? What actions are planned/implemented for their security? Have the Forest Working Plans and Forest Development Corporation Plans within the identified landscapes taken cognizance of such new requirement? These should have been reflected in TCPs. Is there is any effort to rationalize landuse around TR? Is any effort being made to plan and use 'Smart Green Infrastructure'?**

3. Inputs

3.1 Are personnel adequate, well organized and deployed with access to adequate resources in the Tiger Reserve (TR)*?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Few, personnel explicitly allocated but poorly supported for TR management.	Poor		G.O. (Ms) 167 dated 22.10.2013 E & F Deptt., Govt. of TN; Discussions with TR Officials;	Govt. of Tamil Nadu sanctioned an additional new division, 4 new ranges and supporting establishment for STR, which is adequate for the management of STR. As per the information provided by the STR Authorities, there are vacancies at the frontline staff level. Against 82 sanctioned posts of Forest Guards, only 49 posts are filled and 33 posts are lying vacant. Similarly against 52 sanctioned posts of Forest Watchers, only 29 posts are filled and 23 posts are lying vacant. Overall, against total sanctioned posts of 242 in all staff categories, only 129 posts are filled and 113 posts are lying vacant. About 40% of the Forest Guards are in the age classes below 50 and rest are above 50 years of age. The State Government has announced to fill up all vacancies in the Frontline Staff category by constituting uniform recruitment committee. The government sanctioned 150 Anti-Poaching Watchers, who have been engaged under Project Tiger and this has been a great strength for protection in place of Forest Guards and Forest Watchers.
Some personnel explicitly allocated for TR management but not adequately supported and systematically linked to management objectives.	Fair	✓		
Some personnel with fair support explicitly allocated towards achievement of specific TR management objectives.	Good			
Adequate personnel appropriately supported and explicitly allocated towards achievement of specific TR management objectives.	Very good			

***This assessment should inter-alia be based on number of personnel allocated for attainment of TR objectives at the Range, Round, Beat and Patrolling camps levels or as relevant to the needs (sanctioned posts vis- a- vis existing personnel and needs beyond the sanctioned strengths. It is possible that posts have last been sanctioned several years back that do not now account for the current needs)**

3.2 Are resources (vehicle, equipment, building etc.) adequate, well organized and managed with desired access?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Few, if any, resources explicitly allocated for TR management.	Poor		Documents provided by TR Officials and Discussions with TR Officials;	Different resources required for TR management are adequate, well organized and maintained. All 11 Ranges including special Range have been provided vehicles. Quarters are available for most of the existing field staff and are maintained annually. There are 185 government buildings, 85 bore-wells and 17 wells for different categories of staff. Infrastructures for newly created Ranges, Hassanur Division Office and Residence for Deputy Director have been sanctioned and these buildings are under construction. Infrastructure for office staff is required to be built, which has been proposed in the current financial year. Eco-tourism infrastructure is to be developed as per the proposal being carved out separately.
Some resources explicitly allocated for TR management but not systematically linked to management objectives.	Fair			
Some resources explicitly allocated towards achievement of specific TR management objectives.	Good	✓		
Adequate resources explicitly allocated towards achievement of specific TR management objectives.	Very good			

			Arms and ammunitions (77 guns and 1078 round of ammunition) and GPS (42 nos.) are present at beat level and few foresters and all range officers too have weapon in their custody. DFOs too have weapon for their self protection. Ammunitions for all the weapons are sufficient.
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* These form a variety of resources. These may be segregated into immovable (structures) and movable categories and each further may be considered under the essential and desirable categories. It is best to start with what are the minimum needs to attain each objective, what is available and manner of use/deployment. The proportions of the 'essentials' and 'desirables' along the importance gradient of objectives would serve as pointers for score categories. Specific remarks would be vitally important.

3.3 Are financial resources other than those of the State linked to priority actions and are funds adequate, released timely and utilized?

Assessment criteria*																																						
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks																																		
Resource allocation is adhoc, funds are inadequate and seldom released in time and not utilized.	Poor		Documents provided by TR Officials and Discussions with TR Officials	<div>STR has been notified in March, 2013 and has come into existence in December, 2013. Therefore the detail of funding from NTCA is available only for 2013-14.</div> <div>(Rupees in lakhs)</div> <table><tr><th>Year</th><th>Name of the scheme</th><th>Allotment</th><th>Achievement</th></tr><tr><td rowspan="3">2011-12</td><td>Project Tiger</td><td>-</td><td>-</td></tr><tr><td>Project Elephant</td><td>24.900</td><td>22.077</td></tr><tr><td>Nilgiri Biosphere Reserve</td><td>14.100</td><td>12.200</td></tr><tr><td rowspan="3">2012-13</td><td>Project Tiger</td><td>-</td><td>-</td></tr><tr><td>Project Elephant</td><td>24.786</td><td>20.010</td></tr><tr><td>Nilgiri Biosphere Reserve</td><td>-</td><td>-</td></tr><tr><td rowspan="3">2013-14</td><td>Project Tiger</td><td>162.308</td><td>76.080</td></tr><tr><td>Project Elephant</td><td>3.406</td><td>3.406</td></tr><tr><td>Nilgiri Biosphere Reserve</td><td>2.150</td><td>2.150</td></tr></table> <div>The reason of only 47% of expenditure cited by STR Authority was that the NTCA funding was received only by March end.</div> <div>It was also brought to the notice of the MEE Committee members by the STR Authorities that in CSSs, the time gap between the date of issue of GO and release of funds through LoC is considerably long. All the LoCs were released either in the month of February end or in March.</div>	Year	Name of the scheme	Allotment	Achievement	2011-12	Project Tiger	-	-	Project Elephant	24.900	22.077	Nilgiri Biosphere Reserve	14.100	12.200	2012-13	Project Tiger	-	-	Project Elephant	24.786	20.010	Nilgiri Biosphere Reserve	-	-	2013-14	Project Tiger	162.308	76.080	Project Elephant	3.406	3.406	Nilgiri Biosphere Reserve	2.150	2.150
Year	Name of the scheme	Allotment			Achievement																																	
2011-12	Project Tiger	-			-																																	
	Project Elephant	24.900			22.077																																	
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2013-14	Project Tiger	162.308	76.080																																			
	Project Elephant	3.406	3.406																																			
	Nilgiri Biosphere Reserve	2.150	2.150																																			
Some specific allocation for management of priority action. Funds are inadequate and there is some delay in release, partially utilized.	Fair	✓																																				
Comprehensive planning and allocation that meets the most important objectives. Generally funds released with not much delay and mostly utilized.	Good																																					
Comprehensive planning and allocation of resources for attainment of most objectives. Funds generally released on-time and are fully utilized.	Very good																																					

*Obtain details of funds released by NTCA and their utilization by TR in the last 3 years and indicate them under 'Remarks'. Also comment on the problems associated with fund allocations and their utilization.

3.4 Are financial resources from the State linked to priority action and funds adequate, timely released and utilized for the management of Tiger Reserve?

Assessment criteria*																		
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks														
Resource allocation is adhoc, funds are inadequate and seldom released in time and not utilized.	Poor		Documents provided by TR Officials and Discussions with TR Officials	STR has been notified in March, 2013 and has come into existence in December, 2013. STR received funds under 21 different schemes of the state government. Other than regular schemes, various special schemes like Creation of Fodder Resources, Removal of Invasive Species, Augmentation of Water Resources, Eco-development Plans, Asian elephant Depredation and Mitigation Measures, etc. are directly linked with management priorities. The funds received in STR during last three years and their utilization is shown below: <table><tr><th>Year</th><th>Name of scheme</th><th>Allotment (Rs. in lakh)</th><th>Achievement (Rs. in lakhs)</th></tr><tr><td>2011-12</td><td rowspan="3">21 different schemes of the State Government</td><td>308.451</td><td>279.309</td></tr><tr><td>2012-13</td><td>367.206</td><td>296.348</td></tr><tr><td>2013-14</td><td>495.093</td><td>400.990</td></tr></table>	Year	Name of scheme	Allotment (Rs. in lakh)	Achievement (Rs. in lakhs)	2011-12	21 different schemes of the State Government	308.451	279.309	2012-13	367.206	296.348	2013-14	495.093	400.990
Year	Name of scheme	Allotment (Rs. in lakh)			Achievement (Rs. in lakhs)													
2011-12	21 different schemes of the State Government	308.451			279.309													
2012-13		367.206			296.348													
2013-14		495.093	400.990															
Some specific allocation for management of priority action. Funds are inadequate and there is some delay in release, partially utilized.	Fair	✓																
Comprehensive planning and allocation that meets the most important objectives. Generally funds released with not much delay and mostly utilized.	Good																	
Comprehensive planning and allocation of resources for attainment of most objectives. Funds generally released on-time and are fully utilized.	Very good			Receipt of funds under some schemes, such as, Finance Commission and Raising of fodder species, delayed due to various administrative reasons till February – March and therefore funds could not be properly utilized.														

**Obtain details of funds released by State and their utilization by TR in the last 3 years and indicate them under 'Remarks'. Also comment on the problems associated with fund allocation and their utilization.*

3.5 What level of resources are provided by NGOs?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
NGOs contribute nothing for the management of the TR.	Poor		Documents provided by TR Officials and Discussions with TR Officials; Publications and Reports of NGOs	<p>NGOs are actively involved in various activities of Tiger Reserve management. The details are as follows:</p> <ul style="list-style-type: none"> • WWF, India (Tiger Population estimation) • WTI (Skill development) • OSAI (Awareness) • Arulagam (Vulture Conservation) • SEWA (Awareness) • Keystone (Awareness and Eco Development) • Tamil Nadu Green Movement (Awareness, Cross Border Intelligence) <p>WTI has provided basic utility kit to all 150 APWs with bag, jacket, shoes, torch, etc.</p> <p>WWF have provided 4 Patrol bikes to Foresters, 2 Bolero Camper vehicles for water supply to camps and water troughs.</p> <p>Apart from these core activities, all these NGOs have been regularly associated with skill development activities of staff and VFCs.</p>
NGOs make some contribution to management of the TR but opportunities for collaboration are not systematically explored.	Fair			
NGOs contributions are systematically sought and negotiated for the management of some TR level activities.	Good	✓		
NGOs contributions are systematically sought and negotiated for the management of many TR level activities.	Very good			

4. Process

4.1 Does the TR have manpower resources trained in wildlife conservation for effective TR management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No trained officers and frontline staff in the TR.	Poor		MP of Sathyamangalam Wildlife Sanctuary; Indicative TCP; Documents provided by TR Officials; Discussions with TR Officials	<p>In the MP of Sathyamangalam Wildlife Sanctuary, the following areas have been identified for capacity building of staff:</p> <ul style="list-style-type: none"> • Periodical training to the field staff on the use of field equipments • Training on Animal Census – Refreshing course • Periodical workshop on participatory approach with local communities • Training on conservation and awareness programme to address issues of Human-Animal Conflict • Training on documenting animal movements for APW and field staff • Training on use of arms <p>At present, no officer has been trained in wildlife management under Diploma or Certificate Course training at WII.</p> <p>All the 3 IFS officers (FD & DDs) in STR have been trained in IGNFA/SFS College with a separate Wildlife Management Module co-ordinated by WII.</p> <p>The Forest Range Officers and Foresters are trained at Tamil Nadu Forest Academy with a course on wildlife management. They have been</p>
Some trained officers and few trained frontline staff, posted in the TR.	Fair	✓		
All trained officers and and fair number of trained frontline staff posted in the TR.	Good			
All trained officers and most of the trained frontline staff is posted in the TR.	Very good			

				<p>regularly called for refresher courses and subject based trainings in wildlife and conflict management.</p> <p>Forest Guards and Forest Watchers have also been trained at Forest Training College, Vaigai Dam on various basic aspects of wildlife management and they have been periodically called back for courses on conflict management every year. STF also trains them periodically in Weapon Training and Jungle Combat modules. STR also regularly organize short term (1 to 3 days) trainings on weed management, human-animal conflict, eco-development, micro-planning, eco-tourism, disaster management, GIS/ MIS, Project Orientation etc.</p> <p>APWs have been trained in Vaigai Dam yearly once on basic protection techniques. They are trained by STF, WCCB, WTI, WWF, OSAI and other NGOs on Jungle Survival, Combat training, Combing Operations, intelligence, etc.</p> <p>All the staff get the opportunity to participate in some training course.</p>
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***Indicate % of trained staff in various categories. The number and thematic areas of the 'Internal Training' programmes organized in the TR in the last 3 years may be taken into account. Has the TR prepared a 'Staff Development Plan'? Is it being implemented?**

4.2 Is TR staff management performance linked to achievement of management objectives?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No linkage between staff management performance and management objectives.	Poor		Documents provided by TR Officials; Discussions with TR Officials	Performance evaluation at annual interval is being carried out for the front line staff on the basis of objectives achieved and other criteria as per service rule. The promotions are mostly on the basis of seniority subjected to rejection of unfit. Regular review meetings, field inspections, weekly diaries and fortnightly diaries are used as tool to monitor the performances. . With such regular monitoring and official procedures, staff performs to achieve the management objectives and those who willingly do not perform as required, are punished, corrected or replaced.
Some linkage between staff management performance and management objectives, but not consistently or systematically assessed.	Fair	✓		
Management performance for most staff is directly linked to achievement of relevant management objectives.	Good			
Management performance of all staff is directly linked to achievement of relevant management objectives.	Very good			

4.3 Is there effective public participation in TR management* and does it show in making a difference?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no public participation in TR management.	Poor		Documents provided by TR Officials; Discussions with TR Officials; Interaction with VFC members	Participation of public is ensured through activities like PRA planning in EDC/ VFC activities, various trainings, interactions, feedback, eco-awareness programmes, etc. Every month, there is one VFC meeting at range level where-in members are sensitized for wildlife conservation. Apart from these interactions, Public, as volunteers have been part of population estimation exercise in STR. 54 Volunteers and 20 representatives of four NGOs participated in recent population estimation exercise.
Opportunistic public participation in some of the relevant aspects of TR management.	Fair	✓		
Systematic public participation in most of the relevant aspects of TR management.	Good			
Comprehensive and systematic public participation in all important and relevant aspects of TR management.	Very good			

***The involvement of NGOs/ NGLs in population estimation may be taken into account)**

4.4 Is there a responsive system for handling complaints and comments* about TR management?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Ad-hoc approach to handling complaints.	Poor		Documents provided by TR Officials; Petition Register; Discussions with TR Officials;	Petitions received from public regarding issues related to STR management are entered in Petition Register and then the petition is confidentially and discretely enquired by Assistant Conservator of Forests, Forest Protection Squad or WICCU team as per the subject matter of the petition. Grievances in the form of petitions and personal requests too are attended to immediately and are filed in office and are reviewed by head of office periodically and report goes to PCCF and CMO in case of CM Cell Petition, which is to be dealt within 15 days/ a month Apart from this, there is an online grievance redressal system which is enabled through STR website: www.str-tn.org Apart from this, a system of Complaint box/ Suggestion box has been maintained at each Range office and Division Office. Suggestion register is maintained at Superintendent table and in Forest Rest Houses.
Complaints handling system operational but not responsive to individual issues and with limited follow up.	Fair			
Coordinated system logs and responds effectively to most complaints.	Good	✓		
All complaints systematically logged in coordinated system and timely response provided with minimal repeat complaints.	Very good			

***Does the TR maintains 'Suggestions Register'? What actions are taken to deal with suggestions?**

4.5 Does TR management addresses the livelihood issues* of resource dependent communities, especially of women?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No livelihood issues are addressed by TR management.	Poor		Documents provided by TR Officials; Discussions with TR Officials;	Sathyamangalam is known for good EDC and VFC activities. There are a total of 102 VFC's and newly formed 12 EDC's in the division. Rs.60-70 lakh is the revenue earned by these VFCs. Seed money of Rs.5 lakh is given to all EDCs for providing loans to income generation activities. During Tamilnadu Aforestation Programme (TAP I, II) and with revolving fund, an amount of Rs. 1, 15, 20,000 has been disbursed to 192 SHG's of women through VFC's in Sathyamangalam for income generation activities. The loan money is revolved for collection and rotation. Women were always benefited through EDC and VFC's, because they take loan and repay it back promptly through SHG's. Micro credit has always been a helping hand to women. Individual livelihood activities and SHG activities have always been encouraged by loans and trainings, etc. Women have been compulsory part of all such JFMC activities. They have been trained by TRIFED, Avinashilingam Trust, SUDAR for various income generation and NTFP value addition activities, etc. Apart from these tribals have been engaged as APW's, fire watchers, eco watchers and have been labour force for all SMC and afforestation works in forest areas.
Few livelihood issues are addressed by TR management.	Fair			
Substantial livelihood issues are addressed by TR management.	Good	✓		
Livelihood issues of resource dependent communities especially of women are addressed effectively by TR managers.	Very good			

***The number of mandays generated in the last 3 years may be taken into account. Are funds received from District Agencies and other sources? Provide details of funds received in last 3 years.**

4.6 Has the TR planned and implemented the voluntary 'Village Relocation' from the Core/ Critical Tiger Habitat (CTH)?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No planning and no implementation	Poor		Documents provided by TR Officials; Discussions with TR Officials;	As all the human settlements inside the core have been excluded from the core area of the STR, legally they are not the part of the core. However their presence inside the core will not render the core inviolate. Hence voluntary relocation process as applicable in other cases should be planned and implemented. Under Forest Rights Act, 2006, total 411 individual claims have been admitted over about 320.399 ha of forest land. Members of tribal communities of 9 Forest Settlements and 19 Revenue Settlements have been allowed to collect MFP in 23230 ha as per GO.
Plans have been made but no implementation	Fair	✓		
Plans have been made and some implementation is in progress	Good			
Plans have been made and are being actively implemented/ no human habitation in the CTH	Very good			

***Assessment will look into the village relocation planning process including availability of manpower, financial resources and NGO support, if any. Is there a mechanism to address the complaints received in respect of relocation process? Effort must be made to assess post-relocation success or otherwise.**

5. Output

5.1 *Is adequate information on TR management publicly available?*

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no information on TR management publicly available.	Poor		Press releases; Website; Discussions with TR Officials;	Before the constitution of STR, pamphlets about Sathyamangalam Wildlife Sanctuary were printed and distributed. The same is being done for STR. News paper articles on issues and aspects related to STR regularly feature in print media. Recently a website has been developed (www.str-tn.org) for better publicity. Since TCP is under preparation, the approved Management Plan for Satyamangalam Wildlife Sanctuary has been uploaded in this site and is available to public. The site provides good amount of information to public. All the important activities of management are regularly updated and made known to public. There is also STR feeder site for social media which is a link to the website.
Publicly available information is general and has limited relevance to management accountability and the condition of public assets.	Fair			
Publicly available information provides detailed insight into major management issues and condition of public assets.	Good	✓		
Comprehensive reports are routinely available in public domain on management and condition of public assets.	Very good			

5.2 *Are visitor services and facilities appropriate and adequate?*

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Visitor services and facilities do not exist.	Poor		Documents provided by TR Officials; Discussions with TR Officials;	Since the PA (earlier a wildlife sanctuary notified in 2008 and now a tiger reserve notified in 2013) has recently been constituted, the visitor services and facilities are very basic in nature at present. There are 9 FRHs in STR, some of which carry heritage tag with them for being very old rest houses constructed during British period. The oldest FRH at Hasanur was constructed in 1896. There is also a base level interpretation centre at Hasanur which is being improved upon by Keystone Foundation. At present, there are certain fire watch towers, which are used by the visitors. In the TCP, the STR Authorities will include Eco-tourism Plan and according to which visitor services and facilities should be developed.
Visitor services and facilities are very basic.	Fair	✓		
Visitor services and facilities are monitored from time to time and are fairly effective.	Good			
Visitor services and facilities are conscientiously maintained, regularly upgraded and monitored for visitor satisfaction	Very good			

**Include the existence and quality of visitor and interpretation centers, including skills and capabilities of personnel manning these, TR related publications, films, videos; arrangements of stay (including places serving refreshments and food owned and managed by TR), watch towers and hides including safety factors, vehicles assigned for visitors including riding elephants, if any and their deployment, drinking water, rest rooms, garbage disposal, attended and self guided services in the field, visitor feed back on the quality of wilderness experience.*

5.3 Are research/ monitoring related trends systematically evaluated and routinely reported and used to improve management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no systematic evaluation or routine reporting of trends.	Poor		Documents provided by TR Officials; Discussions with TR Officials;	In spite of being notified as TR very recently (last Year), STR, even as a PA Sahtyamangalam has been exceptional in attracting many individuals and organizations to carry out research in recent years. So far, 29 scientific studies have been conducted in STR and 14 studies are ongoing. The very reason behind rediscovery of tiger in STR has been the study conducted by WTI and CCMB. The Phase IV monitoring of tiger population with camera traps is being done by WWF, India.
Some evaluation and reporting undertaken but neither systematic nor routine.	Fair			
Systematic evaluation and routine reporting of trends undertaken.	Good	✓		
Systematic evaluation and comprehensive reporting of trends undertaken and attempts made at course corrections as relevant.	Very good			

***Not all TRs attract projects and researchers and with exceptions, little research takes place on the TRs own steam because of systemic limitations. However, monitoring of some critical issues is expected e.g. population of tiger, co-predators and prey with insights into their demography and distribution (some opportunistic sampling by sightings, signs and spatial distribution during assessment would be extremely useful in terms of expert impression and as a pulse), monitoring incidence of livestock grazing, fires, weeds, sources of water, a variety of illegal activities typically associated with the reserve, wildlife health (e.g. epidemics, immunization of livestock) regeneration and change in vegetation, visitors and their activities, offence cases, ex-gratia payments etc. Efforts must be made to assess the planning and implementation of Phase-IV monitoring protocols and the success of implementation of M-Stripes (wherever applicable). Are the 'Sykes and Horill' monitoring plots maintained and data analyzed?**

5.4 Is there a systematic maintenance schedule and funds in place for management of infrastructure/assets?

Assessment criteria																				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks																
No systematic inventory or maintenance schedule.	Poor		Documents provided by TR Officials; Discussions with TR Officials;	As per the information and documents provided by the STR Authorities, there is no fund crunch for maintenance of buildings, vehicles, equipments etc. The funds received in STR during last three years from State schemes and their utilization is shown below:																
Inventory maintenance is adhoc and so is the maintenance schedule.	Fair																			
Systematic inventory provides the basis for maintenance schedule but funds are inadequate.	Good	✓																		
Systematic inventory provides the basis for maintenance schedule and adequate funds are made available.	Very good																			
				<table><tr><th>Year</th><th>Name of scheme</th><th>Allotment (Rs. in lakh)</th><th>Achieve-ment (Rs. in lakhs)</th></tr><tr><td>2011-12</td><td>21 different</td><td>308.451</td><td>279.309</td></tr><tr><td>2012-13</td><td>schemes of the</td><td>367.206</td><td>296.348</td></tr><tr><td>2013-14</td><td>State Governm ent</td><td>495.093</td><td>400.990</td></tr></table>	Year	Name of scheme	Allotment (Rs. in lakh)	Achieve-ment (Rs. in lakhs)	2011-12	21 different	308.451	279.309	2012-13	schemes of the	367.206	296.348	2013-14	State Governm ent	495.093	400.990
Year	Name of scheme	Allotment (Rs. in lakh)	Achieve-ment (Rs. in lakhs)																	
2011-12	21 different	308.451	279.309																	
2012-13	schemes of the	367.206	296.348																	
2013-14	State Governm ent	495.093	400.990																	

6. Outcomes

6.1 Are populations of threatened species declining, stable or increasing?

Assessment criteria*																			
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks															
Populations of key threatened/ endangered species are declining.	Poor		Documents provided by TR Officials;	As per the documents provided by the STR Authorities, the population of some of animal species are given below: <table><tr><td>Species</td><td>2011</td><td>2012</td></tr><tr><td>Elephant*</td><td>0.88</td><td>0.34 - 0.52</td></tr><tr><td>Black buck*</td><td>0.40</td><td>0.43 – 5.4</td></tr><tr><td>Wild dog**</td><td>0.09</td><td>0.05</td></tr><tr><td>Leopard**</td><td>0.13</td><td>0.08</td></tr></table>	Species	2011	2012	Elephant*	0.88	0.34 - 0.52	Black buck*	0.40	0.43 – 5.4	Wild dog**	0.09	0.05	Leopard**	0.13	0.08
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Elephant*	0.88	0.34 - 0.52																	
Black buck*	0.40	0.43 – 5.4																	
Wild dog**	0.09	0.05																	
Leopard**	0.13	0.08																	
Some threatened/ endangered species populations declining, some are increasing, most others are stable.	Fair	✓	Animal Survey Report, 2011 TNFD & WWF; Population Estimation																
Several threatened/ endangered species populations increasing, most others are stable.	Good		Report, 2012 TNFD & WWF; Discussions with TR Officials;																
All threatened/ endangered species populations either increasing or stable.	Very good		Field visits																
				*Density (per km ²) ** Encounter Rate (sign per km) The data is not available for 2013. The results of All India Population Estimation, 2013 are awaited. During the field visit of the team, it was observed that the area is a potential wildlife habitat and because of its unique location, also serves as an important corridor for movement of tigers and elephants as well as accommodating spill over populations from adjoining PAs.															

*This needs to practically relate to the natural ecosystem potential rather than being driven merely by numbers and visibility. The assessment score may be elaborated under remarks.

6.2 Is the population of tigers showing a declining, stable or increasing trend?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Population of tiger is showing a declining trend	Poor		Documents provided by TR Officials;	The results of All India Population Estimation, 2013 are awaited. However, as per the documents provided by the STR Authorities, the sign encounter rate per km. was 0.17 in 2011 and 0.13 in 2012. It was also reported that in the year 2005, first evidence of tiger presence were observed. In 2006, there was direct sighting of tiger in the area. In 2010, WTI and CCMB confirmed 18 distinct tigers based on genetic analysis of scats. Based on camera trap tiger photographs, 54 individual tigers have been identified in 2014. This clearly indicates that the tigers are extensively using this habitat, either as wandering individuals or as residents. Recently, one tigress with 5 cubs was also captured in camera trap in STR.
Population of tiger is stable	Fair	✓	Animal Survey Report, 2011	
Population of tiger is showing an increasing trend	Good		TNFD & WWF; Population Estimation Report, 2012	
Population of tiger has significantly increased	Very good		TNFD & WWF; CCMB Report; Discussions with TR Officials;	

*This assessment should be based in the context of available population estimate (2010-11) and the outcomes of the currently ongoing Phase-IV analyses.

6.3 Have the threats* to the TR being reduced/ minimized? Or is there an increase?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Threats to the TR have not abated but have enhanced.	Poor			<p>At present, the JFM institutions (VFCs/ EDCs) are not at their expected level best as far as their involvement in STR management is concerned. If, however, these institutions are brought back to life by making them aware and by sharing the ownership, we may expect that the biotic pressure will reduce in due course of time. There are 27 embedded human settlements within STR. Since they are revenue villages and not part of the PA/ Core (CTH) the situation requires special dealings so far relocation is concerned. In case they don't agree for voluntary relocation, co-existence principle when human and wildlife exists together accommodating each other is the fate accompli. This will be possible only when the economic and human losses are minimized and well compensated with high level of human sensitivity.</p> <p>The STR Management is working on reduction of invasive species like <i>Prosopis</i>, <i>Lantana</i>, etc. This is being done based on scientific studies conducted in STR. But proper safeguards should be ensured. This requires experimentation and continuous monitoring. Public entry to places of worship inside STR has been made highly regulated. Temple priests are sensitized through trainings.</p> <p>The movement on forest roads has been prohibited to minimize disturbance to wildlife. Grazing pressure is also reduced because of disposal of scrub cattle due to alternate income generation activities, education and also because of movement of people to nearby cities for employment.</p> <p>No tiger poaching reported after the constitution of STR.</p> <p>Establishment of Anti-poaching camps and recruitment of Anti-poaching Watchers have reduced the occurrence of offences.</p> <p>Wildlife stray incidences, crop raids, etc reduced due to various water management measures undertaken.</p>
Some threats to the TR have abated, others continue their presence	Fair			
Most threats to the TR have abated. The few remaining are vigorously being addressed	Good	✓		
All threats to the TR have been effectively contained and an efficient system is in place to deal with any emerging situation	Very good			

***Does the TR has a Disaster Risk Management Plan to deal with existing as well as emerging threats?**

6.4 Are the expectations of visitors* generally met or exceeded?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Expectations of visitors generally not met.	Poor		Documents provided by TR Officials; Discussions with TR Officials;	The PA is very recently constituted (earlier a wildlife sanctuary notified in 2008 and now a tiger reserve notified in 2013). The visitor inflow is negligible at present. The visitor services and facilities are also bare minimum. The STR Authorities are preparing TCP. It will be wise on part of STR Management that any eco-tourism activity is taken up only after proper approval of the TCP by NTCA.
Expectations of many visitors are met.	Fair	✓		
Expectations of most visitors are met.	Good			
Expectations of all most all visitors are met.	Very good			

*What is the compliance status on Supreme Court/ NTCA Guidelines on Ecotourism in TRs?

6.5 Are local communities supportive of TR management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Local communities are hostile.	Poor		Documents provided by TR Officials; Discussions with TR Officials; Interaction with NGOs and VFC members	During the course of declaring the area as tiger reserve, there was great apprehension among the local people who feared relocation as imminent. After many interactions, meetings, EDC activities and continued efforts to clarify the doubts of all village representatives from different forest fringe villages and tribal settlements about formation of tiger reserve, the orientation of the people is said to have changed. The credit goes to STR Authorities for their hard work and perseverance. This is an indicator that the local communities are becoming somewhat supportive towards STR Management. Also the entire core and buffer zone of STR is under the unified control of the Field Director and is being managed under two separate divisions. This provides great opportunity to the STR Management to work with the local communities and win their support for STR management as well as facilitating improvement in their economic conditions. 113 VFCs/ EDCs have been constituted in the entire STR and as per the records, from 1997 to 2010, an amount of Rs. 2,19, 51,307 was provided as loan to members and an amount of Rs. 1,42,31,014 has been recovered which is about 65% of loan disbursement. Hence by activating these institutions, the eco-development programme may be activated which will enhance people's contribution in wildlife conservation.
Some are supportive.	Fair	✓		
Most locals are supportive of TR management.	Good			
All local communities supportive of TR management.	Very good			

*There could be many reasons for disenchantment. It could be real because of managerial neglect or the managerial efforts could be appropriate but there could be local elements/organizations who would like to keep the disaffection simmering for their own ulterior motives. Likewise success could be entirely because of the efforts of managers or they might be fortunate in striking partnerships with credible NGOs. Assessment may take the prevailing causes into account.

7. MEE Score Card*

Framework Element Number	Framework Element Name	Number of Criteria (a)	Maximum Mark per question (b)	Total (a x b)	Marks obtained for the Element	Overall MEE Score and % age
1	Context	4	10	40	22.5	61.29%
2	Planning	7	10	70	47.5	
3	Inputs	5	10	50	30	
4	Process	6	10	60	35	
5	Outputs	4	10	40	27.5	
6	Outcomes	5	10	50	27.5	
Total		31		310	190	

**Efforts will be made by the NTCA-WII-MEE Team to address the issue of assigning 'differential' weightages to the 30 Assessment Criteria including 'normalization'.*

Assessment Criteria for addressing issues relating to Climate Change & Carbon capture in the Tiger Reserves (TRs)

1. *Additional Criteria on Climate Change: Is the TR being consciously managed to adapt to climate change?*

Condition	Category*	(Tick ✓)	Comment/ Explanation	Next Steps
There have been no efforts to consider adaptation to climate change in management	Poor		Although various measures have been taken as part of the holistic conservation measures to prevent the carbon loss, clear prescriptions are required to be incorporated in TCP for reducing carbon emission/ effecting carbon capture in planning various activities / operations. The STR Authorities are preparing TCP. It is, therefore, advisable to incorporate management actions to predicted climate change.	The agency of CCF, Tamilnadu Afforestation Programme has been assigned the work of evaluation of adaptation to climate change. This may be incorporated in TCP based on its appropriateness. It is advisable to have sensitization workshop of STR Management before any management actions are prescribed in TCP related to issue of climate change. It is necessary to issue guide lines at National level for adopting various measures in this direction without compromising the primary objectives of Wildlife habitat/ TR management to preserve the biodiversity of unique habitats/ eco-systems.
Some initial thought has taken place about likely impacts of climate change, but this has yet to be translated into management plans	Fair	✓		
Detailed plans have been drawn up about how to adapt management to predicted climate change, but these have yet to be translated into active management.	Good			
Detailed plans have been drawn up about how to adapt management to predicted climate change, and these are already being implemented	Very good			

2. *Additional Criteria on Climate Change: Is the TR being consciously managed to prevent carbon loss and to encourage further carbon capture?*

Condition	Category*	(Tick ✓)	Comment/ Explanation	Next Steps
Carbon storage and carbon dioxide capture have not been considered in management of the TR	Poor		Climate change, as it is understood at present, may pose grim threat to biodiversity as well as to economic well being of human populations. The major reasons for climate change are considered to be carbon loss and increasing emission of green house gases, especially CO ₂ .	The effective prevention of accidental fires, reducing biotic pressure, use of alternative source of energy by local people as well as the staff residing inside STR, use of solar energy are some of the basic steps which should be encouraged for carbon capture and to prevent carbon loss.
Carbon storage and carbon dioxide capture have been considered in general terms, but has not yet been significantly reflected in management	Fair	✓		
There are active measures in place to reduce carbon loss from the TR, but no conscious measures to increase carbon dioxide capture	Good			
There are active measures in place both to reduce carbon loss from the TR and to increase carbon dioxide capture	Very good			

Cluster: V

S.No.	Name of Tiger Reserve	Page No.
36.	Buxa Tiger Reserve, West Bengal	596
37.	Dampa Tiger Reserve, Mizoram	608
38.	Kaziranga Tiger Reserve, Assam	619
39.	Manas Tiger Reserve, Assam	631
40.	Namdapha Tiger Reserve, Arunachal Pradesh	642
41.	Nameri Tiger Reserve, Assam	653
42.	Pakke Tiger Reserve, Arunachal Pradesh	664
43.	Sundarban Tiger Reserve, West Bengal	687

Management Effectiveness Evaluation (MEE) of Buxa Tiger Reserve

1. Context

1.1 Are the values of the TR well documented, assessed and monitored?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Values not systematically documented, assessed and monitored.	Poor		Draft TCP	
Values generally identified but not systematically assessed and monitored.	Fair	✓		
Most values systematically identified, assessed and monitored.	Good			
All values systematically identified, assessed and monitored.	Very good			

1.2 Are the threats to TR values well documented and assessed*?

Assessment criteria ⁺				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Threats not systematically documented or assessed.	Poor		Draft TCP	
Threats generally identified but not systematically assessed.	Fair	✓		
Most threats systematically identified and assessed.	Good			
All threats systematically identified and assessed.	Very good			

⁺*This assessment should be based on number, nature and extent of threats*

1.2 Is the 'Core Area' of TR free from human and biotic interference?

Assessment criteria ⁺				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
The 'Core Area' has extensive human and biotic interference.	Poor			
The 'Core Area' has some human and biotic interference.	Fair	✓		
The 'Core Area' has little human and biotic interference.	Good			
The 'Core Area' has no human and biotic interference.	Very good			

⁺*This assessment should be based on existence and the efforts made by TR management to address issues related to human settlements/ villages inside the core area; livestock grazing, cultivation, encroachments etc, resource extraction/ livelihood dependence of local communities and should reflect the overall interference due to all the above factors. The issue of 'Unified Control' of the 'Core' and 'Buffer' zones under the Field Director would also be taken into account.*

1.4 Has the TR complied with the four Statutory* Requirements (SR) along with Tripartite MoU and three Standard Operation Procedures (SOP)?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
None of the four SR, no compliance of Tripartite MoU and three SOPs met	Poor		1. Notification of CTH and Buffer of TR dated 6 th Aug 2009 2. Trust deed of Tiger Conservation Foundation dated 30 th Mar 2010 3. Revised TCP submitted to NTCA on 12 th Dec 2013. 4. Notification of steering Committee dated 10 th Jan 2008	1. Redelineation of CTH is needed in view of some areas fragment the CTH 2. 3 SOPs are said to have been followed 3. No meeting took place of State Steering Committee
Two of the four SR, 50% conditions of the Tripartite MoU and SOPs complied	Fair			
Three of the four SR, 75% conditions of the Tripartite MoU and SOPs complied	Good	✓		
All four SR, 100% conditions of the Tripartite MoU and SOPs complied	Very good			

2. Planning

2.1 Status of Tiger Conservation Plan (TCP)*?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No TCP in place.	Poor		TCP and Comments of NTCA	1. Revised TCP submitted to NTCA on 12 th Dec 2013 2. participatory process used in the preparation of Tourism plan only
TCP is under preparation	Fair			
TR has a relevant TCP	Good	✓		
TR has a comprehensive and relevant TCP, duly approved by the NTCA	Very good			

***The scientific content and the participatory processes used in preparation of the TCP will be taken into account in assessing the quality of TCP.**

2.2 Does the TR safeguards the threatened biodiversity values?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR does not safeguard the threatened biodiversity values.	Poor			Based on field visit
TR safeguards a few threatened biodiversity values.	Fair			
TR safeguards a large number of threatened biodiversity values.	Good	✓		
TR safeguards all threatened biodiversity values.	Very good			

***Remarks need to elaborate on the kind of safeguards and how they work or are intended to work**

2.3 Are stakeholders given an opportunity to participate in planning process?

**The result of participation must show in the field and not merely reported as a routine exercise.*

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little, if any opportunity for stakeholder participation in planning.	Poor		Minutes of the meeting of Annual general Body Meeting	As general assessment made by the committee
Stakeholders participate in some planning.	Fair			
Stakeholders participate in most planning processes.	Good	✓		
Stakeholders routinely and systematically participate in all planning processes.	Very good			

**Statutory requirements are (1) Legal delineation and notification of Core and Buffer Areas; (2) Establishment of Tiger Conservation Foundation; (3) Development of a Tiger Conservation Plan; and (4) Constitution of a State-level Steering Committee under the Chairmanship of the Chief Minister. TA refers agreement between Field Director, State Government and NTCA. The 3 SOPs are on (i) Straying of Tiger in human dominated landscape, (ii) Tiger Mortality and (iii) Disposal of Carcasses*

2.4 Are habitat management programmes systematically planned, relevant and monitored, and contribute effectively to Tiger and other endangered species conservation?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Habitat management programmes are entirely adhoc.	Poor		TCP page 89 and 196	
Limited planning and monitoring programmes are in place for habitat management.	Fair			
Habitat management programmes are generally planned and monitored.	Good	✓		
Habitat management programmes are thoroughly planned and monitored.	Very good			

**This assessment should be primarily based on habitat management programmes in relation to habitats for species that are threatened (IUCN categories), are habitat specialists, subjected to seasonal movements, wide ranging with emphasis on the breeding and rearing habitat and may include factors such as food, water, shelter (all connotations).Habitat structure, composition, unique patches of vegetation and sensitive sites, sources of water and their distribution are integral. Corridors within buffer zone are critically important. For example, all riparian habitats. Have these been addressed? Is their a planning process in place? The management practices dealing with invasive species such as Lantana, Michania etc. would be examined.*

2.5 Does the TR has an effective Protection Strategy (PS)* and Security Plan and Security Audit (SA) in place?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR has little or no PS and SA.	Poor		1. Security Plan given in TCP	
TR has an adhoc PS and SA.	Fair			
TR has a generally relevant PS and SA but is not very effective.	Good	✓		
TR has a comprehensive and very effective PS and SA.	Very good			

**This assessment takes inter-alia into account the nature of threats, the number and location of patrolling camps and foot and mobile patrolling, needs that relate to available manpower, terrain difficulties, practicability of area coverage, readiness to contain specific threats with necessary support and facilities. The constitution and functioning of Special Tiger Protection Force (STPF), Number of offences reported, arrests made, prosecution initiated and conviction achieved will be taken into account.*

2.6 Has the TR been effective in the mitigation of human-wildlife conflicts?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Human-wildlife conflicts are significant but poorly addressed.	Poor			The current disbursement process is very effective
TR has been able to mitigate few human-wildlife conflicts.	Fair			
TR has been able to mitigate many human-wildlife conflicts.	Good			
TR has been effective in mitigating all human-wildlife conflicts.	Very good	✓		

*The assessment will take into account the number of incidences reported and payment of compensation made and its timeliness.

2.7 Is the TR integrated into a wider ecological network/ landscape following the principles of the ecosystem approach?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR not integrated into a wider network/ landscape.	Poor		TCP	Attempts are being made to integrate in a wider ecological network
Some limited attempts to integrate the TR into a network/ landscape.	Fair	✓		
TR is generally quite well integrated into a network/ landscape.	Good			
TR is fully integrated into a wider network/ landscape.	Very good			

*Assessment needs to consider the scope of opportunities on the landscape scale that exist. Consider whether any attempts have been made and what are these? Have all the important corridors been identified? What actions are planned/implemented for their security? Have the Forest Working Plans and Forest Development Corporation Plans within the identified landscapes taken cognizance of such new requirement? These should have been reflected in TCPs. Is there is any effort to rationalize landuse around TR? Is any effort being made to plan and use 'Smart Green Infrastructure'?

3. Inputs

3.1 Are personnel adequate, well organized and deployed with access to adequate resources in the Tiger Reserve (TR)*?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Few, personnel explicitly allocated but poorly supported for TR management.	Poor		Data given by FD	
Some personnel explicitly allocated for TR management but not adequately supported and systematically linked to management objectives.	Fair	✓		
Some personnel with fair support explicitly allocated towards achievement of specific TR management objectives.	Good			
Adequate personnel appropriately supported and explicitly allocated towards achievement of specific TR management objectives.	Very good			

*This assessment should inter-alia be based on number of personnel allocated for attainment of TR objectives at the Range , Round, Beat and Patrolling camps levels or as relevant to the needs (sanctioned posts vis- a- vis existing personnel and needs beyond the sanctioned strengths. It is possible that posts have last been sanctioned several years back that do not now account for the current needs)

*Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

3.2 Are resources (vehicle, equipment, building etc.) adequate, well organized and managed with desired access?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Few, if any, resources explicitly allocated for TR management.	Poor		List of moveable and immovable submitted by the PA managers	
Some resources explicitly allocated for TR management but not systematically linked to management objectives.	Fair			
Some resources explicitly allocated towards achievement of specific TR management objectives.	Good			
Adequate resources explicitly allocated towards achievement of specific TR management objectives.	Very good	✓		

** These form a variety of resources. These may be segregated into immovable (structures) and movable categories and each further may be considered under the essential and desirable categories. It is best to start with what are the minimum needs to attain each objective, what is available and manner of use/deployment. The proportions of the 'essentials' and 'desirables' along the importance gradient of objectives would serve as pointers for score categories. Specific remarks would be vitally important.*

3.3 Are financial resources other than those of the State linked to priority actions and are funds adequate, released timely and utilized?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Resource allocation is adhoc, funds are inadequate and seldom released in time and not utilized.	Poor		Documents submitted by PA managers	
Some specific allocation for management of priority action. Funds are inadequate and there is some delay in release, partially utilized.	Fair			
Comprehensive planning and allocation that meets the most important objectives. Generally funds released with not much delay and mostly utilized.	Good	✓		
Comprehensive planning and allocation of resources for attainment of most objectives. Funds generally released on-time and are fully utilized.	Very good			

**Obtain details of funds released by NTCA and their utilization by TR in the last 3 years and indicate them under 'Remarks'. Also comment on the problems associated with fund allocations and their utilization.*

3.4 Are financial resources from the State linked to priority action and funds adequate, timely released and utilized for the management of Tiger Reserve?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Resource allocation is adhoc, funds are inadequate and seldom released in time and not utilized.	Poor		Documents submitted by PA managers	
Some specific allocation for management of priority action. Funds are inadequate and there is some delay in release, partially utilized.	Fair			
Comprehensive planning and allocation that meets the most important objectives. Generally funds released with not much delay and mostly utilized.	Good	✓		
Comprehensive planning and allocation of resources for attainment of most objectives. Funds generally released on-time and are fully utilized.	Very good			

**Obtain details of funds released by State and their utilization by TR in the last 3 years and indicate them under 'Remarks'. Also comment on the problems associated with fund allocation and their utilization.*

***Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

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3.5 What level of resources are provided by NGOs?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
NGOs contribute nothing for the management of the TR.	Poor		List of NGO submitted by FD	
NGOs make some contribution to management of the TR but opportunities for collaboration are not systematically explored.	Fair	✓		
NGOs contributions are systematically sought and negotiated for the management of some TR level activities.	Good			
NGOs contributions are systematically sought and negotiated for the management of many TR level activities.	Very good			

4. Process

4.1 Does the TR have manpower resources trained in wildlife conservation for effective TR management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No trained officers and frontline staff in the TR.	Poor		List submitted by the PA managers	Only one RFO is WII trend
Some trained officers and few trained frontline staff, posted in the TR.	Fair	✓		
All trained officers and and fair number of trained frontline staff posted in the TR.	Good			
All trained officers and most of the trained frontline staff is posted in the TR.	Very good			

**Indicate % of trained staff in various categories. The number and thematic areas of the 'Internal Training' programmes organized in the TR in the last 3 years may be taken into account. Has the TR prepared a 'Staff Development Plan'? Is it being implemented?*

4.2 Is TR staff management performance linked to achievement of management objectives?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No linkage between staff management performance and management objectives.	Poor		List of awardees	
Some linkage between staff management performance and management objectives, but not consistently or systematically assessed.	Fair	✓		
Management performance for most staff is directly linked to achievement of relevant management objectives.	Good			
Management performance of all staff is directly linked to achievement of relevant management objectives.	Very good			

4.3 Is there effective public participation in TR management* and does it show in making a difference?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no public participation in TR management.	Poor		Various meeting register	
Opportunistic public participation in some of the relevant aspects of TR management.	Fair			
Systematic public participation in most of the relevant aspects of TR management.	Good	✓		
Comprehensive and systematic public participation in all important and relevant aspects of TR management.	Very good			

**The involvement of NGOs/ NGLs in population estimation may be taken into account)*

4.4 Is there a responsive system for handling complaints and comments* about TR management?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Ad-hoc approach to handling complaints.	Poor			The TR maintains file to address complaint. However it would be better if log could be maintained
Complaints handling system operational but not responsive to individual issues and with limited follow up.	Fair			
Coordinated system logs and responds effectively to most complaints.	Good	✓		
All complaints systematically logged in coordinated system and timely response provided with minimal repeat complaints.	Very good			

**Does the TR maintains 'Suggestions Register'? What actions are taken to deal with suggestions?*

4.5 Does TR management addresses the livelihood issues* of resource dependent communities, especially of women?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No livelihood issues are addressed by TR management.	Poor		Document submitted by FD	
Few livelihood issues are addressed by TR management.	Fair			
Substantial livelihood issues are addressed by TR management.	Good	✓		
Livelihood issues of resource dependent communities especially of women are addressed effectively by TR managers.	Very good			

**The number of mandays generated in the last 3 years may be taken into account. Are funds received from District Agencies and other sources? Provide details of funds received in last 3 years.*

4.6 Has the TR planned and implemented the voluntary 'Village Relocation' from the Core/ Critical Tiger Habitat (CTH)?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No planning and no implementation	Poor			
Plans have been made but no implementation	Fair			
Plans have been made and some implementation is in progress	Good			
Plans have been made and are being actively implemented/ no human habitation in the CTH	Very good	✓		

***Assessment will look into the village relocation planning process including availability of manpower, financial resources and NGO support, if any. Is there a mechanism to address the complaints received in respect of relocation process? Effort must be made to assess post-relocation success or otherwise.**

5. Output

5.1 Is adequate information on TR management publicly available?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no information on TR management publicly available.	Poor		Website of Buxa TR www.buxatigerreserve.com	
Publicly available information is general and has limited relevance to management accountability and the condition of public assets.	Fair			
Publicly available information provides detailed insight into major management issues and condition of public assets.	Good	✓		
Comprehensive reports are routinely available in public domain on management and condition of public assets.	Very good			

5.2 Are visitor services and facilities appropriate and adequate?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Visitor services and facilities do not exist.	Poor			Based on field visit observation
Visitor services and facilities are very basic.	Fair			
Visitor services and facilities are monitored from time to time and are fairly effective.	Good	✓		
Visitor services and facilities are conscientiously maintained, regularly upgraded and monitored for visitor satisfaction	Very good			

***Include the existence and quality of visitor and interpretation centers, including skills and capabilities of personnel manning these, TR related publications, films, videos; arrangements of stay (including places serving refreshments and food owned and managed by TR), watch towers and hides including safety factors, vehicles assigned for visitors including riding elephants, if any and their deployment, drinking water, rest rooms, garbage disposal, attended and self guided services in the field, visitor feed back on the quality of wilderness experience.**

5.3 Are research/ monitoring related trends systematically evaluated and routinely reported and used to improve management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no systematic evaluation or routine reporting of trends.	Poor		TCP page # 69	
Some evaluation and reporting undertaken but neither systematic nor routine.	Fair	✓		
Systematic evaluation and routine reporting of trends undertaken.	Good			
Systematic evaluation and comprehensive reporting of trends undertaken and attempts made at course corrections as relevant.	Very good			

***Not all TRs attract projects and researchers and with exceptions, little research takes place on the TRs own steam because of systemic limitations. However, monitoring of some critical issues is expected e.g. population of tiger, co-predators and prey with insights into their demography and distribution (some opportunistic sampling by sightings, signs and spatial distribution during assessment would be extremely useful in terms of expert impression and as a pulse), monitoring incidence of livestock grazing, fires, weeds, sources of water, a variety of illegal activities typically associated with the reserve, wildlife health (e.g. epidemics, immunization of livestock) regeneration and change in vegetation, visitors and their activities, offence cases, ex-gratia payments etc. Efforts must be made to assess the planning and implementation of Phase-IV monitoring protocols and the success of implementation of M-Stripes (wherever applicable). Are the 'Sykes and Horill' monitoring plots maintained and data analyzed?**

5.4 Is there a systematic maintenance schedule and funds in place for management of infrastructure/assets?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No systematic inventory or maintenance schedule.	Poor			As per requirement the maintenance
Inventory maintenance is adhoc and so is the maintenance schedule.	Fair	✓		
Systematic inventory provides the basis for maintenance schedule but funds are inadequate.	Good			
Systematic inventory provides the basis for maintenance schedule and adequate funds are made available.	Very good			

6. Outcomes

6.1 Are populations of threatened species declining, stable or increasing?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Populations of key threatened/ endangered species are declining.	Poor		TCP page # 44	
Some threatened/ endangered species populations declining, some are increasing, most others are stable.	Fair	✓		
Several threatened/ endangered species populations increasing, most others are stable.	Good			
All threatened/ endangered species populations either increasing or stable.	Very good			

***This needs to practically relate to the natural ecosystem potential rather than being driven merely by numbers and visibility. The assessment score may be elaborated under remarks.**

6.2 Is the population of tigers showing a declining, stable or increasing trend?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Population of tiger is showing a declining trend	Poor		CCMB and Aaranyak report	Still not a single tiger has been captured in camera
Population of tiger is stable	Fair	✓		
Population of tiger is showing an increasing trend	Good			
Population of tiger has significantly increased	Very good			

**This assessment should be based in the context of available population estimate (2010-11) and the outcomes of the currently ongoing Phase-IV analyses.*

6.3 Have the threats* to the TR being reduced/ minimized? Or is there an increase?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Threats to the TR have not abated but have enhanced.	Poor			Many new field camps are constructed to abate threats
Some threats to the TR have abated, others continue their presence	Fair	✓		
Most threats to the TR have abated. The few remaining are vigorously being addressed	Good			
All threats to the TR have been effectively contained and an efficient system is in place to deal with any emerging situation	Very good			

**Does the TR has a Disaster Risk Management Plan to deal with existing as well as emerging threats?*

6.4 Are the expectations of visitors* generally met or exceeded?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Expectations of visitors generally not met.	Poor			Interaction with visitors and local people
Expectations of many visitors are met.	Fair			
Expectations of most visitors are met.	Good	✓		
Expectations of all most all visitors are met.	Very good			

**What is the compliance status on Supreme Court/ NTCA Guidelines on Ecotourism in TRs?*

6.5 Are local communities supportive of TR management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Local communities are hostile.	Poor			Interaction with locals
Some are supportive.	Fair			
Most locals are supportive of TR management.	Good	✓		
All local communities supportive of TR management.	Very good			

**There could be many reasons for disenchantment. It could be real because of managerial neglect or the managerial efforts could be appropriate but there could be local elements/organizations who would like to keep the disaffection simmering for their own ulterior motives. Likewise success could be entirely because of the efforts of managers or they might be fortunate in striking partnerships with credible NGOs. Assessment may take the prevailing causes into account.*

7. MEE Score Card*

Framework Element Number	Framework Element Name	Number of Criteria (a)	Maximum Mark per question (b)	Total (a x b)	Marks obtained for the Element	Overall MEE Score and % age
1	Context	4	10	40	22.5	69.35%
2	Planning	7	10	70	52.5	
3	Inputs	5	10	50	35	
4	Process	6	10	60	42.5	
5	Outputs	4	10	40	25	
6	Outcomes	5	10	50	30	
Total		31		310	207.5	

**Efforts will be made by the NTCA-WII-MEE Team to address the issue of assigning 'differential' weightages to the 30 Assessment Criteria including 'normalization'.*

Assessment Criteria for addressing issues relating to Climate Change & Carbon capture in the Tiger Reserves (TRs)

1. Additional Criteria on Climate Change: Is the TR being consciously managed to adapt to climate change?

Condition	Category*	(Tick ✓)	Comment/ Explanation	Next Steps
There have been no efforts to consider adaptation to climate change in management	Poor		PA managers are having basic understanding about issues but unable to translate into action	PA managers need training to make them aware about the issue
Some initial thought has taken place about likely impacts of climate change, but this has yet to be translated into management plans	Fair	✓		
Detailed plans have been drawn up about how to adapt management to predicted climate change, but these have yet to be translated into active management.	Good			
Detailed plans have been drawn up about how to adapt management to predicted climate change, and these are already being implemented	Very good			

2. Additional Criteria on Climate Change: Is the TR being consciously managed to prevent carbon loss and to encourage further carbon capture?

Condition	Category*	(Tick ✓)	Comment/ Explanation	Next Steps
Carbon storage and carbon dioxide capture have not been considered in management of the TR	Poor	✓		PA managers need training to make them aware about the issue
Carbon storage and carbon dioxide capture have been considered in general terms, but has not yet been significantly reflected in management	Fair			
There are active measures in place to reduce carbon loss from the TR, but no conscious measures to increase carbon dioxide capture	Good			
There are active measures in place both to reduce carbon loss from the TR and to increase carbon dioxide capture	Very good			

Management Effectiveness Evaluation (MEE) of Dampa Tiger Reserve

1. Context

1.1 Are the values of the TR well documented, assessed and monitored?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Values not systematically documented, assessed and monitored.	Poor		Para 1.3 of TCP, statement of significances	Lack of resources to assess and monitored the TR values
Values generally identified but not systematically assessed and monitored.	Fair			
Most values systematically identified, assessed and monitored.	Good	✓		
All values systematically identified, assessed and monitored.	Very good			

1.2 Are the threats to TR values well documented and assessed*?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Threats not systematically documented or assessed.	Poor		TCP para 3.3 page 26-29	
Threats generally identified but not systematically assessed.	Fair			
Most threats systematically identified and assessed.	Good	✓		
All threats systematically identified and assessed.	Very good			

**This assessment should be based on number, nature and extent of threats*

1.3 Is the 'Core Area' of TR free from human and biotic interference?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
The 'Core Area' has extensive human and biotic interference.	Poor			No human settlement in Core area. Last village Andermanik relocated in Jan 2011.
The 'Core Area' has some human and biotic interference.	Fair			
The 'Core Area' has little human and biotic interference.	Good			
The 'Core Area' has no human and biotic interference.	Very good	✓		

**This assessment should be based on existence of human settlements/ villages inside the core area; livestock grazing, cultivation, encroachments etc, resource extraction/ livelihood dependence of local communities and should reflect the overall interference due to all the above factors.*

1.4 Has the TR complied with the four statutory* requirements?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
None of the four statutory requirements met	Poor		Annexure given in TCP	1. Instead of notification of CTH to be made u/s 38V it was done u/s 38X 2. No meeting of steering committee was held till now
One of the four statutory requirements met	Fair			
Two/three of the four statutory requirements met	Good			
All four statutory requirements met	Very good	✓		

*Statutory requirements are (1) Legal delineation and notification of Core and Buffer Areas; (2) Establishment of Tiger Conservation Foundation; (3) Development of a Tiger Conservation Plan; and (4) Constitution of a State-level Steering Committee under the Chairmanship of the Chief Minister. TA refers agreement between Field Director, State Government and NTCA. The 3 SOPs are on (i) Straying of Tiger in human dominated landscape, (ii) Tiger Mortality and (iii) Disposal of Carcasses

2. Planning

2.1 Status of Tiger Conservation Plan (TCP)?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No TCP in place.	Poor		Final draft of TCP 2013-22 submitted to NTCA	1. The title of annexure IX of TCP is notification of CTH but the notification of buffer is given there 2. CTH notification is missing in TCP
TCP is under preparation	Fair			
TR has a relevant TCP	Good	✓		
TR has a comprehensive and relevant TCP	Very good			

2.2 Does the TR safeguards the threatened biodiversity values?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR does not safeguard the threatened biodiversity values.	Poor		TCP	Strengthening of existing protection strategy is well described in proposed TCP
TR safeguards a few threatened biodiversity values.	Fair			
TR safeguards a large number of threatened biodiversity values.	Good	✓		
TR safeguards all threatened biodiversity values.	Very good			

*Remarks need to elaborate on the kind of safeguards and how they work or are intended to work

2.3 Are stakeholders given an opportunity to participate in planning process?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little, if any opportunity for stakeholder participation in planning.	Poor			Observation based on the discussion made with various stakeholders
Stakeholders participate in some planning.	Fair			
Stakeholders participate in most planning processes.	Good	✓		
Stakeholders routinely and systematically participate in all planning processes.	Very good			

***The result of participation must show in the field and not merely reported as a routine exercise.**

2.4 Are habitat management programmes systematically planned, relevant and monitored?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Habitat management programmes are entirely adhoc.	Poor		TCP and Office records	Some opening may be needed after having detailed scientific study to increase pray base
Limited planning and monitoring programmes are in place for habitat management.	Fair	✓		
Habitat management programmes are generally planned and monitored.	Good			
Habitat management programmes are thoroughly planned and monitored.	Very good			

***This assessment should be primarily based on habitat management programmes in relation to habitats for species that are threatened (IUCN categories), are habitat specialists, subjected to seasonal movements, wide ranging with emphasis on the breeding and rearing habitat and may include factors such as food, water, shelter (all connotations).Habitat structure, composition, unique patches of vegetation and sensitive sites, sources of water and their distribution are integral. Corridors within buffer zone are critically important. For example, all riparian habitats. Have these been addressed? Is their a planning process in place?**

2.5 Does the TR has an effective protection strategy*?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR has little or no protection strategy.	Poor		TCP	The proposed protection strategy is well defined in TCP but shortage in permanent staff and fund availability are major limiting factors to implement the scheme
TR has an adhoc protection strategy.	Fair			
TR has a generally relevant protection strategy but is not very effective.	Good	✓		
TR has a comprehensive and very effective protection strategy.	Very good			

***This assessment takes inter-alia into account the nature of threats, the number and location of patrolling camps and foot and mobile patrolling, needs that relate to available manpower, terrain difficulties, practicability of area coverage, readiness to contain specific threats with necessary support and facilities.**

2.6 Has the TR been effective in the mitigation of human-wildlife conflicts?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Human-wildlife conflicts are significant but poorly addressed.	Poor		Office record	Majority of human – wildlife conflicts from crop damages by wild pig. Compensations paid off according to Govt. of Mizoram vide No.C.18013/2/91-FST Dt.19.9.2002. However, availability of funds with PA manager is a major limiting factor for disbursement of claims on time.
TR has been able to mitigate few human-wildlife conflicts.	Fair			
TR has been able to mitigate many human-wildlife conflicts.	Good			
TR has been effective in mitigating all human-wildlife conflicts.	Very good	✓		

***Judgment needs to consider staff training, capabilities, equipment, logistics, local attitude and politics (negatively aided and/or abetted), assistance of relevant agencies (e.g. police. Local administration, local people themselves) PR, follow-up actions and monitoring**

2.7 Is the TR integrated into a wider ecological network/ landscape following the principles of the ecosystem approach?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR not integrated into a wider network/ landscape.	Poor		Page # 261 onwards of TCP address this issue for adjoining Area of DTR	
Some limited attempts to integrate the TR into a network/ landscape.	Fair			
TR is generally quite well integrated into a network/ landscape.	Good	✓		
TR is fully integrated into a wider network/ landscape.	Very good			

***Assessment needs to consider the scope of opportunities on the landscape scale that exist. Consider whether any attempts have been made and what are these? Have all the important corridors been identified? What actions are planned/implemented for their security? Have the Forest Working Plans and Forest Development Corporation Plans within the identified landscapes taken cognizance of such new requirement?**

3. Inputs

3.1 Are personnel adequate, well organized and deployed with access to adequate resources in the Tiger Reserve (TR)*?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Few, personnel explicitly allocated but poorly supported for TR management.	Poor		TCP and Office records	Presently only 12 posts are filled up (one ACF in charge of DFO, 2 ROs, 5 Fr, 3 Fgds& 1 LDC) against 43 sanctioned post.
Some personnel explicitly allocated for TR management but not adequately supported and systematically linked to management objectives.	Fair	✓		
Some personnel with fair support explicitly allocated towards achievement of specific TR management objectives.	Good			
Adequate personnel appropriately supported and explicitly allocated towards achievement of specific TR management objectives.	Very good			

***This assessment should inter-alia be based on number of personnel allocated for attainment of TR objectives at the Range , Round, Beat and Patrolling camps levels or as relevant to the needs (sanctioned posts vis- a- vis existing personnel and needs beyond the sanctioned strengths. It is possible that posts have last been sanctioned several years back that do not now account for the current needs)**

***Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

3.2 Are resources (vehicle, equipment, building etc.) adequate, well organized and managed with desired access?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Few, if any, resources explicitly allocated for TR management.	Poor		TCP and Office records	1. Marshall jeep (2003) 2. Tata 407 Truck (2003) 3. Gypsy (2006) 4. Tata 207 TL (2007) 5. Tata 207 TL (2009) 6. Tata 407 LPK (2009) 7. RX 135 (4nos) – 2001 all unused.
Some resources explicitly allocated for TR management but not systematically linked to management objectives.	Fair	✓		
Some resources explicitly allocated towards achievement of specific TR management objectives.	Good			
Adequate resources explicitly allocated towards achievement of specific TR management objectives.	Very good			

***Assessment: These form a variety of resources. These may be segregated into immovable (structures) and movable categories and each further may be considered under the essential and desirable categories. It is best to start with what are the minimum needs to attain each objective, what is available and manner of use/deployment. The proportions of the 'essentials' and 'desirables' along the importance gradient of objectives would serve as pointers for score categories. Specific remarks would be vitally important.**

3.3 Are financial resources other than those of the State linked to priority actions and are funds adequate, released timely and utilized?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Resource allocation is adhoc, funds are inadequate and seldom released in time and not utilized.	Poor		Letters showing dates for fund release	
Some specific allocation for management of priority action. Funds are inadequate and there is some delay in release, partially utilized.	Fair			
Comprehensive planning and allocation that meets the most important objectives. Generally funds released with not much delay and mostly utilized.	Good	✓		
Comprehensive planning and allocation of resources for attainment of most objectives. Funds generally released on-time and are fully utilized.	Very good			

***Obtain details of funds released by NTCA and their utilization by TR in the last 3 years and indicate them under 'Remarks'. Also comment on the problems associated with funds and their mitigation.**

3.4 Are financial resources from the State linked to priority action and funds adequate, timely released and utilized for the management of Tiger Reserve?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Resource allocation is adhoc, funds are inadequate and seldom released in time and not utilized.	Poor		Letters showing release of state funds	
Some specific allocation for management of priority action. Funds are inadequate and there is some delay in release, partially utilized.	Fair			
Comprehensive planning and allocation that meets the most important objectives. Generally funds released with not much delay and mostly utilized.	Good	✓		
Comprehensive planning and allocation of resources for attainment of most objectives. Funds generally released on-time and are fully utilized.	Very good			

***Obtain details of funds released by State and their utilization by TR in the last 3 years and indicate them under 'Remarks'. Also comment on the problems associated with funds and their mitigation.**

***Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

3.5 What level of resources are provided by NGOs?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
NGOs contribute nothing for the management of the TR.	Poor	✓	TCP and office records	Being the remotest TRs in India, no NGOs seem to be interested in working or making contribution. However, recently NGOs like NCF & Aaranyak has come forward for some documentation work along with some freelancer's biologist.
NGOs make some contribution to management of the TR but opportunities for collaboration are not systematically explored.	Fair			
NGOs contributions are systematically sought and negotiated for the management of some TR level activities.	Good			
NGOs contributions are systematically sought and negotiated for the management of many TR level activities.	Very good			

4. Process

4.1 Does the TR have manpower resources trained in wildlife conservation for effective TR management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No trained officers and frontline staff in the TR.	Poor		TCP	Only FD is trained in wildlife management from WII. Other existing frontline staffs & daily wagers have been given very basic training.
Some trained officers and few trained frontline staff, posted in the TR.	Fair	✓		
All trained officers and and fair number of trained frontline staff posted in the TR.	Good			
All trained officers and most of the trained frontline staff is posted in the TR.	Very good			

*Indicate % of trained staff in various categories.

4.2 Is TR staff management performance linked to achievement of management objectives?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No linkage between staff management performance and management objectives.	Poor		TCP and office records	FD has initiated some award scheme to recognize the staff performance.
Some linkage between staff management performance and management objectives, but not consistently or systematically assessed.	Fair	✓		
Management performance for most staff is directly linked to achievement of relevant management objectives.	Good			
Management performance of all staff is directly linked to achievement of relevant management objectives.	Very good			

*Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

4.3 Is there effective public participation in TR management and does it show in making a difference?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no public participation in TR management.	Poor			Mostly opportunistic public participation as perceived during visit
Opportunistic public participation in some of the relevant aspects of TR management.	Fair	✓		
Systematic public participation in most of the relevant aspects of TR management.	Good			
Comprehensive and systematic public participation in all important and relevant aspects of TR management.	Very good			

4.4 Is there a responsive system for handling complaints and comments about TR management?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Ad-hoc approach to handling complaints.	Poor		Office record	Most of the complaints are verbal and directly handled by FD. There is a file to maintain written complaint.
Complaints handling system operational but not responsive to individual issues and with limited follow up.	Fair			
Coordinated system logs and responds effectively to most complaints.	Good	✓		
All complaints systematically logged in coordinated system and timely response provided with minimal repeat complaints.	Very good			

4.5 Does TR management addresses the livelihood issues of resource dependent communities, especially of women?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No livelihood issues are addressed by TR management.	Poor		TCP and Office records	Substantial livelihood issues are addressed through EDC
Few livelihood issues are addressed by TR management.	Fair			
Substantial livelihood issues are addressed by TR management.	Good	✓		
Livelihood issues of resource dependent communities especially of women are addressed effectively by TR managers.	Very good			

4.6 Has the TR planned and implemented the voluntary 'Village Relocation' from the core areas?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No planning and no implementation	Poor		Office records	Last village from Core has been relocated in January 2011 and now Core is totally inviolate
Plans have been made but no implementation	Fair			
Plans have been made and some implementation is in progress	Good			
Plans have been made and are being actively implemented	Very good	✓		

*Assessment will look into the village relocation planning process including availability of manpower, financial resources and NGO support, if any.

*Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

5. Output

5.1 Is adequate information on TR management publicly available?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no information on TR management publicly available.	Poor			Annual report has been prepared which could be obtain on request.
Publicly available information is general and has limited relevance to management accountability and the condition of public assets.	Fair	✓		
Publicly available information provides detailed insight into major management issues and condition of public assets.	Good			
Comprehensive reports are routinely available in public domain on management and condition of public assets.	Very good			

5.2 Are visitor services and facilities appropriate and adequate?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Visitor services and facilities do not exist.	Poor			Since there were no visitors except researchers (that too recently) the need for visitor facilities is very limited.
Visitor services and facilities are very basic.	Fair	✓		
Visitor services and facilities are monitored from time to time and are fairly effective.	Good			
Visitor services and facilities are conscientiously maintained, regularly upgraded and monitored for visitor satisfaction	Very good			

**Include the existence and quality of visitor and interpretation centers, including skills and capabilities of personnel manning these, TR related publications, films, videos; arrangements of stay (including places serving refreshments and food owned and managed by TR), watch towers and hides including safety factors, vehicles assigned for visitors including riding elephants, if any and their deployment, drinking water, rest rooms, garbage disposal, attended and self guided services in the field, visitor feed back on the quality of wilderness experience.*

5.3 Are research/ monitoring related trends systematically evaluated and routinely reported and used to improve management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no systematic evaluation or routine reporting of trends.	Poor			Practically, there were no applied researches carried out. Now few researchers from MZU and some biologists have come forward to undertake some studies.
Some evaluation and reporting undertaken but neither systematic nor routine.	Fair	✓		
Systematic evaluation and routine reporting of trends undertaken.	Good			
Systematic evaluation and comprehensive reporting of trends undertaken and attempts made at course corrections as relevant.	Very good			

**Not all TRs attract projects and researchers and with exceptions, little research takes place on the TRs own steam because of systemic limitations. However, monitoring of some critical issues is expected e.g. population of tiger, co-predators and prey with insights into their demography and distribution (some opportunistic sampling by sightings, signs and spatial distribution during assessment would be extremely useful in terms of expert impression and as a pulse), monitoring incidence of livestock grazing, fires, weeds, sources of water, a variety of illegal activities typically associated with the reserve, wildlife health (e.g. epidemics, immunization of livestock) regeneration and change in vegetation, visitors and their activities, offence cases, ex-gratia payments etc.*

**Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10*

5.4 Is there a systematic maintenance schedule and funds in place for management of infrastructure/assets?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No systematic inventory or maintenance schedule.	Poor			No proper schedule are maintained but maintenance work are undertaken as an when required.
Inventory maintenance is adhoc and so is the maintenance schedule.	Fair			
Systematic inventory provides the basis for maintenance schedule but funds are inadequate.	Good	✓		
Systematic inventory provides the basis for maintenance schedule and adequate funds are made available.	Very good			

6. Outcomes

6.1 Are populations of threatened species especially tiger populations declining, stable or increasing?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Threatened/ endangered species especially tiger populations declining.	Poor			Camera trap photographs shows presence of almost all the major species. However, no tiger was captured in camera trap. According to FD and interaction with some researchers the population of threatened and endangered species populations are seems to be stable.
Some threatened/ endangered species populations declining, some are increasing, most others are stable.	Fair			
Several threatened/ endangered species populations increasing, most others are stable.	Good	✓		
All threatened/ endangered species populations either increasing or stable.	Very good			

**This needs to practically relate to the natural ecosystem potential rather than being driven merely by numbers and visibility. The assessment score may be elaborated under remarks.*

6.2 Have the threats to the TR being reduced/ minimized? Or is there an increase?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Threats to the TR have not abated but have enhanced.	Poor			Most threats to the TR have abated. The few remaining are vigorously being addressed
Some threats to the TR have abated, others continue their presence	Fair			
Most threats to the TR have abated. The few remaining are vigorously being addressed	Good	✓		
All threats to the TR have been effectively contained and an efficient system is in place to deal with any emerging situation	Very good			

6.3 Are the expectations of visitors generally met or exceeded?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Expectations of visitors generally not met.	Poor			Since there is no visitors therefore, no arrangements could be made. No complaints, therefore rated good.
Expectations of many visitors are met.	Fair			
Expectations of most visitors are met.	Good	✓		
Expectations of all most all visitors are met.	Very good			

6.4 Are local communities supportive of TR management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Local communities are hostile.	Poor			Out of 17 villages around TR, only one village is having resentment but it is also being looked after. Therefore, it can be said that most locals are supportive of TR management.
Some are supportive.	Fair			
Most locals are supportive of TR management.	Good	✓		
All local communities supportive of TR management.	Very good			

**There could be many reasons for disenchantment. It could be real because of managerial neglect or the managerial efforts could be appropriate but there could be local elements/organizations who would like to keep the disaffection simmering for their own ulterior motives. Likewise success could be entirely because of the efforts of managers or they might be fortunate in striking partnerships with credible NGOs. Assessment may take the prevailing causes into account.*

7. MEE Score Card

Framework Element Number	Framework Element Name	Number of Criteria (a)	Maximum Mark per question (b)	Total (a x b)	Marks obtained for the Element	Overall MEE Score and % age
1	Context	4	10	40	35	68.55
2	Planning	7	10	70	52.5	
3	Inputs	5	10	50	27.5	
4	Process	6	10	60	40	
5	Outputs	4	10	40	22.5	
6	Outcomes	5	10	40	35	
Total		31		310	212.5	

Assessment Criteria for addressing issues relating to Climate Change & Carbon capture in the Tiger Reserves (TRs)

1. Additional Criteria on Climate Change: Is the TR being consciously managed to adapt to climate change?

Condition	Category*	(Tick ✓)	Comment/ Explanation	Next Steps
There have been no efforts to consider adaptation to climate change in management	Poor	✓	PA managers are having basic understanding about issues but unable to translate into action	PA managers need training to make them aware about the issue
Some initial thought has taken place about likely impacts of climate change, but this has yet to be translated into management plans	Fair			
Detailed plans have been drawn up about how to adapt management to predicted climate change, but these have yet to be translated into active management.	Good			
Detailed plans have been drawn up about how to adapt management to predicted climate change, and these are already being implemented	Very good			

2. Additional Criteria on Climate Change: Is the TR being consciously managed to prevent carbon loss and to encourage further carbon capture?

Condition	Category*	(Tick ✓)	Comment/ Explanation	Next Steps
Carbon storage and carbon dioxide capture have not been considered in management of the TR	Poor	✓		PA managers need training to make them aware about the issue
Carbon storage and carbon dioxide capture have been considered in general terms, but has not yet been significantly reflected in management	Fair			
There are active measures in place to reduce carbon loss from the TR, but no conscious measures to increase carbon dioxide capture	Good			
There are active measures in place both to reduce carbon loss from the TR and to increase carbon dioxide capture	Very good			

Management Effectiveness Evaluation (MEE) of Kaziranga Tiger Reserve

1. Context

1.1 Are the values of the TR well documented, assessed and monitored?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Values not systematically documented, assessed and monitored.	Poor		Draft TCP	Passing reference to the values are TR
Values generally identified but not systematically assessed and monitored.	Fair			
Most values systematically identified, assessed and monitored.	Good	✓		
All values systematically identified, assessed and monitored.	Very good			

1.2 Are the threats to TR values well documented and assessed*?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Threats not systematically documented or assessed.	Poor		Draft TCP	1. Passing reference to the values are TR 2. Additional affidavit in PIL (Suemoto 66/2012) in Guwahati HC.
Threats generally identified but not systematically assessed.	Fair			
Most threats systematically identified and assessed.	Good	✓		
All threats systematically identified and assessed.	Very good			

***This assessment should be based on number, nature and extent of threats**

1.3 Is the 'Core Area' of TR free from human and biotic interference?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
The 'Core Area' has extensive human and biotic interference.	Poor		Notification of TR dated 3 rd Aug 2007	½ of 2 nd , whole 3 rd and whole 5 th addition to KNP as notified under core has not yet been transferred to the Forest Department and also it has biotic interference.. 6 th addition to the KNP as notified buffer has yet not been transferred to Forest Dept and Bagser RF is has not yet been transferred within the administrative control of Director, KNP
The 'Core Area' has some human and biotic interference.	Fair	✓		
The 'Core Area' has little human and biotic interference.	Good			
The 'Core Area' has no human and biotic interference.	Very good			

***This assessment should be based on existence and the efforts made by TR management to address issues related to human settlements/ villages inside the core area; livestock grazing, cultivation, encroachments etc, resource extraction/ livelihood dependence of local communities and should reflect the overall interference due to all the above factors. The issue of 'Unified Control' of the 'Core' and 'Buffer' zones under the Field Director would also be taken into account.**

***Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

1.4 Has the TR complied with the four Statutory* Requirements (SR) along with Tripartite MoU and three Standard Operation Procedures (SOP)?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
None of the four SR, no compliance of Tripartite MoU and three SOPs met	Poor		1. Notification of TR dated 3 rd Aug 2007 2. Notification of Tiger Conservation Foundation dated 20 th Mar 2010 3. NTCA given final on TCP vide letter no. 1-16/2013-NTCA dated 22 nd Jul 2013 4. Notification of steering Committee dated 6 th March 2012	1. 4 th and 6 th addition to the KNP is notified as buffer which could be against the provision of sec. 35 of the WPA, 1972. 2. Only two TCF meeting completed since its constitution. 3. Not a single meeting has been held for Steering Committee. 4. 3 SOPs are said to have been followed but documents are not available with PA management. 5. Discussion with FD reflects that focus of PA manager is limited to KNP only.
Two of the four SR, 50% conditions of the Tripartite MoU and SOPs complied	Fair			
Three of the four SR, 75% conditions of the Tripartite MoU and SOPs complied	Good	✓		
All four SR, 100% conditions of the Tripartite MoU and SOPs complied	Very good			

***Statutory requirements are (1) Legal delineation and notification of Core and Buffer Areas; (2) Establishment of Tiger Conservation Foundation; (3) Development of a Tiger Conservation Plan; and (4) Constitution of a State-level Steering Committee under the Chairmanship of the Chief Minister. TA refers agreement between Field Director, State Government and NTCA. The 3 SOPs are on (i) Straying of Tiger in human dominated landscape, (ii) Tiger Mortality and (iii) Disposal of Carcasses**

2. Planning

2.1 Status of Tiger Conservation Plan (TCP)*?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No TCP in place.	Poor		TCP and Comments of NTCA	1. Final comments of NTCA on the TCP is yet not been incorporated. 2. No indication of participatory process used in the preparation of TCP
TCP is under preparation	Fair			
TR has a relevant TCP	Good	✓		
TR has a comprehensive and relevant TCP, duly approved by the NTCA	Very good			

***The scientific content and the participatory processes used in preparation of the TCP will be taken into account in assessing the quality of TCP.**

2.2 Does the TR safeguards the threatened biodiversity values?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR does not safeguard the threatened biodiversity values.	Poor		Govt of Assam notification dated 19 th Jun 2009 about creation of Kaziranga Biodiversity Conservation and Development Committee (KBCDC)	Five meeting of KBCDC has taken place, last being on 4 th Jan 2012 but no report has been submitted
TR safeguards a few threatened biodiversity values.	Fair			
TR safeguards a large number of threatened biodiversity values.	Good	✓		
TR safeguards all threatened biodiversity values.	Very good			

**Remarks need to elaborate on the kind of safeguards and how they work or are intended to work*

2.3 Are stakeholders given an opportunity to participate in planning process?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little, if any opportunity for stakeholder participation in planning.	Poor		No documents available	As general assessment made by the committee
Stakeholders participate in some planning.	Fair			
Stakeholders participate in most planning processes.	Good	✓		
Stakeholders routinely and systematically participate in all planning processes.	Very good			

**The result of participation must show in the field and not merely reported as a routine exercise.*

2.4 Are habitat management programmes systematically planned, relevant and monitored, and contribute effectively to Tiger and other endangered species conservation?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Habitat management programmes are entirely adhoc.	Poor		Draft TCP para 6.3.4 to 6.3.8	There is mention of few habitat management programmes but no systematic planning and monitoring to contribute effectively
Limited planning and monitoring programmes are in place for habitat management.	Fair			
Habitat management programmes are generally planned and monitored.	Good	✓		
Habitat management programmes are thoroughly planned and monitored.	Very good			

**This assessment should be primarily based on habitat management programmes in relation to habitats for species that are threatened (IUCN categories), are habitat specialists, subjected to seasonal movements, wide ranging with emphasis on the breeding and rearing habitat and may include factors such as food, water, shelter (all connotations). Habitat structure, composition, unique patches of vegetation and sensitive sites, sources of water and their distribution are integral. Corridors within buffer zone are critically important. For example, all riparian habitats. Have these been addressed? Is there a planning process in place? The management practices dealing with invasive species such as Lantana, Michania etc. would be examined.*

2.5 Does the TR has an effective Protection Strategy (PS)* and Security Plan and Security Audit (SA) in place?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR has little or no PS and SA.	Poor		1. Draft TCP 2. Deployment of AFPF vide letter dated 1 st Jun 2012 3. Map showing location AP camps 4. Abstract of poachers arrested/killed and recoveries made.	The Security plan and protection strategy are in place but security audit has not taken place but in view of the location of AP camps, poacher arrested/killed and the recoveries made justifies the category given The constitution of STPF has not taken place but AFPF is effectively discharging their duties and meeting the expectation
TR has an adhoc PS and SA.	Fair			
TR has a generally relevant PS and SA but is not very effective.	Good			
TR has a comprehensive and very effective PS and SA.	Very good	✓		

***This assessment takes inter-alia into account the nature of threats, the number and location of patrolling camps and foot and mobile patrolling, needs that relate to available manpower, terrain difficulties, practicability of area coverage, readiness to contain specific threats with necessary support and facilities. The constitution and functioning of Special Tiger Protection Force (STPF), Number of offences reported, arrests made, prosecution initiated and conviction achieved will be taken into account.**

2.6 Has the TR been effective in the mitigation of human-wildlife conflicts?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Human-wildlife conflicts are significant but poorly addressed.	Poor		Report submitted by Director	The current disbursement process is very cumbersome leading to extraordinary delay in the ex-gratia payment
TR has been able to mitigate few human-wildlife conflicts.	Fair	✓		
TR has been able to mitigate many human-wildlife conflicts.	Good			
TR has been effective in mitigating all human-wildlife conflicts.	Very good			

***The assessment will take into account the number of incidences reported and payment of compensation made and its timeliness.**

2.7 Is the TR integrated into a wider ecological network/ landscape following the principles of the ecosystem approach?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR not integrated into a wider network/ landscape.	Poor		Draft TCP	1. No visible efforts have been to integrate the TR in wider landscape management principles. 2. Landuse around the TR is not being regulated
Some limited attempts to integrate the TR into a network/ landscape.	Fair	✓		
TR is generally quite well integrated into a network/ landscape.	Good			
TR is fully integrated into a wider network/ landscape.	Very good			

***Assessment needs to consider the scope of opportunities on the landscape scale that exist. Consider whether any attempts have been made and what are these? Have all the important corridors been identified? What actions are planned/implemented for their security? Have the Forest Working Plans and Forest Development Corporation Plans within the identified landscapes taken cognizance of such new requirement? These should have been reflected in TCPs. Is there is any effort to rationalize landuse around TR? Is any effort being made to plan and use 'Smart Green Infrastructure'?**

3. Inputs

3.1 Are personnel adequate, well organized and deployed with access to adequate resources in the Tiger Reserve (TR)*?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Few, personnel explicitly allocated but poorly supported for TR management.	Poor		Report submitted by Director	
Some personnel explicitly allocated for TR management but not adequately supported and systematically linked to management objectives.	Fair			
Some personnel with fair support explicitly allocated towards achievement of specific TR management objectives.	Good	✓		
Adequate personnel appropriately supported and explicitly allocated towards achievement of specific TR management objectives.	Very good			

***This assessment should inter-alia be based on number of personnel allocated for attainment of TR objectives at the Range , Round, Beat and Patrolling camps levels or as relevant to the needs (sanctioned posts vis- a- vis existing personnel and needs beyond the sanctioned strengths. It is possible that posts have last been sanctioned several years back that do not now account for the current needs)**

3.2 Are resources (vehicle, equipment, building etc.) adequate, well organized and managed with desired access?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Few, if any, resources explicitly allocated for TR management.	Poor		List of moveable and immovable submitted by the PA managers	1. Need to create more forest guards quarters 2. Need more numbers of GPS, Camera and binoculars etc. 3. Old vehicles needs to be replaced at earliest
Some resources explicitly allocated for TR management but not systematically linked to management objectives.	Fair			
Some resources explicitly allocated towards achievement of specific TR management objectives.	Good	✓		
Adequate resources explicitly allocated towards achievement of specific TR management objectives.	Very good			

*** These form a variety of resources. These may be segregated into immovable (structures) and movable categories and each further may be considered under the essential and desirable categories. It is best to start with what are the minimum needs to attain each objective, what is available and manner of use/deployment. The proportions of the 'essentials' and 'desirables' along the importance gradient of objectives would serve as pointers for score categories. Specific remarks would be vitally important.**

3.3 Are financial resources other than those of the State linked to priority actions and are funds adequate, released timely and utilized?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Resource allocation is adhoc, funds are inadequate and seldom released in time and not utilized.	Poor		Documents submitted by PA managers	Delay in release of funds from the state govt.
Some specific allocation for management of priority action. Funds are inadequate and there is some delay in release, partially utilized.	Fair	✓		
Comprehensive planning and allocation that meets the most important objectives. Generally funds released with not much delay and mostly utilized.	Good			
Comprehensive planning and allocation of resources for attainment of most objectives. Funds generally released on-time and are fully utilized.	Very good			

***Obtain details of funds released by NTCA and their utilization by TR in the last 3 years and indicate them under 'Remarks'. Also comment on the problems associated with fund allocations and their utilization.**

3.4 Are financial resources from the State linked to priority action and funds adequate, timely released and utilized for the management of Tiger Reserve?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Resource allocation is adhoc, funds are inadequate and seldom released in time and not utilized.	Poor	✓		No documents were available but as per oral submission with Director, no resource allocation has been done by the State govt.
Some specific allocation for management of priority action. Funds are inadequate and there is some delay in release, partially utilized.	Fair			
Comprehensive planning and allocation that meets the most important objectives. Generally funds released with not much delay and mostly utilized.	Good			
Comprehensive planning and allocation of resources for attainment of most objectives. Funds generally released on-time and are fully utilized.	Very good			

***Obtain details of funds released by State and their utilization by TR in the last 3 years and indicate them under 'Remarks'. Also comment on the problems associated with fund allocation and their utilization.**

3.5 What level of resources are provided by NGOs?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
NGOs contribute nothing for the management of the TR.	Poor		List of NGO who supported	No records were provided to assist the quantum of assistance provided by NGO
NGOs make some contribution to management of the TR but opportunities for collaboration are not systematically explored.	Fair			
NGOs contributions are systematically sought and negotiated for the management of some TR level activities.	Good	✓		
NGOs contributions are systematically sought and negotiated for the management of many TR level activities.	Very good			

4. Process

4.1 Does the TR have manpower resources trained in wildlife conservation for effective TR management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No trained officers and frontline staff in the TR.	Poor		List submitted by the PA mangers	1. List submitted by the PA managers indicate the low percentage of wildlife trained staff in KTR. 2. There is neither staff development plan nor not any internal training programme organized in the last 3 years.
Some trained officers and few trained frontline staff, posted in the TR.	Fair			
All trained officers and and fair number of trained frontline staff posted in the TR.	Good	✓		
All trained officers and most of the trained frontline staff is posted in the TR.	Very good			

**Indicate % of trained staff in various categories. The number and thematic areas of the 'Internal Training' programmes organized in the TR in the last 3 years may be taken into account. Has the TR prepared a 'Staff Development Plan'? Is it being implemented?*

4.2 Is TR staff management performance linked to achievement of management objectives?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No linkage between staff management performance and management objectives.	Poor		List submitted by the PA manager	The list submitted by the management neither indicates the date of award nor the park management is having appraisal of staff linked to achievement of management objectives.
Some linkage between staff management performance and management objectives, but not consistently or systematically assessed.	Fair	✓		
Management performance for most staff is directly linked to achievement of relevant management objectives.	Good			
Management performance of all staff is directly linked to achievement of relevant management objectives.	Very good			

4.3 Is there effective public participation in TR management* and does it show in making a difference?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no public participation in TR management.	Poor			No documents were submitted but the assessment is based on interaction with PA officials, NGOs and public
Opportunistic public participation in some of the relevant aspects of TR management.	Fair	✓		
Systematic public participation in most of the relevant aspects of TR management.	Good			
Comprehensive and systematic public participation in all important and relevant aspects of TR management.	Very good			

**The involvement of NGOs/ NGIs in population estimation may be taken into account)*

4.4 Is there a responsive system for handling complaints and comments* about TR management?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Ad-hoc approach to handling complaints.	Poor	✓		The TR does not maintain any suggestion and compliant register
Complaints handling system operational but not responsive to individual issues and with limited follow up.	Fair			
Coordinated system logs and responds effectively to most complaints.	Good			
All complaints systematically logged in coordinated system and timely response provided with minimal repeat complaints.	Very good			

***Does the TR maintains 'Suggestions Register'? What actions are taken to deal with suggestions?**

4.5 Does TR management addresses the livelihood issues* of resource dependent communities, especially of women?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No livelihood issues are addressed by TR management.	Poor			No documents were submitted regarding man days generated or funds received from district agencies and other resources
Few livelihood issues are addressed by TR management.	Fair	✓		
Substantial livelihood issues are addressed by TR management.	Good			
Livelihood issues of resource dependent communities especially of women are addressed effectively by TR managers.	Very good			

***The number of mandays generated in the last 3 years may be taken into account. Are funds received from District Agencies and other sources? Provide details of funds received in last 3 years.**

4.6 Has the TR planned and implemented the voluntary 'Village Relocation' from the Core/ Critical Tiger Habitat (CTH)?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No planning and no implementation	Poor	✓		½ of 2 nd , whole 3 rd and , whole 5 th addition to KNP as notified under core has not yet been transferred to the Forest Department and also it has biotic interference
Plans have been made but no implementation	Fair			
Plans have been made and some implementation is in progress	Good			
Plans have been made and are being actively implemented/ no human habitation in the CTH	Very good			

***Assessment will look into the village relocation planning process including availability of manpower, financial resources and NGO support, if any. Is there a mechanism to address the complaints received in respect of relocation process? Effort must be made to assess post-relocation success or otherwise.**

5. Output

5.1 Is adequate information on TR management publicly available?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no information on TR management publicly available.	Poor		Website of KNP	
Publicly available information is general and has limited relevance to management accountability and the condition of public assets.	Fair	✓		
Publicly available information provides detailed insight into major management issues and condition of public assets.	Good			
Comprehensive reports are routinely available in public domain on management and condition of public assets.	Very good			

5.2 Are visitor services and facilities appropriate and adequate?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Visitor services and facilities do not exist.	Poor		Tourist inflow data and elephant/ jeep safari data provided by PA managers	1. Only elephant safari are provided by the PA mgmt, whereas the other facility are provided by pvt, tour operators. 2. Films Video are screened 3. The interpretation center is non functional
Visitor services and facilities are very basic.	Fair	✓		
Visitor services and facilities are monitored from time to time and are fairly effective.	Good			
Visitor services and facilities are conscientiously maintained, regularly upgraded and monitored for visitor satisfaction	Very good			

**Include the existence and quality of visitor and interpretation centers, including skills and capabilities of personnel manning these, TR related publications, films, videos; arrangements of stay (including places serving refreshments and food owned and managed by TR), watch towers and hides including safety factors, vehicles assigned for visitors including riding elephants, if any and their deployment, drinking water, rest rooms, garbage disposal, attended and self guided services in the field, visitor feed back on the quality of wilderness experience.*

5.3 Are research/ monitoring related trends systematically evaluated and routinely reported and used to improve management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no systematic evaluation or routine reporting of trends.	Poor		List of research projects in KNP submitted by PA managers	The list shows a lack of orientation and insight into research pertaining management aspect s
Some evaluation and reporting undertaken but neither systematic nor routine.	Fair	✓		
Systematic evaluation and routine reporting of trends undertaken.	Good			
Systematic evaluation and comprehensive reporting of trends undertaken and attempts made at course corrections as relevant.	Very good			

**Not all TRs attract projects and researchers and with exceptions, little research takes place on the TRs own steam because of systemic limitations. However, monitoring of some critical issues is expected e.g. population of tiger, co-predators and prey with insights into their demography and distribution (some opportunistic sampling by sightings, signs and spatial distribution during assessment would be extremely useful in terms of expert impression and as a pulse), monitoring incidence of livestock grazing, fires, weeds, sources of water, a variety of illegal activities typically associated with the reserve, wildlife health (e.g. epidemics, immunization of livestock) regeneration and change in vegetation, visitors and their activities, offence cases, ex-gratia payments etc. Efforts must be made to assess the planning and implementation of Phase-IV monitoring protocols and the success of implementation of M-Stripes (wherever applicable). Are the 'Sykes and Horill' monitoring plots maintained and data analyzed?*

**Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10*

5.4 Is there a systematic maintenance schedule and funds in place for management of infrastructure/assets?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No systematic inventory or maintenance schedule.	Poor		No documents submitted by PA managers	
Inventory maintenance is adhoc and so is the maintenance schedule.	Fair	✓		
Systematic inventory provides the basis for maintenance schedule but funds are inadequate.	Good			
Systematic inventory provides the basis for maintenance schedule and adequate funds are made available.	Very good			

6. Outcomes

6.1 Are populations of threatened species declining, stable or increasing?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Populations of key threatened/ endangered species are declining.	Poor		Census figure given by PA managers	1. There is no systematic population estimate has been reported to be undertaken for all the threatened species 2. The wild animal population data indicates the population estimate of only six species
Some threatened/ endangered species populations declining, some are increasing, most others are stable.	Fair			
Several threatened/ endangered species populations increasing, most others are stable.	Good	✓		
All threatened/ endangered species populations either increasing or stable.	Very good			

**This needs to practically relate to the natural ecosystem potential rather than being driven merely by numbers and visibility. The assessment score may be elaborated under remarks.*

6.2 Is the population of tigers showing a declining, stable or increasing trend?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Population of tiger is showing a declining trend	Poor		Census data from 1993-2010	Phase IV monitoring is for 2014 is ongoing
Population of tiger is stable	Fair			
Population of tiger is showing an increasing trend	Good	✓		
Population of tiger has significantly increased	Very good			

**This assessment should be based in the context of available population estimate (2010-11) and the outcomes of the currently ongoing Phase-IV analyses.*

6.3 Have the threats* to the TR being reduced/ minimized? Or is there an increase?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Threats to the TR have not abated but have enhanced.	Poor		No documents were submitted	
Some threats to the TR have abated, others continue their presence	Fair	✓		
Most threats to the TR have abated. The few remaining are vigorously being addressed	Good			
All threats to the TR have been effectively contained and an efficient system is in place to deal with any emerging situation	Very good			

**Does the TR has a Disaster Risk Management Plan to deal with existing as well as emerging threats?*

6.4 Are the expectations of visitors* generally met or exceeded?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Expectations of visitors generally not met.	Poor			Interaction with visitors and local people
Expectations of many visitors are met.	Fair			
Expectations of most visitors are met.	Good	✓		
Expectations of all most all visitors are met.	Very good			

***What is the compliance status on Supreme Court/ NTCA Guidelines on Ecotourism in TRs?**

6.5 Are local communities supportive of TR management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Local communities are hostile.	Poor			
Some are supportive.	Fair	✓		
Most locals are supportive of TR management.	Good			
All local communities supportive of TR management.	Very good			

***There could be many reasons for disenchantment. It could be real because of managerial neglect or the managerial efforts could be appropriate but there could be local elements/organizations who would like to keep the disaffection simmering for their own ulterior motives. Likewise success could be entirely because of the efforts of managers or they might be fortunate in striking partnerships with credible NGOs. Assessment may take the prevailing causes into account.**

7. MEE Score Card*

Framework Element Number	Framework Element Name	Number of Criteria (a)	Maximum Mark per question (b)	Total (a x b)	Marks obtained for the Element	Overall MEE Score and % age
1	Context	4	10	40	27.5	61.29
2	Planning	7	10	70	50	
3	Inputs	5	10	50	42.5	
4	Process	6	10	60	27.5	
5	Outputs	4	10	40	25	
6	Outcomes	5	10	50	17.5	
Total		31		310	190	

***Efforts will be made by the NTCA-WII-MEE Team to address the issue of assigning 'differential' weightages to the 30 Assessment Criteria including 'normalization'.**

Assessment Criteria for addressing issues relating to Climate Change & Carbon capture in the Tiger Reserves (TRs)

1. Additional Criteria on Climate Change: Is the TR being consciously managed to adapt to climate change?

Condition	Category*	(Tick ✓)	Comment/ Explanation	Next Steps
There have been no efforts to consider adaptation to climate change in management	Poor	✓	PA managers are having basic understanding about issues but unable to translate into action	PA managers need training to make them aware about the issue
Some initial thought has taken place about likely impacts of climate change, but this has yet to be translated into management plans	Fair			
Detailed plans have been drawn up about how to adapt management to predicted climate change, but these have yet to be translated into active management.	Good			
Detailed plans have been drawn up about how to adapt management to predicted climate change, and these are already being implemented	Very good			

2. Additional Criteria on Climate Change: Is the TR being consciously managed to prevent carbon loss and to encourage further carbon capture?

Condition	Category*	(Tick ✓)	Comment/ Explanation	Next Steps
Carbon storage and carbon dioxide capture have not been considered in management of the TR	Poor	✓		PA managers need training to make them aware about the issue
Carbon storage and carbon dioxide capture have been considered in general terms, but has not yet been significantly reflected in management	Fair			
There are active measures in place to reduce carbon loss from the TR, but no conscious measures to increase carbon dioxide capture	Good			
There are active measures in place both to reduce carbon loss from the TR and to increase carbon dioxide capture	Very good			

Management Effectiveness Evaluation (MEE) of Manas Tiger Reserve

1. Context

1.1 Are the values of the TR well documented, assessed and monitored?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Values not systematically documented, assessed and monitored.	Poor		TCP page # 32	Notification of NP and TR does not describe. However UNESCO report mentioned about its value
Values generally identified but not systematically assessed and monitored.	Fair			
Most values systematically identified, assessed and monitored.	Good	✓		
All values systematically identified, assessed and monitored.	Very good			

1.2 Are the threats to TR values well documented and assessed*?

Assessment criteria ⁺				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Threats not systematically documented or assessed.	Poor		TCP page # 95	
Threats generally identified but not systematically assessed.	Fair	✓		
Most threats systematically identified and assessed.	Good			
All threats systematically identified and assessed.	Very good			

***This assessment should be based on number, nature and extent of threats**

1.3 Is the 'Core Area' of TR free from human and biotic interference?

Assessment criteria ⁺				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
The 'Core Area' has extensive human and biotic interference.	Poor			1. Core and buffer are not under unified control of FD.
The 'Core Area' has some human and biotic interference.	Fair	✓		
The 'Core Area' has little human and biotic interference.	Good			
The 'Core Area' has no human and biotic interference.	Very good			

***This assessment should be based on existence and the efforts made by TR management to address issues related to human settlements/ villages inside the core area; livestock grazing, cultivation, encroachments etc, resource extraction/ livelihood dependence of local communities and should reflect the overall interference due to all the above factors. The issue of 'Unified Control' of the 'Core' and 'Buffer' zones under the Field Director would also be taken into account.**

1.4 Has the TR complied with the four Statutory* Requirements (SR) along with Tripartite MoU and three Standard Operation Procedures (SOP)?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
None of the four SR, no compliance of Tripartite MoU and three SOPs met	Poor		TCP page # 232	TR is notified but in area demarcation is not given for core
Two of the four SR, 50% conditions of the Tripartite MoU and SOPs complied	Fair			
Three of the four SR, 75% conditions of the Tri-partite MoU and SOPs complied	Good			
All four SR, 100% conditions of the Tripartite MoU and SOPs complied	Very good	✓		

***Statutory requirements are (1) Legal delineation and notification of Core and Buffer Areas; (2) Establishment of Tiger Conservation Foundation; (3) Development of a Tiger Conservation Plan; and (4) Constitution of a State-level Steering Committee under the Chairmanship of the Chief Minister. TA refers agreement between Field Director, State Government and NTCA. The 3 SOPs are on (i) Straying of Tiger in human dominated landscape, (ii) Tiger Mortality and (iii) Disposal of Carcasses**

2. Planning

2.1 Status of Tiger Conservation Plan (TCP)*?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No TCP in place.	Poor		NTCA letter # 1-14/2011-NTCA dated 2 May 2014	No records are available to justify about participatory process
TCP is under preparation	Fair			
TR has a relevant TCP	Good	✓		
TR has a comprehensive and relevant TCP, duly approved by the NTCA	Very good			

***The scientific content and the participatory processes used in preparation of the TCP will be taken into account in assessing the quality of TCP.**

2.2 Does the TR safeguards the threatened biodiversity values?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR does not safeguard the threatened biodiversity values.	Poor			MNP has safeguards but threats to other areas of TR are not under control of FD
TR safeguards a few threatened biodiversity values.	Fair	✓		
TR safeguards a large number of threatened biodiversity values.	Good			
TR safeguards all threatened biodiversity values.	Very good			

***Remarks need to elaborate on the kind of safeguards and how they work or are intended to work**

2.3 Are stakeholders given an opportunity to participate in planning process?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little, if any opportunity for stakeholder participation in planning.	Poor		Minutes of meeting	Biosphere protection committee and EDC are having participatory process
Stakeholders participate in some planning.	Fair	✓		
Stakeholders participate in most planning processes.	Good			
Stakeholders routinely and systematically participate in all planning processes.	Very good			

***The result of participation must show in the field and not merely reported as a routine exercise.**

***Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

2.4 Are habitat management programmes systematically planned, relevant and monitored, and contribute effectively to Tiger and other endangered species conservation?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Habitat management programmes are entirely adhoc.	Poor			Special emphasis has started for grassland management.
Limited planning and monitoring programmes are in place for habitat management.	Fair			
Habitat management programmes are generally planned and monitored.	Good	✓		
Habitat management programmes are thoroughly planned and monitored.	Very good			

**This assessment should be primarily based on habitat management programmes in relation to habitats for species that are threatened (IUCN categories), are habitat specialists, subjected to seasonal movements, wide ranging with emphasis on the breeding and rearing habitat and may include factors such as food, water, shelter (all connotations).Habitat structure, composition, unique patches of vegetation and sensitive sites, sources of water and their distribution are integral. Corridors within buffer zone are critically important. For example, all riparian habitats. Have these been addressed? Is their a planning process in place? The management practices dealing with invasive species such as Lantana, Michania etc. would be examined.*

2.5 Does the TR has an effective Protection Strategy (PS)* and Security Plan and Security Audit (SA) in place?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR has little or no PS and SA.	Poor			Only MNP part of TR is having well defined PS as other areas of TR is not under control of FD
TR has an adhoc PS and SA.	Fair	✓		
TR has a generally relevant PS and SA but is not very effective.	Good			
TR has a comprehensive and very effective PS and SA.	Very good			

**This assessment takes inter-alia into account the nature of threats, the number and location of patrolling camps and foot and mobile patrolling, needs that relate to available manpower, terrain difficulties, practicability of area coverage, readiness to contain specific threats with necessary support and facilities. The constitution and functioning of Special Tiger Protection Force (STPF), Number of offences reported, arrests made, prosecution initiated and conviction achieved will be taken into account.*

2.6 Has the TR been effective in the mitigation of human-wildlife conflicts?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Human-wildlife conflicts are significant but poorly addressed.	Poor	✓		11 km long solar fence on southern boundary but budget is a major constraint to undertake effective mitigation measures
TR has been able to mitigate few human-wildlife conflicts.	Fair			
TR has been able to mitigate many human-wildlife conflicts.	Good			
TR has been effective in mitigating all human-wildlife conflicts.	Very good			

**The assessment will take into account the number of incidences reported and payment of compensation made and its timeliness.*

2.7 Is the TR integrated into a wider ecological network/ landscape following the principles of the ecosystem approach?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR not integrated into a wider network/ landscape.	Poor		TCP and UNESCO report	
Some limited attempts to integrate the TR into a network/ landscape.	Fair			
TR is generally quite well integrated into a network/ landscape.	Good	✓		
TR is fully integrated into a wider network/ landscape.	Very good			

***Assessment needs to consider the scope of opportunities on the landscape scale that exist. Consider whether any attempts have been made and what are these? Have all the important corridors been identified? What actions are planned/implemented for their security? Have the Forest Working Plans and Forest Development Corporation Plans within the identified landscapes taken cognizance of such new requirement? These should have been reflected in TCPs. Is there is any effort to rationalize landuse around TR? Is any effort being made to plan and use 'Smart Green Infrastructure'?**

3. Inputs

3.1 Are personnel adequate, well organized and deployed with access to adequate resources in the Tiger Reserve (TR)*?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Few, personnel explicitly allocated but poorly supported for TR management.	Poor		Existing staff strength list	More man power are needed
Some personnel explicitly allocated for TR management but not adequately supported and systematically linked to management objectives.	Fair	✓		
Some personnel with fair support explicitly allocated towards achievement of specific TR management objectives.	Good			
Adequate personnel appropriately supported and explicitly allocated towards achievement of specific TR management objectives.	Very good			

***This assessment should inter-alia be based on number of personnel allocated for attainment of TR objectives at the Range , Round, Beat and Patrolling camps levels or as relevant to the needs (sanctioned posts vis- a- vis existing personnel and needs beyond the sanctioned strengths. It is possible that posts have last been sanctioned several years back that do not now account for the current needs)**

3.2 Are resources (vehicle, equipment, building etc.) adequate, well organized and managed with desired access?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Few, if any, resources explicitly allocated for TR management.	Poor		Office record	
Some resources explicitly allocated for TR management but not systematically linked to management objectives.	Fair	✓		
Some resources explicitly allocated towards achievement of specific TR management objectives.	Good			
Adequate resources explicitly allocated towards achievement of specific TR management objectives.	Very good			

*** These form a variety of resources. These may be segregated into immovable (structures) and movable categories and each further may be considered under the essential and desirable categories. It is best to start with what are the minimum needs to attain each objective, what is available and manner of use/deployment. The proportions of the 'essentials' and 'desirables' along the importance gradient of objectives would serve as pointers for score categories. Specific remarks would be vitally important.**

***Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

3.3 Are financial resources other than those of the State linked to priority actions and are funds adequate, released timely and utilized?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Resource allocation is adhoc, funds are inadequate and seldom released in time and not utilized.	Poor	✓	Office record	
Some specific allocation for management of priority action. Funds are inadequate and there is some delay in release, partially utilized.	Fair			
Comprehensive planning and allocation that meets the most important objectives. Generally funds released with not much delay and mostly utilized.	Good			
Comprehensive planning and allocation of resources for attainment of most objectives. Funds generally released on-time and are fully utilized.	Very good			

***Obtain details of funds released by NTCA and their utilization by TR in the last 3 years and indicate them under 'Remarks'. Also comment on the problems associated with fund allocations and their utilization.**

3.4 Are financial resources from the State linked to priority action and funds adequate, timely released and utilized for the management of Tiger Reserve?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Resource allocation is adhoc, funds are inadequate and seldom released in time and not utilized.	Poor	✓	Office record	
Some specific allocation for management of priority action. Funds are inadequate and there is some delay in release, partially utilized.	Fair			
Comprehensive planning and allocation that meets the most important objectives. Generally funds released with not much delay and mostly utilized.	Good			
Comprehensive planning and allocation of resources for attainment of most objectives. Funds generally released on-time and are fully utilized.	Very good			

***Obtain details of funds released by State and their utilization by TR in the last 3 years and indicate them under 'Remarks'. Also comment on the problems associated with fund allocation and their utilization.**

3.5 What level of resources are provided by NGOs?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
NGOs contribute nothing for the management of the TR.	Poor		Office record	
NGOs make some contribution to management of the TR but opportunities for collaboration are not systematically explored.	Fair			
NGOs contributions are systematically sought and negotiated for the management of some TR level activities.	Good			
NGOs contributions are systematically sought and negotiated for the management of many TR level activities.	Very good	✓		

4. Process

4.1 Does the TR have manpower resources trained in wildlife conservation for effective TR management?

Assessment criteria [*]				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No trained officers and frontline staff in the TR.	Poor		Office record	
Some trained officers and few trained frontline staff, posted in the TR.	Fair	✓		
All trained officers and fair number of trained frontline staff posted in the TR.	Good			
All trained officers and most of the trained frontline staff is posted in the TR.	Very good			

^{*}Indicate % of trained staff in various categories. The number and thematic areas of the 'Internal Training' programmes organized in the TR in the last 3 years may be taken into account. Has the TR prepared a 'Staff Development Plan'? Is it being implemented?

4.2 Is TR staff management performance linked to achievement of management objectives?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No linkage between staff management performance and management objectives.	Poor		Office record	
Some linkage between staff management performance and management objectives, but not consistently or systematically assessed.	Fair	✓		
Management performance for most staff is directly linked to achievement of relevant management objectives.	Good			
Management performance of all staff is directly linked to achievement of relevant management objectives.	Very good			

4.3 Is there effective public participation in TR management^{*} and does it show in making a difference?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no public participation in TR management.	Poor		Minutes of meeting with stakeholders	
Opportunistic public participation in some of the relevant aspects of TR management.	Fair			
Systematic public participation in most of the relevant aspects of TR management.	Good	✓		
Comprehensive and systematic public participation in all important and relevant aspects of TR management.	Very good			

^{*}The involvement of NGOs/ NGLs in population estimation may be taken into account)

4.4 Is there a responsive system for handling complaints and comments^{*} about TR management?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Ad-hoc approach to handling complaints.	Poor			No formal system are in place
Complaints handling system operational but not responsive to individual issues and with limited follow up.	Fair	✓		
Coordinated system logs and responds effectively to most complaints.	Good			
All complaints systematically logged in coordinated system and timely response provided with minimal repeat complaints.	Very good			

^{*}Does the TR maintains 'Suggestions Register'? What actions are taken to deal with suggestions?

^{*}Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

4.5 Does TR management addresses the livelihood issues* of resource dependent communities, especially of women?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No livelihood issues are addressed by TR management.	Poor		Biosphere reserve document	
Few livelihood issues are addressed by TR management.	Fair			
Substantial livelihood issues are addressed by TR management.	Good	✓		
Livelihood issues of resource dependent communities especially of women are addressed effectively by TR managers.	Very good			

***The number of mandays generated in the last 3 years may be taken into account. Are funds received from District Agencies and other sources? Provide details of funds received in last 3 years.**

4.6 Has the TR planned and implemented the voluntary 'Village Relocation' from the Core/ Critical Tiger Habitat (CTH)?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No planning and no implementation	Poor			No human settlement in MNP
Plans have been made but no implementation	Fair			
Plans have been made and some implementation is in progress	Good	✓		
Plans have been made and are being actively implemented/ no human habitation in the CTH	Very good			

***Assessment will look into the village relocation planning process including availability of manpower, financial resources and NGO support, if any. Is there a mechanism to address the complaints received in respect of relocation process? Effort must be made to assess post-relocation success or otherwise.**

5. Output

5.1 Is adequate information on TR management publicly available?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no information on TR management publicly available.	Poor			1. Current website describe only about MNP. 2. Proper signage at strategic location are missing
Publicly available information is general and has limited relevance to management accountability and the condition of public assets.	Fair	✓		
Publicly available information provides detailed insight into major management issues and condition of public assets.	Good			
Comprehensive reports are routinely available in public domain on management and condition of public assets.	Very good			

5.2 Are visitor services and facilities appropriate and adequate?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Visitor services and facilities do not exist.	Poor			Grading based on field observation
Visitor services and facilities are very basic.	Fair	✓		
Visitor services and facilities are monitored from time to time and are fairly effective.	Good			
Visitor services and facilities are conscientiously maintained, regularly upgraded and monitored for visitor satisfaction	Very good			

***Include the existence and quality of visitor and interpretation centers, including skills and capabilities of personnel manning these, TR related publications, films, videos; arrangements of stay (including places serving refreshments and food owned and managed by TR), watch towers and hides including safety factors, vehicles assigned for visitors including riding elephants, if any and their deployment, drinking water, rest rooms, garbage disposal, attended and self guided services in the field, visitor feed back on the quality of wilderness experience.**

5.3 Are research/ monitoring related trends systematically evaluated and routinely reported and used to improve management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no systematic evaluation or routine reporting of trends.	Poor		TCP page # 292	
Some evaluation and reporting undertaken but neither systematic nor routine.	Fair			
Systematic evaluation and routine reporting of trends undertaken.	Good	✓		
Systematic evaluation and comprehensive reporting of trends undertaken and attempts made at course corrections as relevant.	Very good			

***Not all TRs attract projects and researchers and with exceptions, little research takes place on the TRs own steam because of systemic limitations. However, monitoring of some critical issues is expected e.g. population of tiger, co-predators and prey with insights into their demography and distribution (some opportunistic sampling by sightings, signs and spatial distribution during assessment would be extremely useful in terms of expert impression and as a pulse), monitoring incidence of livestock grazing, fires, weeds, sources of water, a variety of illegal activities typically associated with the reserve, wildlife health (e.g. epidemics, immunization of livestock) regeneration and change in vegetation, visitors and their activities, offence cases, ex-gratia payments etc. Efforts must be made to assess the planning and implementation of Phase-IV monitoring protocols and the success of implementation of M-Stripes (wherever applicable). Are the 'Sykes and Horill' monitoring plots maintained and data analyzed?**

5.4 Is there a systematic maintenance schedule and funds in place for management of infrastructure/assets?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No systematic inventory or maintenance schedule.	Poor			This is undertaken on need base
Inventory maintenance is adhoc and so is the maintenance schedule.	Fair	✓		
Systematic inventory provides the basis for maintenance schedule but funds are inadequate.	Good			
Systematic inventory provides the basis for maintenance schedule and adequate funds are made available.	Very good			

6. Outcomes

6.1 Are populations of threatened species declining, stable or increasing?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Populations of key threatened/ endangered species are declining.	Poor		TCP page # 336	
Some threatened/ endangered species populations declining, some are increasing, most others are stable.	Fair			
Several threatened/ endangered species populations increasing, most others are stable.	Good	✓		
All threatened/ endangered species populations either increasing or stable.	Very good			

***This needs to practically relate to the natural ecosystem potential rather than being driven merely by numbers and visibility. The assessment score may be elaborated under remarks.**

6.2 Is the population of tigers showing a declining, stable or increasing trend?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Population of tiger is showing a declining trend	Poor		TCP page # 336	
Population of tiger is stable	Fair			
Population of tiger is showing an increasing trend	Good	✓		
Population of tiger has significantly increased	Very good			

***This assessment should be based in the context of available population estimate (2010-11) and the outcomes of the currently ongoing Phase-IV analyses.**

6.3 Have the threats* to the TR being reduced/ minimized? Or is there an increase?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Threats to the TR have not abated but have enhanced.	Poor		Offence record	
Some threats to the TR have abated, others continue their presence	Fair	✓		
Most threats to the TR have abated. The few remaining are vigorously being addressed	Good			
All threats to the TR have been effectively contained and an efficient system is in place to deal with any emerging situation	Very good			

***Does the TR has a Disaster Risk Management Plan to deal with existing as well as emerging threats?**

6.4 Are the expectations of visitors* generally met or exceeded?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Expectations of visitors generally not met.	Poor			Grading based on field observation
Expectations of many visitors are met.	Fair			
Expectations of most visitors are met.	Good	✓		
Expectations of all most all visitors are met.	Very good			

***What is the compliance status on Supreme Court/ NTCA Guidelines on Ecotourism in TRs?**

6.5 Are local communities supportive of TR management?

Assessment criteria ⁺				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Local communities are hostile.	Poor			Grading based on field observation
Some are supportive.	Fair			
Most locals are supportive of TR management.	Good	✓		
All local communities supportive of TR management.	Very good			

**There could be many reasons for disenchantment. It could be real because of managerial neglect or the managerial efforts could be appropriate but there could be local elements/organizations who would like to keep the disaffection simmering for their own ulterior motives. Likewise success could be entirely because of the efforts of managers or they might be fortunate in striking partnerships with credible NGOs. Assessment may take the prevailing causes into account.*

7. MEE Score Card⁺

Framework Element Number	Framework Element Name	Number of Criteria (a)	Maximum Mark per question (b)	Total (a x b)	Marks obtained for the Element	Overall MEE Score and % age
1	Context	4	10	40	27.5	60.48
2	Planning	7	10	70	40	
3	Inputs	5	10	50	25	
4	Process	6	10	60	37.5	
5	Outputs	4	10	40	22.5	
6	Outcomes	5	10	50	35	
Total		31		310	187.5	

**Efforts will be made by the NTCA-WII-MEE Team to address the issue of assigning 'differential' weightages to the 30 Assessment Criteria including 'normalization'.*

Assessment Criteria for addressing issues relating to Climate Change & Carbon capture in the Tiger Reserves (TRs)

1. *Additional Criteria on Climate Change: Is the TR being consciously managed to adapt to climate change?*

Condition	Category*	(Tick ✓)	Comment/ Explanation	Next Steps
There have been no efforts to consider adaptation to climate change in management	Poor		PA managers are having basic understanding about issues but unable to translate into action	PA managers need training to make them aware about the issue
Some initial thought has taken place about likely impacts of climate change, but this has yet to be translated into management plans	Fair	✓		
Detailed plans have been drawn up about how to adapt management to predicted climate change, but these have yet to be translated into active management.	Good			
Detailed plans have been drawn up about how to adapt management to predicted climate change, and these are already being implemented	Very good			

2. *Additional Criteria on Climate Change: Is the TR being consciously managed to prevent carbon loss and to encourage further carbon capture?*

Condition	Category*	(Tick ✓)	Comment/ Explanation	Next Steps
Carbon storage and carbon dioxide capture have not been considered in management of the TR	Poor	✓		PA managers need training to make them aware about the issue
Carbon storage and carbon dioxide capture have been considered in general terms, but has not yet been significantly reflected in management	Fair			
There are active measures in place to reduce carbon loss from the TR, but no conscious measures to increase carbon dioxide capture	Good			
There are active measures in place both to reduce carbon loss from the TR and to increase carbon dioxide capture	Very good			

Management Effectiveness Evaluation (MEE) of Namdapha Tiger Reserve

1. Context

1.1 Are the values of the TR well documented, assessed and monitored?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Values not systematically documented, assessed and monitored.	Poor		1.3.4 of draft TCP	1. Number of staff is very less to execute monitoring 2. almost 60% area is inaccessible
Values generally identified but not systematically assessed and monitored.	Fair	✓		
Most values systematically identified, assessed and monitored.	Good			
All values systematically identified, assessed and monitored.	Very good			

1.2 Are the threats to TR values well documented and assessed*?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Threats not systematically documented or assessed.	Poor		3.4 of draft TCP	Lack of resources (man power, roads, vehicles, buildings etc.) which requires for systematic documentation and assessment
Threats generally identified but not systematically assessed.	Fair	✓		
Most threats systematically identified and assessed.	Good			
All threats systematically identified and assessed.	Very good			

*This assessment should be based on number, nature and extent of threats

1.3 Is the 'Core Area' of TR free from human and biotic interference?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
The 'Core Area' has extensive human and biotic interference.	Poor		Appendix 8 of draft TCP	
The 'Core Area' has some human and biotic interference.	Fair			
The 'Core Area' has little human and biotic interference.	Good	✓		
The 'Core Area' has no human and biotic interference.	Very good			

*This assessment should be based on existence and the efforts made by TR management to address issues related to human settlements/ villages inside the core area; livestock grazing, cultivation, encroachments etc, resource extraction/ livelihood dependence of local communities and should reflect the overall interference due to all the above factors. The issue of 'Unified Control' of the 'Core' and 'Buffer' zones under the Field Director would also be taken into account.

1.4 Has the TR complied with the four Statutory* Requirements (SR) along with Tripartite MoU and three Standard Operation Procedures (SOP)?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
None of the four SR, no compliance of Tripartite MoU and three SOPs met	Poor		1.Core and buffer notification 2.Tiger foundation notification 3.notification of steering committee 4.comment of NTCA on Draft TCP	No cases are found to assess SOPs No records available to assess any meeting of Tiger Steering Committee
Two of the four SR, 50% conditions of the Tripartite MoU and SOPs complied	Fair			
Three of the four SR, 75% conditions of the Tripartite MoU and SOPs complied	Good			
All four SR, 100% conditions of the Tripartite MoU and SOPs complied	Very good	✓		

***Statutory requirements are (1) Legal delineation and notification of Core and Buffer Areas; (2) Establishment of Tiger Conservation Foundation; (3) Development of a Tiger Conservation Plan; and (4) Constitution of a State-level Steering Committee under the Chairmanship of the Chief Minister. TA refers agreement between Field Director, State Government and NTCA. The 3 SOPs are on (i) Straying of Tiger in human dominated landscape, (ii) Tiger Mortality and (iii) Disposal of Carcasses**

2. Planning

2.1 Status of Tiger Conservation Plan (TCP)*?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No TCP in place.	Poor		Letters reflecting comments of NGO and NGI	
TCP is under preparation	Fair			
TR has a relevant TCP	Good	✓		
TR has a comprehensive and relevant TCP, duly approved by the NTCA	Very good			

***The scientific content and the participatory processes used in preparation of the TCP will be taken into account in assessing the quality of TCP.**

2.2 Does the TR safeguards the threatened biodiversity values?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR does not safeguard the threatened biodiversity values.	Poor	✓		Biodiversity safeguards are inheriting due to presence of natural physical barriers, however no efforts are taken by the state
TR safeguards a few threatened biodiversity values.	Fair			
TR safeguards a large number of threatened biodiversity values.	Good			
TR safeguards all threatened biodiversity values.	Very good			

***Remarks need to elaborate on the kind of safeguards and how they work or are intended to work**

2.3 Are stakeholders given an opportunity to participate in planning process?

Assessment criteria ⁺				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little, if any opportunity for stakeholder participation in planning.	Poor		Minutes of the various meetings	
Stakeholders participate in some planning.	Fair	✓		
Stakeholders participate in most planning processes.	Good			
Stakeholders routinely and systematically participate in all planning processes.	Very good			

⁺*The result of participation must show in the field and not merely reported as a routine exercise.*

2.4 Are habitat management programmes systematically planned, relevant and monitored, and contribute effectively to Tiger and other endangered species conservation?

Assessment criteria ⁺				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Habitat management programmes are entirely adhoc.	Poor		2013-14 APO	Limiting factors for extensive planning are less manpower and poor infrastructure
Limited planning and monitoring programmes are in place for habitat management.	Fair	✓		
Habitat management programmes are generally planned and monitored.	Good			
Habitat management programmes are thoroughly planned and monitored.	Very good			

⁺*This assessment should be primarily based on habitat management programmes in relation to habitats for species that are threatened (IUCN categories), are habitat specialists, subjected to seasonal movements, wide ranging with emphasis on the breeding and rearing habitat and may include factors such as food, water, shelter (all connotations). Habitat structure, composition, unique patches of vegetation and sensitive sites, sources of water and their distribution are integral. Corridors within buffer zone are critically important. For example, all riparian habitats. Have these been addressed? Is there a planning process in place? The management practices dealing with invasive species such as Lantana, Michania etc. would be examined.*

2.5 Does the TR has an effective Protection Strategy (PS)* and Security Plan and Security Audit (SA) in place?

Assessment criteria ⁺				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR has little or no PS and SA.	Poor		Draft security plan Appendix 5 of draft TCP Signed document of FD	
TR has an adhoc PS and SA.	Fair			
TR has a generally relevant PS and SA but is not very effective.	Good	✓		
TR has a comprehensive and very effective PS and SA.	Very good			

⁺*This assessment takes inter-alia into account the nature of threats, the number and location of patrolling camps and foot and mobile patrolling, needs that relate to available manpower, terrain difficulties, practicability of area coverage, readiness to contain specific threats with necessary support and facilities. The constitution and functioning of Special Tiger Protection Force (STPF), Number of offences reported, arrests made, prosecution initiated and conviction achieved will be taken into account.*

2.6 Has the TR been effective in the mitigation of human-wildlife conflicts?

Assessment criteria ⁺				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Human-wildlife conflicts are significant but poorly addressed.	Poor			No conflicts are reported
TR has been able to mitigate few human-wildlife conflicts.	Fair			
TR has been able to mitigate many human-wildlife conflicts.	Good			
TR has been effective in mitigating all human-wildlife conflicts.	Very good	✓		

⁺*The assessment will take into account the number of incidences reported and payment of compensation made and its timeliness.*

*Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

2.7 Is the TR integrated into a wider ecological network/ landscape following the principles of the ecosystem approach?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR not integrated into a wider network/ landscape.	Poor			Traditional customs support ecological conservation
Some limited attempts to integrate the TR into a network/ landscape.	Fair			
TR is generally quite well integrated into a network/ landscape.	Good	✓		
TR is fully integrated into a wider network/ landscape.	Very good			

***Assessment needs to consider the scope of opportunities on the landscape scale that exist. Consider whether any attempts have been made and what are these? Have all the important corridors been identified? What actions are planned/implemented for their security? Have the Forest Working Plans and Forest Development Corporation Plans within the identified landscapes taken cognizance of such new requirement? These should have been reflected in TCPs. Is there is any effort to rationalize landuse around TR? Is any effort being made to plan and use 'Smart Green Infrastructure'?**

3. Inputs

3.1 Are personnel adequate, well organized and deployed with access to adequate resources in the Tiger Reserve (TR)*?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Few, personnel explicitly allocated but poorly supported for TR management.	Poor	✓	4.9 of draft TCP Documents submitted by PA managers	Almost 50% vacancy exist of forest guards Sanction posts need to e assessed in view of large landscape Poor infrastructure
Some personnel explicitly allocated for TR management but not adequately supported and systematically linked to management objectives.	Fair			
Some personnel with fair support explicitly allocated towards achievement of specific TR management objectives.	Good			
Adequate personnel appropriately supported and explicitly allocated towards achievement of specific TR management objectives.	Very good			

***This assessment should inter-alia be based on number of personnel allocated for attainment of TR objectives at the Range , Round, Beat and Patrolling camps levels or as relevant to the needs (sanctioned posts vis- a- vis existing personnel and needs beyond the sanctioned strengths. It is possible that posts have last been sanctioned several years back that do not now account for the current needs)**

3.2 Are resources (vehicle, equipment, building etc.) adequate, well organized and managed with desired access?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Few, if any, resources explicitly allocated for TR management.	Poor	✓	4.9 of draft TCP Documents submitted by PA managers	Poor infrastructure n view of large landscape
Some resources explicitly allocated for TR management but not systematically linked to management objectives.	Fair			
Some resources explicitly allocated towards achievement of specific TR management objectives.	Good			
Adequate resources explicitly allocated towards achievement of specific TR management objectives.	Very good			

*** These form a variety of resources. These may be segregated into immovable (structures) and movable categories and each further may be considered under the essential and desirable categories. It is best to start with what are the minimum needs to attain each objective, what is available and manner of use/deployment. The proportions of the 'essentials' and 'desirables' along the importance gradient of objectives would serve as pointers for score categories. Specific remarks would be vitally important.**

3.3 Are financial resources other than those of the State linked to priority actions and are funds adequate, released timely and utilized?

Assessment criteria⁺				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Resource allocation is adhoc, funds are inadequate and seldom released in time and not utilized.	Poor	✓	Document submitted by the PA maager	
Some specific allocation for management of priority action. Funds are inadequate and there is some delay in release, partially utilized.	Fair			
Comprehensive planning and allocation that meets the most important objectives. Generally funds released with not much delay and mostly utilized.	Good			
Comprehensive planning and allocation of resources for attainment of most objectives. Funds generally released on-time and are fully utilized.	Very good			

***Obtain details of funds released by NTCA and their utilization by TR in the last 3 years and indicate them under 'Remarks'. Also comment on the problems associated with fund allocations and their utilization.**

3.4 Are financial resources from the State linked to priority action and funds adequate, timely released and utilized for the management of Tiger Reserve?

Assessment criteria⁺				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Resource allocation is adhoc, funds are inadequate and seldom released in time and not utilized.	Poor	✓	Document submitted by PA managers	
Some specific allocation for management of priority action. Funds are inadequate and there is some delay in release, partially utilized.	Fair			
Comprehensive planning and allocation that meets the most important objectives. Generally funds released with not much delay and mostly utilized.	Good			
Comprehensive planning and allocation of resources for attainment of most objectives. Funds generally released on-time and are fully utilized.	Very good			

***Obtain details of funds released by State and their utilization by TR in the last 3 years and indicate them under 'Remarks'. Also comment on the problems associated with fund allocation and their utilization.**

3.5 What level of resources are provided by NGOs?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
NGOs contribute nothing for the management of the TR.	Poor	✓	No documents submitted	
NGOs make some contribution to management of the TR but opportunities for collaboration are not systematically explored.	Fair			
NGOs contributions are systematically sought and negotiated for the management of some TR level activities.	Good			
NGOs contributions are systematically sought and negotiated for the management of many TR level activities.	Very good			

4. Process

4.1 Does the TR have manpower resources trained in wildlife conservation for effective TR management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No trained officers and frontline staff in the TR.	Poor	✓	Document submitted by PA manager	Only one RFO is trained in wildlife Staff are gently needs orientation towards implementation of wildlife laws
Some trained officers and few trained frontline staff, posted in the TR.	Fair			
All trained officers and and fair number of trained frontline staff posted in the TR.	Good			
All trained officers and most of the trained frontline staff is posted in the TR.	Very good			

***Indicate % of trained staff in various categories. The number and thematic areas of the 'Internal Training' programmes organized in the TR in the last 3 years may be taken into account. Has the TR prepared a 'Staff Development Plan'? Is it being implemented?**

4.2 Is TR staff management performance linked to achievement of management objectives?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No linkage between staff management performance and management objectives.	Poor	✓		No documents are submitted
Some linkage between staff management performance and management objectives, but not consistently or systematically assessed.	Fair			
Management performance for most staff is directly linked to achievement of relevant management objectives.	Good			
Management performance of all staff is directly linked to achievement of relevant management objectives.	Very good			

4.3 Is there effective public participation in TR management* and does it show in making a difference?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no public participation in TR management.	Poor		Document submitted by PA managers	
Opportunistic public participation in some of the relevant aspects of TR management.	Fair	✓		
Systematic public participation in most of the relevant aspects of TR management.	Good			
Comprehensive and systematic public participation in all important and relevant aspects of TR management.	Very good			

***The involvement of NGOs/ NGLs in population estimation may be taken into account)**

4.4 Is there a responsive system for handling complaints and comments* about TR management?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Ad-hoc approach to handling complaints.	Poor	✓		As such no complain is received
Complaints handling system operational but not responsive to individual issues and with limited follow up.	Fair			
Coordinated system logs and responds effectively to most complaints.	Good			
All complaints systematically logged in coordinated system and timely response provided with minimal repeat complaints.	Very good			

***Does the TR maintains 'Suggestions Register'? What actions are taken to deal with suggestions?**

***Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

4.5 Does TR management addresses the livelihood issues* of resource dependent communities, especially of women?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No livelihood issues are addressed by TR management.	Poor	✓		No documents submitted by PA manager
Few livelihood issues are addressed by TR management.	Fair			
Substantial livelihood issues are addressed by TR management.	Good			
Livelihood issues of resource dependent communities especially of women are addressed effectively by TR managers.	Very good			

***The number of mandays generated in the last 3 years may be taken into account. Are funds received from District Agencies and other sources? Provide details of funds received in last 3 years.**

4.6 Has the TR planned and implemented the voluntary 'Village Relocation' from the Core/ Critical Tiger Habitat (CTH)?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No planning and no implementation	Poor		Draft TCP	
Plans have been made but no implementation	Fair	✓		
Plans have been made and some implementation is in progress	Good			
Plans have been made and are being actively implemented/ no human habitation in the CTH	Very good			

***Assessment will look into the village relocation planning process including availability of manpower, financial resources and NGO support, if any. Is there a mechanism to address the complaints received in respect of relocation process? Effort must be made to assess post-relocation success or otherwise.**

5. Output

5.1 Is adequate information on TR management publicly available?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no information on TR management publicly available.	Poor	✓		Website launched very recently
Publicly available information is general and has limited relevance to management accountability and the condition of public assets.	Fair			
Publicly available information provides detailed insight into major management issues and condition of public assets.	Good			
Comprehensive reports are routinely available in public domain on management and condition of public assets.	Very good			

5.2 Are visitor services and facilities appropriate and adequate?

Assessment criteria⁺				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Visitor services and facilities do not exist.	Poor			Site visit of MEE team
Visitor services and facilities are very basic.	Fair	✓		
Visitor services and facilities are monitored from time to time and are fairly effective.	Good			
Visitor services and facilities are conscientiously maintained, regularly upgraded and monitored for visitor satisfaction	Very good			

***Include the existence and quality of visitor and interpretation centers, including skills and capabilities of personnel manning these, TR related publications, films, videos; arrangements of stay (including places serving refreshments and food owned and managed by TR), watch towers and hides including safety factors, vehicles assigned for visitors including riding elephants, if any and their deployment, drinking water, rest rooms, garbage disposal, attended and self guided services in the field, visitor feed back on the quality of wilderness experience.**

5.3 Are research/ monitoring related trends systematically evaluated and routinely reported and used to improve management?

Assessment criteria⁺				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no systematic evaluation or routine reporting of trends.	Poor	✓	List of publication	The list shows a lack of orientation and insight into research pertaining management aspect s
Some evaluation and reporting undertaken but neither systematic nor routine.	Fair			
Systematic evaluation and routine reporting of trends undertaken.	Good			
Systematic evaluation and comprehensive reporting of trends undertaken and attempts made at course corrections as relevant.	Very good			

***Not all TRs attract projects and researchers and with exceptions, little research takes place on the TRs own steam because of systemic limitations. However, monitoring of some critical issues is expected e.g. population of tiger, co-predators and prey with insights into their demography and distribution (some opportunistic sampling by sightings, signs and spatial distribution during assessment would be extremely useful in terms of expert impression and as a pulse), monitoring incidence of livestock grazing, fires, weeds, sources of water, a variety of illegal activities typically associated with the reserve, wildlife health (e.g. epidemics, immunization of livestock) regeneration and change in vegetation, visitors and their activities, offence cases, ex-gratia payments etc. Efforts must be made to assess the planning and implementation of Phase-IV monitoring protocols and the success of implementation of M-Stripes (wherever applicable). Are the 'Sykes and Horill' monitoring plots maintained and data analyzed?**

5.4 Is there a systematic maintenance schedule and funds in place for management of infrastructure/assets?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No systematic inventory or maintenance schedule.	Poor		Document submitted by PA manager	
Inventory maintenance is adhoc and so is the maintenance schedule.	Fair	✓		
Systematic inventory provides the basis for maintenance schedule but funds are inadequate.	Good			
Systematic inventory provides the basis for maintenance schedule and adequate funds are made available.	Very good			

***Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

6. Outcomes

6.1 Are populations of threatened species declining, stable or increasing?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Populations of key threatened/ endangered species are declining.	Poor		Draft TCP	No census/ monitoring done to ascertain the population of threatened species
Some threatened/ endangered species populations declining, some are increasing, most others are stable.	Fair	✓		
Several threatened/ endangered species populations increasing, most others are stable.	Good			
All threatened/ endangered species populations either increasing or stable.	Very good			

**This needs to practically relate to the natural ecosystem potential rather than being driven merely by numbers and visibility. The assessment score may be elaborated under remarks.*

6.2 Is the population of tigers showing a declining, stable or increasing trend?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Population of tiger is showing a declining trend	Poor			No realistic past data is available and phase IV monitoring is ongoing
Population of tiger is stable	Fair	✓		
Population of tiger is showing an increasing trend	Good			
Population of tiger has significantly increased	Very good			

**This assessment should be based in the context of available population estimate (2010-11) and the outcomes of the currently ongoing Phase-IV analyses.*

6.3 Have the threats* to the TR being reduced/ minimized? Or is there an increase?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Threats to the TR have not abated but have enhanced.	Poor			
Some threats to the TR have abated, others continue their presence	Fair	✓		
Most threats to the TR have abated. The few remaining are vigorously being addressed	Good			
All threats to the TR have been effectively contained and an efficient system is in place to deal with any emerging situation	Very good			

**Does the TR has a Disaster Risk Management Plan to deal with existing as well as emerging threats?*

6.4 Are the expectations of visitors* generally met or exceeded?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Expectations of visitors generally not met.	Poor		Visitors register	
Expectations of many visitors are met.	Fair			
Expectations of most visitors are met.	Good	✓		
Expectations of all most all visitors are met.	Very good			

**What is the compliance status on Supreme Court/ NTCA Guidelines on Ecotourism in TRs?*

***Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

6.5 Are local communities supportive of TR management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Local communities are hostile.	Poor			There are only two local communities are inside NTR
Some are supportive.	Fair			
Most locals are supportive of TR management.	Good	✓		
All local communities supportive of TR management.	Very good			

**There could be many reasons for disenchantment. It could be real because of managerial neglect or the managerial efforts could be appropriate but there could be local elements/organizations who would like to keep the disaffection simmering for their own ulterior motives. Likewise success could be entirely because of the efforts of managers or they might be fortunate in striking partnerships with credible NGOs. Assessment may take the prevailing causes into account.*

7. MEE Score Card*

Framework Element Number	Framework Element Name	Number of Criteria (a)	Maximum Mark per question (b)	Total (a x b)	Marks obtained for the Element	Overall MEE Score and % age
1	Context	4	10	40	27.5	48.39
2	Planning	7	10	70	45	
3	Inputs	5	10	50	12.5	
4	Process	6	10	60	20	
5	Outputs	4	10	40	15	
6	Outcomes	5	10	50	30	
Total		31		310	150	

**Efforts will be made by the NTCA-WII-MEE Team to address the issue of assigning 'differential' weightages to the 30 Assessment Criteria including 'normalization'.*

Assessment Criteria for addressing issues relating to Climate Change & Carbon capture in the Tiger Reserves (TRs)

1. *Additional Criteria on Climate Change: Is the TR being consciously managed to adapt to climate change?*

Condition	Category*	(Tick ✓)	Comment/ Explanation	Next Steps
There have been no efforts to consider adaptation to climate change in management	Poor	✓	PA managers are having basic understanding about issues but unable to translate into action	PA managers need training to make them aware about the issue
Some initial thought has taken place about likely impacts of climate change, but this has yet to be translated into management plans	Fair			
Detailed plans have been drawn up about how to adapt management to predicted climate change, but these have yet to be translated into active management.	Good			
Detailed plans have been drawn up about how to adapt management to predicted climate change, and these are already being implemented	Very good			

2. *Additional Criteria on Climate Change: Is the TR being consciously managed to prevent carbon loss and to encourage further carbon capture?*

Condition	Category*	(Tick ✓)	Comment/ Explanation	Next Steps
Carbon storage and carbon dioxide capture have not been considered in management of the TR	Poor	✓		PA managers need training to make them aware about the issue
Carbon storage and carbon dioxide capture have been considered in general terms, but has not yet been significantly reflected in management	Fair			
There are active measures in place to reduce carbon loss from the TR, but no conscious measures to increase carbon dioxide capture	Good			
There are active measures in place both to reduce carbon loss from the TR and to increase carbon dioxide capture	Very good			

Management Effectiveness Evaluation (MEE) of Nameri Tiger Reserve

1. Context

1.1 Are the values of the TR well documented, assessed and monitored?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Values not systematically documented, assessed and monitored.	Poor		Page # 9, 13-14 of draft TCP	
Values generally identified but not systematically assessed and monitored.	Fair	✓		
Most values systematically identified, assessed and monitored.	Good			
All values systematically identified, assessed and monitored.	Very good			

1.2 Are the threats to TR values well documented and assessed*?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Threats not systematically documented or assessed.	Poor		Page # 23 of draft TCP	
Threats generally identified but not systematically assessed.	Fair	✓		
Most threats systematically identified and assessed.	Good			
All threats systematically identified and assessed.	Very good			

***This assessment should be based on number, nature and extent of threats**

1.3 Is the 'Core Area' of TR free from human and biotic interference?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
The 'Core Area' has extensive human and biotic interference.	Poor		Map of core area	Buffers are not under control of DFO and moreover 90% of notified buffer is under encroachment
The 'Core Area' has some human and biotic interference.	Fair			
The 'Core Area' has little human and biotic interference.	Good	✓		
The 'Core Area' has no human and biotic interference.	Very good			

***This assessment should be based on existence and the efforts made by TR management to address issues related to human settlements/ villages inside the core area; livestock grazing, cultivation, encroachments etc, resource extraction/ livelihood dependence of local communities and should reflect the overall interference due to all the above factors. The issue of 'Unified Control' of the 'Core' and 'Buffer' zones under the Field Director would also be taken into account.**

1.4 Has the TR complied with the four Statutory* Requirements (SR) along with Tripartite MoU and three Standard Operation Procedures (SOP)?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
None of the four SR, no compliance of Tripartite MoU and three SOPs met	Poor		1. Delineation of core and buffer notification dated 1 st march 2000 2. Tiger Conservation foundation notification dated 20 th March 2010 3. State steering committee notification dated 6 th March 2012	1. Notification related to legal delineation of core and buffer u/s 38V is not available with DFO office. 2. So far not meeting was held for Tiger Steering Committee
Two of the four SR, 50% conditions of the Tripartite MoU and SOPs complied	Fair	✓		
Three of the four SR, 75% conditions of the Tripartite MoU and SOPs complied	Good			
All four SR, 100% conditions of the Tripartite MoU and SOPs complied	Very good			

***Statutory requirements are (1) Legal delineation and notification of Core and Buffer Areas; (2) Establishment of Tiger Conservation Foundation; (3) Development of a Tiger Conservation Plan; and (4) Constitution of a State-level Steering Committee under the Chairmanship of the Chief Minister. TA refers agreement between Field Director, State Government and NTCA. The 3 SOPs are on (i) Straying of Tiger in human dominated landscape, (ii) Tiger Mortality and (iii) Disposal of Carcasses**

2. Planning

2.1 Status of Tiger Conservation Plan (TCP)*?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No TCP in place.	Poor		NTCA letter # 1-15/2013-NTCA dt 24.8.13	
TCP is under preparation	Fair	✓		
TR has a relevant TCP	Good			
TR has a comprehensive and relevant TCP, duly approved by the NTCA	Very good			

***The scientific content and the participatory processes used in preparation of the TCP will be taken into account in assessing the quality of TCP.**

2.2 Does the TR safeguards the threatened biodiversity values?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR does not safeguard the threatened biodiversity values.	Poor			All efforts are made for core only by establishing network of anti-poaching camps
TR safeguards a few threatened biodiversity values.	Fair			
TR safeguards a large number of threatened biodiversity values.	Good	✓		
TR safeguards all threatened biodiversity values.	Very good			

***Remarks need to elaborate on the kind of safeguards and how they work or are intended to work**

2.2 Are stakeholders given an opportunity to participate in planning process?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little, if any opportunity for stakeholder participation in planning.	Poor	✓	Minutes of the meetings for delineation of ESZ under EPA dated 24.12.13	
Stakeholders participate in some planning.	Fair			
Stakeholders participate in most planning processes.	Good			
Stakeholders routinely and systematically participate in all planning processes.	Very good			

***The result of participation must show in the field and not merely reported as a routine exercise.**

2.3 Are habitat management programmes systematically planned, relevant and monitored, and contribute effectively to Tiger and other endangered species conservation?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Habitat management programmes are entirely adhoc.	Poor		Draft TCP	
Limited planning and monitoring programmes are in place for habitat management.	Fair	✓		
Habitat management programmes are generally planned and monitored.	Good			
Habitat management programmes are thoroughly planned and monitored.	Very good			

***This assessment should be primarily based on habitat management programmes in relation to habitats for species that are threatened (IUCN categories), are habitat specialists, subjected to seasonal movements, wide ranging with emphasis on the breeding and rearing habitat and may include factors such as food, water, shelter (all connotations).Habitat structure, composition, unique patches of vegetation and sensitive sites, sources of water and their distribution are integral. Corridors within buffer zone are critically important. For example, all riparian habitats. Have these been addressed? Is their a planning process in place? The management practices dealing with invasive species such as Lantana, Michania etc. would be examined.**

2.5 Does the TR has an effective Protection Strategy (PS)* and Security Plan and Security Audit (SA) in place?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR has little or no PS and SA.	Poor		Summary statement regarding status of last three years cases booked.	Hunting cases are even after three years of offence date are still under investigation and seems that final complaint are not filed as per provisions given u/s 55
TR has an adhoc PS and SA.	Fair	✓		
TR has a generally relevant PS and SA but is not very effective.	Good			
TR has a comprehensive and very effective PS and SA.	Very good			

***This assessment takes inter-alia into account the nature of threats, the number and location of patrolling camps and foot and mobile patrolling, needs that relate to available manpower, terrain difficulties, practicability of area coverage, readiness to contain specific threats with necessary support and facilities. The constitution and functioning of Special Tiger Protection Force (STPF), Number of offences reported, arrests made, prosecution initiated and conviction achieved will be taken into account.**

2.6 Has the TR been effective in the mitigation of human-wildlife conflicts?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Human-wildlife conflicts are significant but poorly addressed.	Poor	✓		Conflicts are mainly in buffer area which is not under the administrative control of TR management
TR has been able to mitigate few human-wildlife conflicts.	Fair			
TR has been able to mitigate many human-wildlife conflicts.	Good			
TR has been effective in mitigating all human-wildlife conflicts.	Very good			

*The assessment will take into account the number of incidences reported and payment of compensation made and its timeliness.

2.7 Is the TR integrated into a wider ecological network/ landscape following the principles of the ecosystem approach?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR not integrated into a wider network/ landscape.	Poor			Traditional customs support ecological conservation
Some limited attempts to integrate the TR into a network/ landscape.	Fair			
TR is generally quite well integrated into a network/ landscape.	Good	✓		
TR is fully integrated into a wider network/ landscape.	Very good			

*Assessment needs to consider the scope of opportunities on the landscape scale that exist. Consider whether any attempts have been made and what are these? Have all the important corridors been identified? What actions are planned/implemented for their security? Have the Forest Working Plans and Forest Development Corporation Plans within the identified landscapes taken cognizance of such new requirement? These should have been reflected in TCPs. Is there is any effort to rationalize landuse around TR? Is any effort being made to plan and use 'Smart Green Infrastructure'?

3. Inputs

3.1 Are personnel adequate, well organized and deployed with access to adequate resources in the Tiger Reserve (TR)*?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Few, personnel explicitly allocated but poorly supported for TR management.	Poor		Document submitted by DFO regarding staff strength of Western Assam Wildlife Division	No exercise has been made to evaluate the required staff strength for TR
Some personnel explicitly allocated for TR management but not adequately supported and systematically linked to management objectives.	Fair	✓		
Some personnel with fair support explicitly allocated towards achievement of specific TR management objectives.	Good			
Adequate personnel appropriately supported and explicitly allocated towards achievement of specific TR management objectives.	Very good			

*This assessment should inter-alia be based on number of personnel allocated for attainment of TR objectives at the Range , Round, Beat and Patrolling camps levels or as relevant to the needs (sanctioned posts vis- a- vis existing personnel and needs beyond the sanctioned strengths. It is possible that posts have last been sanctioned several years back that do not now account for the current needs)

*Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

3.2 Are resources (vehicle, equipment, building etc.) adequate, well organized and managed with desired access?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Few, if any, resources explicitly allocated for TR management.	Poor			Field Observation
Some resources explicitly allocated for TR management but not systematically linked to management objectives.	Fair			
Some resources explicitly allocated towards achievement of specific TR management objectives.	Good	✓		
Adequate resources explicitly allocated towards achievement of specific TR management objectives.	Very good			

** These form a variety of resources. These may be segregated into immovable (structures) and movable categories and each further may be considered under the essential and desirable categories. It is best to start with what are the minimum needs to attain each objective, what is available and manner of use/deployment. The proportions of the 'essentials' and 'desirables' along the importance gradient of objectives would serve as pointers for score categories. Specific remarks would be vitally important.*

3.3 Are financial resources other than those of the State linked to priority actions and are funds adequate, released timely and utilized?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Resource allocation is adhoc, funds are inadequate and seldom released in time and not utilized.	Poor	✓	Document submitted by the PA maager	
Some specific allocation for management of priority action. Funds are inadequate and there is some delay in release, partially utilized.	Fair			
Comprehensive planning and allocation that meets the most important objectives. Generally funds released with not much delay and mostly utilized.	Good			
Comprehensive planning and allocation of resources for attainment of most objectives. Funds generally released on-time and are fully utilized.	Very good			

**Obtain details of funds released by NTCA and their utilization by TR in the last 3 years and indicate them under 'Remarks'. Also comment on the problems associated with fund allocations and their utilization.*

3.4 Are financial resources from the State linked to priority action and funds adequate, timely released and utilized for the management of Tiger Reserve?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Resource allocation is adhoc, funds are inadequate and seldom released in time and not utilized.	Poor	✓	Fund release status submitted by DFO	State is not releasing the fund and for last couple of years fund is released by state in March only
Some specific allocation for management of priority action. Funds are inadequate and there is some delay in release, partially utilized.	Fair			
Comprehensive planning and allocation that meets the most important objectives. Generally funds released with not much delay and mostly utilized.	Good			
Comprehensive planning and allocation of resources for attainment of most objectives. Funds generally released on-time and are fully utilized.	Very good			

**Obtain details of funds released by State and their utilization by TR in the last 3 years and indicate them under 'Remarks'. Also comment on the problems associated with fund allocation and their utilization.*

***Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

3.5 What level of resources are provided by NGOs?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
NGOs contribute nothing for the management of the TR.	Poor			FD is not willing to take support from NGOs. Only some NGI has support on adhoc basis
NGOs make some contribution to management of the TR but opportunities for collaboration are not systematically explored.	Fair	✓		
NGOs contributions are systematically sought and negotiated for the management of some TR level activities.	Good			
NGOs contributions are systematically sought and negotiated for the management of many TR level activities.	Very good			

4. Process

4.1 Does the TR have manpower resources trained in wildlife conservation for effective TR management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No trained officers and frontline staff in the TR.	Poor			Only DCF and ACF are trained in wildlife
Some trained officers and few trained frontline staff, posted in the TR.	Fair	✓		
All trained officers and and fair number of trained frontline staff posted in the TR.	Good			
All trained officers and most of the trained frontline staff is posted in the TR.	Very good			

**Indicate % of trained staff in various categories. The number and thematic areas of the 'Internal Training' programmes organized in the TR in the last 3 years may be taken into account. Has the TR prepared a 'Staff Development Plan'? Is it being implemented?*

4.2 Is TR staff management performance linked to achievement of management objectives?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No linkage between staff management performance and management objectives.	Poor	✓		No efforts has been made so far
Some linkage between staff management performance and management objectives, but not consistently or systematically assessed.	Fair			
Management performance for most staff is directly linked to achievement of relevant management objectives.	Good			
Management performance of all staff is directly linked to achievement of relevant management objectives.	Very good			

4.3 Is there effective public participation in TR management* and does it show in making a difference?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no public participation in TR management.	Poor			Buffer is not having under administrative control of TR Management
Opportunistic public participation in some of the relevant aspects of TR management.	Fair	✓		
Systematic public participation in most of the relevant aspects of TR management.	Good			
Comprehensive and systematic public participation in all important and relevant aspects of TR management.	Very good			

**The involvement of NGOs/ NGIs in population estimation may be taken into account)*

***Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

4.4 Is there a responsive system for handling complaints and comments* about TR management?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Ad-hoc approach to handling complaints.	Poor	✓		No system exist to receive complaints and comments
Complaints handling system operational but not responsive to individual issues and with limited follow up.	Fair			
Coordinated system logs and responds effectively to most complaints.	Good			
All complaints systematically logged in coordinated system and timely response provided with minimal repeat complaints.	Very good			

***Does the TR maintains 'Suggestions Register'? What actions are taken to deal with suggestions?**

4.5 Does TR management addresses the livelihood issues* of resource dependent communities, especially of women?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No livelihood issues are addressed by TR management.	Poor			CTH does not have any population and the buffer is not under control of TR management
Few livelihood issues are addressed by TR management.	Fair	✓		
Substantial livelihood issues are addressed by TR management.	Good			
Livelihood issues of resource dependent communities especially of women are addressed effectively by TR managers.	Very good			

***The number of mandays generated in the last 3 years may be taken into account. Are funds received from District Agencies and other sources? Provide details of funds received in last 3 years.**

4.6 Has the TR planned and implemented the voluntary 'Village Relocation' from the Core/ Critical Tiger Habitat (CTH)?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No planning and no implementation	Poor			No village in CTH
Plans have been made but no implementation	Fair			
Plans have been made and some implementation is in progress	Good			
Plans have been made and are being actively implemented/ no human habitation in the CTH	Very good	✓		

***Assessment will look into the village relocation planning process including availability of manpower, financial resources and NGO support, if any. Is there a mechanism to address the complaints received in respect of relocation process? Effort must be made to assess post-relocation success or otherwise.**

5. Output

5.1 Is adequate information on TR management publicly available?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no information on TR management publicly available.	Poor			Website launched very recently
Publicly available information is general and has limited relevance to management accountability and the condition of public assets.	Fair	✓		
Publicly available information provides detailed insight into major management issues and condition of public assets.	Good			
Comprehensive reports are routinely available in public domain on management and condition of public assets.	Very good			

5.2 Are visitor services and facilities appropriate and adequate?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Visitor services and facilities do not exist.	Poor			Field visit observation
Visitor services and facilities are very basic.	Fair	✓		
Visitor services and facilities are monitored from time to time and are fairly effective.	Good			
Visitor services and facilities are conscientiously maintained, regularly upgraded and monitored for visitor satisfaction	Very good			

**Include the existence and quality of visitor and interpretation centers, including skills and capabilities of personnel manning these, TR related publications, films, videos; arrangements of stay (including places serving refreshments and food owned and managed by TR), watch towers and hides including safety factors, vehicles assigned for visitors including riding elephants, if any and their deployment, drinking water, rest rooms, garbage disposal, attended and self guided services in the field, visitor feed back on the quality of wilderness experience.*

5.3 Are research/ monitoring related trends systematically evaluated and routinely reported and used to improve management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no systematic evaluation or routine reporting of trends.	Poor			Only phase IV monitoring data are being taken in account
Some evaluation and reporting undertaken but neither systematic nor routine.	Fair	✓		
Systematic evaluation and routine reporting of trends undertaken.	Good			
Systematic evaluation and comprehensive reporting of trends undertaken and attempts made at course corrections as relevant.	Very good			

**Not all TRs attract projects and researchers and with exceptions, little research takes place on the TRs own steam because of systemic limitations. However, monitoring of some critical issues is expected e.g. population of tiger, co-predators and prey with insights into their demography and distribution (some opportunistic sampling by sightings, signs and spatial distribution during assessment would be extremely useful in terms of expert impression and as a pulse), monitoring incidence of livestock grazing, fires, weeds, sources of water, a variety of illegal activities typically associated with the reserve, wildlife health (e.g. epidemics, immunization of livestock) regeneration and change in vegetation, visitors and their activities, offence cases, ex-gratia payments etc. Efforts must be made to assess the planning and implementation of Phase-IV monitoring protocols and the success of implementation of M-Stripes (wherever applicable). Are the 'Sykes and Horill' monitoring plots maintained and data analyzed?*

5.4 Is there a systematic maintenance schedule and funds in place for management of infrastructure/assets?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No systematic inventory or maintenance schedule.	Poor			Constraints due to delay in fund release by the state
Inventory maintenance is adhoc and so is the maintenance schedule.	Fair	✓		
Systematic inventory provides the basis for maintenance schedule but funds are inadequate.	Good			
Systematic inventory provides the basis for maintenance schedule and adequate funds are made available.	Very good			

6. Outcomes

6.1 Are populations of threatened species declining, stable or increasing?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Populations of key threatened/ endangered species are declining.	Poor			No proper records are available to ascertain the population of threatened species
Some threatened/ endangered species populations declining, some are increasing, most others are stable.	Fair	✓		
Several threatened/ endangered species populations increasing, most others are stable.	Good			
All threatened/ endangered species populations either increasing or stable.	Very good			

**This needs to practically relate to the natural ecosystem potential rather than being driven merely by numbers and visibility. The assessment score may be elaborated under remarks.*

6.2 Is the population of tigers showing a declining, stable or increasing trend?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Population of tiger is showing a declining trend	Poor		Photographic identification of 2012 (5 tigers) and 2013 (7 tiger)	
Population of tiger is stable	Fair			
Population of tiger is showing an increasing trend	Good	✓		
Population of tiger has significantly increased	Very good			

**This assessment should be based in the context of available population estimate (2010-11) and the outcomes of the currently ongoing Phase-IV analyses.*

6.3 Have the threats* to the TR being reduced/ minimized? Or is there an increase?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Threats to the TR have not abated but have enhanced.	Poor			Core is safe but buffer is disappearing fast
Some threats to the TR have abated, others continue their presence	Fair	✓		
Most threats to the TR have abated. The few remaining are vigorously being addressed	Good			
All threats to the TR have been effectively contained and an efficient system is in place to deal with any emerging situation	Very good			

**Does the TR has a Disaster Risk Management Plan to deal with existing as well as emerging threats?*

6.4 Are the expectations of visitors* generally met or exceeded?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Expectations of visitors generally not met.	Poor		Visitors register of Eco Camp run by Assam Bhoreli Anglers Conservation Association	
Expectations of many visitors are met.	Fair			
Expectations of most visitors are met.	Good	✓		
Expectations of all most all visitors are met.	Very good			

***What is the compliance status on Supreme Court/ NTCA Guidelines on Ecotourism in TRs?**

6.5 Are local communities supportive of TR management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Local communities are hostile.	Poor			Most of communities around the CTH are encroachers
Some are supportive.	Fair	✓		
Most locals are supportive of TR management.	Good			
All local communities supportive of TR management.	Very good			

***There could be many reasons for disenchantment. It could be real because of managerial neglect or the managerial efforts could be appropriate but there could be local elements/organizations who would like to keep the disaffection simmering for their own ulterior motives. Likewise success could be entirely because of the efforts of managers or they might be fortunate in striking partnerships with credible NGOs. Assessment may take the prevailing causes into account.**

7. MEE Score Card*

Framework Element Number	Framework Element Name	Number of Criteria (a)	Maximum Mark per question (b)	Total (a x b)	Marks obtained for the Element	Overall MEE Score and % age
1	Context	4	10	40	22.5	51.61
2	Planning	7	10	70	35	
3	Inputs	5	10	50	22.5	
4	Process	6	10	60	30	
5	Outputs	4	10	40	20	
6	Outcomes	5	10	50	30	
Total		31		310	160	

***Efforts will be made by the NTCA-WII-MEE Team to address the issue of assigning 'differential' weightages to the 30 Assessment Criteria including 'normalization'.**

Assessment Criteria for addressing issues relating to Climate Change & Carbon capture in the Tiger Reserves (TRs)

1. Additional Criteria on Climate Change: Is the TR being consciously managed to adapt to climate change?

Condition	Category*	(Tick ✓)	Comment/ Explanation	Next Steps
There have been no efforts to consider adaptation to climate change in management	Poor	✓	PA managers are having basic understanding about issues but unable to translate into action	PA managers need training to make them aware about the issue
Some initial thought has taken place about likely impacts of climate change, but this has yet to be translated into management plans	Fair			
Detailed plans have been drawn up about how to adapt management to predicted climate change, but these have yet to be translated into active management.	Good			
Detailed plans have been drawn up about how to adapt management to predicted climate change, and these are already being implemented	Very good			

2. Additional Criteria on Climate Change: Is the TR being consciously managed to prevent carbon loss and to encourage further carbon capture?

Condition	Category*	(Tick ✓)	Comment/ Explanation	Next Steps
Carbon storage and carbon dioxide capture have not been considered in management of the TR	Poor	✓		PA managers need training to make them aware about the issue
Carbon storage and carbon dioxide capture have been considered in general terms, but has not yet been significantly reflected in management	Fair			
There are active measures in place to reduce carbon loss from the TR, but no conscious measures to increase carbon dioxide capture	Good			
There are active measures in place both to reduce carbon loss from the TR and to increase carbon dioxide capture	Very good			

Management Effectiveness Evaluation (MEE) of Pakke Tiger Reserve

1. Context

1.1 Are the values of the TR well documented, assessed and monitored?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Values not systematically documented, assessed and monitored.	Poor		Draft TCP	
Values generally identified but not systematically assessed and monitored.	Fair	✓		
Most values systematically identified, assessed and monitored.	Good			
All values systematically identified, assessed and monitored.	Very good			

1.2 Are the threats to TR values well documented and assessed*?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Threats not systematically documented or assessed.	Poor		Page # 38, 256-258 of draft TCP	
Threats generally identified but not systematically assessed.	Fair#	✓		
Most threats systematically identified and assessed.	Good			
All threats systematically identified and assessed.	Very good			

*This assessment should be based on number, nature and extent of threats

#Revised results received by the chairman dated 02 January 2015. Earlier it was marked in poor category.

1.3 Is the 'Core Area' of TR free from human and biotic interference?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
The 'Core Area' has extensive human and biotic interference.	Poor		Page # 46 of draft TCP	
The 'Core Area' has some human and biotic interference.	Fair			
The 'Core Area' has little human and biotic interference.	Good	✓		
The 'Core Area' has no human and biotic interference.	Very good			

*This assessment should be based on existence and the efforts made by TR management to address issues related to human settlements/ villages inside the core area; livestock grazing, cultivation, encroachments etc, resource extraction/ livelihood dependence of local communities and should reflect the overall interference due to all the above factors. The issue of 'Unified Control' of the 'Core' and 'Buffer' zones under the Field Director would also be taken into account.

1.4 Has the TR complied with the four Statutory* Requirements (SR) along with Tripartite MoU and three Standard Operation Procedures (SOP)?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
None of the four SR, no compliance of Tripartite MoU and three SOPs met	Poor		Page # 112, 116, 118, 120 & 337 of draft TCP	1. Instead of notification of Tiger Conservation Foundation u/s 38X it was done u/s 38U whereas the notification of governing body of tiger conservation foundation was made u/s 38X. 2. Notification of buffer is not made u/s 38V. 3. No details were available about steering committee meetings
Two of the four SR, 50% conditions of the Tripartite MoU and SOPs complied	Fair			
Three of the four SR, 75% conditions of the Tri-partite MoU and SOPs complied	Good#	✓		
All four SR, 100% conditions of the Tripartite MoU and SOPs complied	Very good			

***Statutory requirements are (1) Legal delineation and notification of Core and Buffer Areas; (2) Establishment of Tiger Conservation Foundation; (3) Development of a Tiger Conservation Plan; and (4) Constitution of a State-level Steering Committee under the Chairmanship of the Chief Minister. TA refers agreement between Field Director, State Government and NTCA. The 3 SOPs are on (i) Straying of Tiger in human dominated landscape, (ii) Tiger Mortality and (iii) Disposal of Carcasses**

#Revised results received by the chairman dated 02 January 2015. Earlier it was marked in Fair category.

2. Planning

2.1 Status of Tiger Conservation Plan (TCP)*?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No TCP in place.	Poor		Draft TCP and letter of NTCA	
TCP is under preparation	Fair			
TR has a relevant TCP	Good	✓		
TR has a comprehensive and relevant TCP, duly approved by the NTCA	Very good			

***The scientific content and the participatory processes used in preparation of the TCP will be taken into account in assessing the quality of TCP.**

2.2 Does the TR safeguards the threatened biodiversity values?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR does not safeguard the threatened biodiversity values.	Poor		Page # 16-27 of draft TCP	
TR safeguards a few threatened biodiversity values.	Fair			
TR safeguards a large number of threatened biodiversity values.	Good#	✓		
TR safeguards all threatened biodiversity values.	Very good			

***Remarks need to elaborate on the kind of safeguards and how they work or are intended to work**

#Revised results by further discussion with the chairman dated 02 January 2015. Earlier it was marked in Fair category.

2.3 Are stakeholders given an opportunity to participate in planning process?

Assessment criteria ⁺				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little, if any opportunity for stakeholder participation in planning.	Poor		Minutes of the various meetings	
Stakeholders participate in some planning.	Fair			
Stakeholders participate in most planning processes.	Good	✓		
Stakeholders routinely and systematically participate in all planning processes.	Very good			

⁺*The result of participation must show in the field and not merely reported as a routine exercise.*

2.4 Are habitat management programmes systematically planned, relevant and monitored, and contribute effectively to Tiger and other endangered species conservation?

Assessment criteria ⁺				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Habitat management programmes are entirely adhoc.	Poor		Draft TCP & APOs	
Limited planning and monitoring programmes are in place for habitat management.	Fair			
Habitat management programmes are generally planned and monitored.	Good [#]	✓		
Habitat management programmes are thoroughly planned and monitored.	Very good			

⁺*This assessment should be primarily based on habitat management programmes in relation to habitats for species that are threatened (IUCN categories), are habitat specialists, subjected to seasonal movements, wide ranging with emphasis on the breeding and rearing habitat and may include factors such as food, water, shelter (all connotations). Habitat structure, composition, unique patches of vegetation and sensitive sites, sources of water and their distribution are integral. Corridors within buffer zone are critically important. For example, all riparian habitats. Have these been addressed? Is there a planning process in place? The management practices dealing with invasive species such as Lantana, Michania etc. would be examined.*

[#]*Revised results received by the chairman, dated 02 January 2015. Earlier it was marked in Fair category.*

2.5 Does the TR has an effective Protection Strategy (PS)* and Security Plan and Security Audit (SA) in place?

Assessment criteria ⁺				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR has little or no PS and SA.	Poor			
TR has an adhoc PS and SA.	Fair [#]	✓		
TR has a generally relevant PS and SA but is not very effective.	Good			
TR has a comprehensive and very effective PS and SA.	Very good			

⁺*This assessment takes inter-alia into account the nature of threats, the number and location of patrolling camps and foot and mobile patrolling, needs that relate to available manpower, terrain difficulties, practicability of area coverage, readiness to contain specific threats with necessary support and facilities. The constitution and functioning of Special Tiger Protection Force (STPF), Number of offences reported, arrests made, prosecution initiated and conviction achieved will be taken into account.*

[#]*Revised results received by the chairman, dated 02 January 2015. Earlier it was marked in Poor category.*

2.6 Has the TR been effective in the mitigation of human-wildlife conflicts?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Human-wildlife conflicts are significant but poorly addressed.	Poor		Compensation register	
TR has been able to mitigate few human-wildlife conflicts.	Fair			
TR has been able to mitigate many human-wildlife conflicts.	Good	✓		
TR has been effective in mitigating all human-wildlife conflicts.	Very good			

***The assessment will take into account the number of incidences reported and payment of compensation made and its timeliness.**

2.7 Is the TR integrated into a wider ecological network/ landscape following the principles of the ecosystem approach?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR not integrated into a wider network/ landscape.	Poor		Draft TCP	Customary laws support ecological conservation
Some limited attempts to integrate the TR into a network/ landscape.	Fair			
TR is generally quite well integrated into a network/ landscape.	Good	✓		
TR is fully integrated into a wider network/ landscape.	Very good			

***Assessment needs to consider the scope of opportunities on the landscape scale that exist. Consider whether any attempts have been made and what are these? Have all the important corridors been identified? What actions are planned/implemented for their security? Have the Forest Working Plans and Forest Development Corporation Plans within the identified landscapes taken cognizance of such new requirement? These should have been reflected in TCPs. Is there is any effort to rationalize landuse around TR? Is any effort being made to plan and use 'Smart Green Infrastructure'?**

3. Inputs

3.1 Are personnel adequate, well organized and deployed with access to adequate resources in the Tiger Reserve (TR)*?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Few, personnel explicitly allocated but poorly supported for TR management.	Poor		Page # 45 of Draft TCP	
Some personnel explicitly allocated for TR management but not adequately supported and systematically linked to management objectives.	Fair	✓		
Some personnel with fair support explicitly allocated towards achievement of specific TR management objectives.	Good			
Adequate personnel appropriately supported and explicitly allocated towards achievement of specific TR management objectives.	Very good			

***This assessment should inter-alia be based on number of personnel allocated for attainment of TR objectives at the Range , Round, Beat and Patrolling camps levels or as relevant to the needs (sanctioned posts vis- a- vis existing personnel and needs beyond the sanctioned strengths. It is possible that posts have last been sanctioned several years back that do not now account for the current needs)**

3.2 Are resources (vehicle, equipment, building etc.) adequate, well organized and managed with desired access?

Assessment criteria⁺				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Few, if any, resources explicitly allocated for TR management.	Poor		Documents submitted by PA managers	
Some resources explicitly allocated for TR management but not systematically linked to management objectives.	Fair	✓		
Some resources explicitly allocated towards achievement of specific TR management objectives.	Good			
Adequate resources explicitly allocated towards achievement of specific TR management objectives.	Very good			

** These form a variety of resources. These may be segregated into immovable (structures) and movable categories and each further may be considered under the essential and desirable categories. It is best to start with what are the minimum needs to attain each objective, what is available and manner of use/deployment. The proportions of the 'essentials' and 'desirables' along the importance gradient of objectives would serve as pointers for score categories. Specific remarks would be vitally important.*

3.3 Are financial resources other than those of the State linked to priority actions and are funds adequate, released timely and utilized?

Assessment criteria⁺				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Resource allocation is adhoc, funds are inadequate and seldom released in time and not utilized.	Poor		Document submitted by the PA maager	
Some specific allocation for management of priority action. Funds are inadequate and there is some delay in release, partially utilized.	Fair	✓		
Comprehensive planning and allocation that meets the most important objectives. Generally funds released with not much delay and mostly utilized.	Good			
Comprehensive planning and allocation of resources for attainment of most objectives. Funds generally released on-time and are fully utilized.	Very good			

**Obtain details of funds released by NTCA and their utilization by TR in the last 3 years and indicate them under 'Remarks'. Also comment on the problems associated with fund allocations and their utilization.*

3.4 Are financial resources from the State linked to priority action and funds adequate, timely released and utilized for the management of Tiger Reserve?

Assessment criteria⁺				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Resource allocation is adhoc, funds are inadequate and seldom released in time and not utilized.	Poor			
Some specific allocation for management of priority action. Funds are inadequate and there is some delay in release, partially utilized.	Fair [#]	✓		
Comprehensive planning and allocation that meets the most important objectives. Generally funds released with not much delay and mostly utilized.	Good			
Comprehensive planning and allocation of resources for attainment of most objectives. Funds generally released on-time and are fully utilized.	Very good			

**Obtain details of funds released by State and their utilization by TR in the last 3 years and indicate them under 'Remarks'. Also comment on the problems associated with fund allocation and their utilization.*

[#]Revised results received by the chairman dated 02 January 2015. Earlier it was marked in Poor category.

**Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10*

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3.5 What level of resources are provided by NGOs?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
NGOs contribute nothing for the management of the TR.	Poor			Field observations, Major NGOs are WCT, WWF and NCF
NGOs make some contribution to management of the TR but opportunities for collaboration are not systematically explored.	Fair			
NGOs contributions are systematically sought and negotiated for the management of some TR level activities.	Good	✓		
NGOs contributions are systematically sought and negotiated for the management of many TR level activities.	Very good			

4. Process

4.1 Does the TR have manpower resources trained in wildlife conservation for effective TR management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No trained officers and frontline staff in the TR.	Poor			Field observations
Some trained officers and few trained frontline staff, posted in the TR.	Fair	✓		
All trained officers and fair number of trained frontline staff posted in the TR.	Good			
All trained officers and most of the trained frontline staff is posted in the TR.	Very good			

**Indicate % of trained staff in various categories. The number and thematic areas of the 'Internal Training' programmes organized in the TR in the last 3 years may be taken into account. Has the TR prepared a 'Staff Development Plan'? Is it being implemented?*

4.2 Is TR staff management performance linked to achievement of management objectives?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No linkage between staff management performance and management objectives.	Poor			Mostly by awards system adopted by PA manager
Some linkage between staff management performance and management objectives, but not consistently or systematically assessed.	Fair	✓		
Management performance for most staff is directly linked to achievement of relevant management objectives.	Good			
Management performance of all staff is directly linked to achievement of relevant management objectives.	Very good			

4.3 Is there effective public participation in TR management* and does it show in making a difference?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no public participation in TR management.	Poor		Document submitted by PA managers	
Opportunistic public participation in some of the relevant aspects of TR management.	Fair	✓		
Systematic public participation in most of the relevant aspects of TR management.	Good			
Comprehensive and systematic public participation in all important and relevant aspects of TR management.	Very good			

**The involvement of NGOs/ NGLs in population estimation may be taken into account)*

***Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

4.4 Is there a responsive system for handling complaints and comments* about TR management?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Ad-hoc approach to handling complaints.	Poor			No complaint registration system available
Complaints handling system operational but not responsive to individual issues and with limited follow up.	Fair	✓		
Coordinated system logs and responds effectively to most complaints.	Good			
All complaints systematically logged in coordinated system and timely response provided with minimal repeat complaints.	Very good			

***Does the TR maintains 'Suggestions Register'? What actions are taken to deal with suggestions?**

#Revised results received by the chairman dated 02 January 2015. Earlier it was marked in Poor category.

4.5 Does TR management addresses the livelihood issues* of resource dependent communities, especially of women?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No livelihood issues are addressed by TR management.	Poor		Page # 220-221 of draft TCP	
Few livelihood issues are addressed by TR management.	Fair	✓		
Substantial livelihood issues are addressed by TR management.	Good			
Livelihood issues of resource dependent communities especially of women are addressed effectively by TR managers.	Very good			

***The number of mandays generated in the last 3 years may be taken into account. Are funds received from District Agencies and other sources? Provide details of funds received in last 3 years.**

#Revised results received by the chairman dated 02 January 2015. Earlier it was marked in Poor category.

4.6 Has the TR planned and implemented the voluntary 'Village Relocation' from the Core/ Critical Tiger Habitat (CTH)?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No planning and no implementation	Poor			No settlements/villages in CTH
Plans have been made but no implementation	Fair			
Plans have been made and some implementation is in progress	Good			
Plans have been made and are being actively implemented/ no human habitation in the CTH	Very good	✓		

***Assessment will look into the village relocation planning process including availability of manpower, financial resources and NGO support, if any. Is there a mechanism to address the complaints received in respect of relocation process? Effort must be made to assess post-relocation success or otherwise.**

5. Output

5.1 Is adequate information on TR management publicly available?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no information on TR management publicly available.	Poor		Website	
Publicly available information is general and has limited relevance to management accountability and the condition of public assets.	Fair			
Publicly available information provides detailed insight into major management issues and condition of public assets.	Good [#]	✓		
Comprehensive reports are routinely available in public domain on management and condition of public assets.	Very good			

#Revised results by further discussion with the chairman dated 02 January 2015. Earlier it was marked in Fair category.

5.2 Are visitor services and facilities appropriate and adequate?

Assessment criteria ⁺				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Visitor services and facilities do not exist.	Poor		Guest House registers	
Visitor services and facilities are very basic.	Fair	✓		
Visitor services and facilities are monitored from time to time and are fairly effective.	Good			
Visitor services and facilities are conscientiously maintained, regularly upgraded and monitored for visitor satisfaction	Very good			

***Include the existence and quality of visitor and interpretation centers, including skills and capabilities of personnel manning these, TR related publications, films, videos; arrangements of stay (including places serving refreshments and food owned and managed by TR), watch towers and hides including safety factors, vehicles assigned for visitors including riding elephants, if any and their deployment, drinking water, rest rooms, garbage disposal, attended and self guided services in the field, visitor feed back on the quality of wilderness experience.**

5.3 Are research/ monitoring related trends systematically evaluated and routinely reported and used to improve management?

Assessment criteria ⁺				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no systematic evaluation or routine reporting of trends.	Poor		Page # 231 of draft TCP	
Some evaluation and reporting undertaken but neither systematic nor routine.	Fair	✓		
Systematic evaluation and routine reporting of trends undertaken.	Good			
Systematic evaluation and comprehensive reporting of trends undertaken and attempts made at course corrections as relevant.	Very good			

***Not all TRs attract projects and researchers and with exceptions, little research takes place on the TRs own steam because of systemic limitations. However, monitoring of some critical issues is expected e.g. population of tiger, co-predators and prey with insights into their demography and distribution (some opportunistic sampling by sightings, signs and spatial distribution during assessment would be extremely useful in terms of expert impression and as a pulse), monitoring incidence of livestock grazing, fires, weeds, sources of water, a variety of illegal activities typically associated with the reserve, wildlife health (e.g. epidemics, immunization of livestock) regeneration and change in vegetation, visitors and their activities, offence cases, ex-gratia payments etc. Efforts must be made to assess the planning and implementation of Phase-IV monitoring protocols and the success of implementation of M-Stripes (wherever applicable). Are the 'Sykes and Horill' monitoring plots maintained and data analyzed?**

5.4 Is there a systematic maintenance schedule and funds in place for management of infrastructure/assets?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No systematic inventory or maintenance schedule.	Poor		APOs	
Inventory maintenance is adhoc and so is the maintenance schedule.	Fair	✓		
Systematic inventory provides the basis for maintenance schedule but funds are inadequate.	Good			
Systematic inventory provides the basis for maintenance schedule and adequate funds are made available.	Very good			

6. Outcomes

6.1 Are populations of threatened species declining, stable or increasing?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Populations of key threatened/ endangered species are declining.	Poor			No documentary proofs are available to draw any conclusions
Some threatened/ endangered species populations declining, some are increasing, most others are stable.	Fair	✓		
Several threatened/ endangered species populations increasing, most others are stable.	Good			
All threatened/ endangered species populations either increasing or stable.	Very good			

**This needs to practically relate to the natural ecosystem potential rather than being driven merely by numbers and visibility. The assessment score may be elaborated under remarks.*

6.2 Is the population of tigers showing a declining, stable or increasing trend?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Population of tiger is showing a declining trend	Poor			Discussion with DFO on ongoing Phase IV data analysis.
Population of tiger is stable	Fair	✓		
Population of tiger is showing an increasing trend	Good			
Population of tiger has significantly increased	Very good			

**This assessment should be based in the context of available population estimate (2010-11) and the outcomes of the currently ongoing Phase-IV analyses.*

6.3 Have the threats* to the TR being reduced/ minimized? Or is there an increase?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Threats to the TR have not abated but have enhanced.	Poor			Discussion with DFO
Some threats to the TR have abated, others continue their presence	Fair	✓		
Most threats to the TR have abated. The few remaining are vigorously being addressed	Good			
All threats to the TR have been effectively contained and an efficient system is in place to deal with any emerging situation	Very good			

**Does the TR has a Disaster Risk Management Plan to deal with existing as well as emerging threats?*

***Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

6.4 Are the expectations of visitors* generally met or exceeded?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Expectations of visitors generally not met.	Poor			No records are available
Expectations of many visitors are met.	Fair	✓		
Expectations of most visitors are met.	Good			
Expectations of all most all visitors are met.	Very good			

***What is the compliance status on Supreme Court/ NTCA Guidelines on Ecotourism in TRs?**

6.5 Are local communities supportive of TR management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Local communities are hostile.	Poor		MOU with NGO and minutes of meeting with local community.	
Some are supportive.	Fair			
Most locals are supportive of TR management.	Good	✓		
All local communities supportive of TR management.	Very good			

***There could be many reasons for disenchantment. It could be real because of managerial neglect or the managerial efforts could be appropriate but there could be local elements/organizations who would like to keep the disaffection simmering for their own ulterior motives. Likewise success could be entirely because of the efforts of managers or they might be fortunate in striking partnerships with credible NGOs. Assessment may take the prevailing causes into account.**

7. MEE Score Card*

Framework Element Number	Framework Element Name	Number of Criteria (a)	Maximum Mark per question (b)	Total (a x b)	Marks obtained for the Element	Overall MEE Score and % age
1	Context	4	10	40	25	60.48
2	Planning	7	10	70	50	
3	Inputs	5	10	50	27.5	
4	Process	6	10	60	35	
5	Outputs	4	10	40	22.5	
6	Outcomes	5	10	50	27.5	
Total		31		310	187.5	

***Efforts will be made by the NTCA-WII-MEE Team to address the issue of assigning 'differential' weightages to the 31 Assessment Criteria including 'normalization'.**

Assessment Criteria for addressing issues relating to Climate Change & Carbon capture in the Tiger Reserves (TRs)

1. Additional Criteria on Climate Change: Is the TR being consciously managed to adapt to climate change?

Condition	Category*	(Tick ✓)	Comment/ Explanation	Next Steps
There have been no efforts to consider adaptation to climate change in management	Poor	✓	PA managers are having basic understanding about issues but unable to translate into action	PA managers need training to make them aware about the issue
Some initial thought has taken place about likely impacts of climate change, but this has yet to be translated into management plans	Fair			
Detailed plans have been drawn up about how to adapt management to predicted climate change, but these have yet to be translated into active management.	Good			
Detailed plans have been drawn up about how to adapt management to predicted climate change, and these are already being implemented	Very good			

2. Additional Criteria on Climate Change: Is the TR being consciously managed to prevent carbon loss and to encourage further carbon capture?

Condition	Category*	(Tick ✓)	Comment/ Explanation	Next Steps
Carbon storage and carbon dioxide capture have not been considered in management of the TR	Poor	✓		PA managers need training to make them aware about the issue
Carbon storage and carbon dioxide capture have been considered in general terms, but has not yet been significantly reflected in management	Fair			
There are active measures in place to reduce carbon loss from the TR, but no conscious measures to increase carbon dioxide capture	Good			
There are active measures in place both to reduce carbon loss from the TR and to increase carbon dioxide capture	Very good			

Management Effectiveness Evaluation (MEE) of Buxa Tiger Reserve

1. Context

1.3 Are the values of the TR well documented, assessed and monitored?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Values not systematically documented, assessed and monitored.	Poor		Draft TCP	
Values generally identified but not systematically assessed and monitored.	Fair	✓		
Most values systematically identified, assessed and monitored.	Good			
All values systematically identified, assessed and monitored.	Very good			

1.2 Are the threats to TR values well documented and assessed*?

Assessment criteria ⁺				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Threats not systematically documented or assessed.	Poor		Draft TCP	
Threats generally identified but not systematically assessed.	Fair	✓		
Most threats systematically identified and assessed.	Good			
All threats systematically identified and assessed.	Very good			

⁺*This assessment should be based on number, nature and extent of threats*

1.4 Is the 'Core Area' of TR free from human and biotic interference?

Assessment criteria ⁺				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
The 'Core Area' has extensive human and biotic interference.	Poor			
The 'Core Area' has some human and biotic interference.	Fair	✓		
The 'Core Area' has little human and biotic interference.	Good			
The 'Core Area' has no human and biotic interference.	Very good			

⁺*This assessment should be based on existence and the efforts made by TR management to address issues related to human settlements/ villages inside the core area; livestock grazing, cultivation, encroachments etc, resource extraction/ livelihood dependence of local communities and should reflect the overall interference due to all the above factors. The issue of 'Unified Control' of the 'Core' and 'Buffer' zones under the Field Director would also be taken into account.*

1.4 Has the TR complied with the four Statutory* Requirements (SR) along with Tripartite MoU and three Standard Operation Procedures (SOP)?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
None of the four SR, no compliance of Tripartite MoU and three SOPs met	Poor		1. Notification of CTH and Buffer of TR dated 6 th Aug 2009 2. Trust deed of Tiger Conservation Foundation dated 30 th Mar 2010 3. Revised TCP submitted to NTCA on 12 th Dec 2013. 4. Notification of steering Committee dated 10 th Jan 2008	1. Redelineation of CTH is needed in view of some areas fragment the CTH 2. 3 SOPs are said to have been followed 3. No meeting took place of State Steering Committee
Two of the four SR, 50% conditions of the Tripartite MoU and SOPs complied	Fair			
Three of the four SR, 75% conditions of the Tripartite MoU and SOPs complied	Good	✓		
All four SR, 100% conditions of the Tripartite MoU and SOPs complied	Very good			

2. Planning

2.1 Status of Tiger Conservation Plan (TCP)*?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No TCP in place.	Poor		TCP and Comments of NTCA	1. Revised TCP submitted to NTCA on 12 th Dec 2013 2. participatory process used in the preparation of Tourism plan only
TCP is under preparation	Fair			
TR has a relevant TCP	Good	✓		
TR has a comprehensive and relevant TCP, duly approved by the NTCA	Very good			

***The scientific content and the participatory processes used in preparation of the TCP will be taken into account in assessing the quality of TCP.**

2.2 Does the TR safeguards the threatened biodiversity values?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR does not safeguard the threatened biodiversity values.	Poor			Based on field visit
TR safeguards a few threatened biodiversity values.	Fair			
TR safeguards a large number of threatened biodiversity values.	Good	✓		
TR safeguards all threatened biodiversity values.	Very good			

***Remarks need to elaborate on the kind of safeguards and how they work or are intended to work**

2.3 Are stakeholders given an opportunity to participate in planning process?

**The result of participation must show in the field and not merely reported as a routine exercise.*

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little, if any opportunity for stakeholder participation in planning.	Poor		Minutes of the meeting of Annual general Body Meeting	As general assessment made by the committee
Stakeholders participate in some planning.	Fair			
Stakeholders participate in most planning processes.	Good	✓		
Stakeholders routinely and systematically participate in all planning processes.	Very good			

**Statutory requirements are (1) Legal delineation and notification of Core and Buffer Areas; (2) Establishment of Tiger Conservation Foundation; (3) Development of a Tiger Conservation Plan; and (4) Constitution of a State-level Steering Committee under the Chairmanship of the Chief Minister. TA refers agreement between Field Director, State Government and NTCA. The 3 SOPs are on (i) Straying of Tiger in human dominated landscape, (ii) Tiger Mortality and (iii) Disposal of Carcasses*

2.4 Are habitat management programmes systematically planned, relevant and monitored, and contribute effectively to Tiger and other endangered species conservation?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Habitat management programmes are entirely adhoc.	Poor		TCP page 89 and 196	
Limited planning and monitoring programmes are in place for habitat management.	Fair			
Habitat management programmes are generally planned and monitored.	Good	✓		
Habitat management programmes are thoroughly planned and monitored.	Very good			

**This assessment should be primarily based on habitat management programmes in relation to habitats for species that are threatened (IUCN categories), are habitat specialists, subjected to seasonal movements, wide ranging with emphasis on the breeding and rearing habitat and may include factors such as food, water, shelter (all connotations).Habitat structure, composition, unique patches of vegetation and sensitive sites, sources of water and their distribution are integral. Corridors within buffer zone are critically important. For example, all riparian habitats. Have these been addressed? Is their a planning process in place? The management practices dealing with invasive species such as Lantana, Michania etc. would be examined.*

2.5 Does the TR has an effective Protection Strategy (PS)* and Security Plan and Security Audit (SA) in place?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR has little or no PS and SA.	Poor		1. Security Plan given in TCP	
TR has an adhoc PS and SA.	Fair			
TR has a generally relevant PS and SA but is not very effective.	Good	✓		
TR has a comprehensive and very effective PS and SA.	Very good			

**This assessment takes inter-alia into account the nature of threats, the number and location of patrolling camps and foot and mobile patrolling, needs that relate to available manpower, terrain difficulties, practicability of area coverage, readiness to contain specific threats with necessary support and facilities. The constitution and functioning of Special Tiger Protection Force (STPF), Number of offences reported, arrests made, prosecution initiated and conviction achieved will be taken into account.*

2.6 *Has the TR been effective in the mitigation of human-wildlife conflicts?*

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Human-wildlife conflicts are significant but poorly addressed.	Poor			The current disbursement process is very effective
TR has been able to mitigate few human-wildlife conflicts.	Fair			
TR has been able to mitigate many human-wildlife conflicts.	Good			
TR has been effective in mitigating all human-wildlife conflicts.	Very good	✓		

***The assessment will take into account the number of incidences reported and payment of compensation made and its timeliness.**

2.7 *Is the TR integrated into a wider ecological network/ landscape following the principles of the ecosystem approach?*

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR not integrated into a wider network/ landscape.	Poor		TCP	Attempts are being made to integrate in a wider ecological network
Some limited attempts to integrate the TR into a network/ landscape.	Fair	✓		
TR is generally quite well integrated into a network/ landscape.	Good			
TR is fully integrated into a wider network/ landscape.	Very good			

***Assessment needs to consider the scope of opportunities on the landscape scale that exist. Consider whether any attempts have been made and what are these? Have all the important corridors been identified? What actions are planned/implemented for their security? Have the Forest Working Plans and Forest Development Corporation Plans within the identified landscapes taken cognizance of such new requirement? These should have been reflected in TCPs. Is there is any effort to rationalize landuse around TR? Is any effort being made to plan and use 'Smart Green Infrastructure'?**

3. Inputs

3.1 *Are personnel adequate, well organized and deployed with access to adequate resources in the Tiger Reserve (TR)*?*

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Few, personnel explicitly allocated but poorly supported for TR management.	Poor		Data given by FD	
Some personnel explicitly allocated for TR management but not adequately supported and systematically linked to management objectives.	Fair	✓		
Some personnel with fair support explicitly allocated towards achievement of specific TR management objectives.	Good			
Adequate personnel appropriately supported and explicitly allocated towards achievement of specific TR management objectives.	Very good			

***This assessment should inter-alia be based on number of personnel allocated for attainment of TR objectives at the Range , Round, Beat and Patrolling camps levels or as relevant to the needs (sanctioned posts vis- a- vis existing personnel and needs beyond the sanctioned strengths. It is possible that posts have last been sanctioned several years back that do not now account for the current needs)**

***Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

3.2 Are resources (vehicle, equipment, building etc.) adequate, well organized and managed with desired access?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Few, if any, resources explicitly allocated for TR management.	Poor		List of moveable and immovable submitted by the PA managers	
Some resources explicitly allocated for TR management but not systematically linked to management objectives.	Fair			
Some resources explicitly allocated towards achievement of specific TR management objectives.	Good			
Adequate resources explicitly allocated towards achievement of specific TR management objectives.	Very good	✓		

** These form a variety of resources. These may be segregated into immovable (structures) and movable categories and each further may be considered under the essential and desirable categories. It is best to start with what are the minimum needs to attain each objective, what is available and manner of use/deployment. The proportions of the 'essentials' and 'desirables' along the importance gradient of objectives would serve as pointers for score categories. Specific remarks would be vitally important.*

3.3 Are financial resources other than those of the State linked to priority actions and are funds adequate, released timely and utilized?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Resource allocation is adhoc, funds are inadequate and seldom released in time and not utilized.	Poor		Documents submitted by PA managers	
Some specific allocation for management of priority action. Funds are inadequate and there is some delay in release, partially utilized.	Fair			
Comprehensive planning and allocation that meets the most important objectives. Generally funds released with not much delay and mostly utilized.	Good	✓		
Comprehensive planning and allocation of resources for attainment of most objectives. Funds generally released on-time and are fully utilized.	Very good			

**Obtain details of funds released by NTCA and their utilization by TR in the last 3 years and indicate them under 'Remarks'. Also comment on the problems associated with fund allocations and their utilization.*

3.4 Are financial resources from the State linked to priority action and funds adequate, timely released and utilized for the management of Tiger Reserve?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Resource allocation is adhoc, funds are inadequate and seldom released in time and not utilized.	Poor		Documents submitted by PA managers	
Some specific allocation for management of priority action. Funds are inadequate and there is some delay in release, partially utilized.	Fair			
Comprehensive planning and allocation that meets the most important objectives. Generally funds released with not much delay and mostly utilized.	Good	✓		
Comprehensive planning and allocation of resources for attainment of most objectives. Funds generally released on-time and are fully utilized.	Very good			

**Obtain details of funds released by State and their utilization by TR in the last 3 years and indicate them under 'Remarks'. Also comment on the problems associated with fund allocation and their utilization.*

***Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

3.5 What level of resources are provided by NGOs?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
NGOs contribute nothing for the management of the TR.	Poor		List of NGO submitted by FD	
NGOs make some contribution to management of the TR but opportunities for collaboration are not systematically explored.	Fair	✓		
NGOs contributions are systematically sought and negotiated for the management of some TR level activities.	Good			
NGOs contributions are systematically sought and negotiated for the management of many TR level activities.	Very good			

4. Process

4.1 Does the TR have manpower resources trained in wildlife conservation for effective TR management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No trained officers and frontline staff in the TR.	Poor		List submitted by the PA managers	Only one RFO is WII trend
Some trained officers and few trained frontline staff, posted in the TR.	Fair	✓		
All trained officers and and fair number of trained frontline staff posted in the TR.	Good			
All trained officers and most of the trained frontline staff is posted in the TR.	Very good			

**Indicate % of trained staff in various categories. The number and thematic areas of the 'Internal Training' programmes organized in the TR in the last 3 years may be taken into account. Has the TR prepared a 'Staff Development Plan'? Is it being implemented?*

4.2 Is TR staff management performance linked to achievement of management objectives?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No linkage between staff management performance and management objectives.	Poor		List of awardees	
Some linkage between staff management performance and management objectives, but not consistently or systematically assessed.	Fair	✓		
Management performance for most staff is directly linked to achievement of relevant management objectives.	Good			
Management performance of all staff is directly linked to achievement of relevant management objectives.	Very good			

4.3 Is there effective public participation in TR management* and does it show in making a difference?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no public participation in TR management.	Poor		Various meeting register	
Opportunistic public participation in some of the relevant aspects of TR management.	Fair			
Systematic public participation in most of the relevant aspects of TR management.	Good	✓		
Comprehensive and systematic public participation in all important and relevant aspects of TR management.	Very good			

**The involvement of NGOs/ NGLs in population estimation may be taken into account)*

4.4 Is there a responsive system for handling complaints and comments* about TR management?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Ad-hoc approach to handling complaints.	Poor			The TR maintains file to address complaint. However it would be better if log could be maintained
Complaints handling system operational but not responsive to individual issues and with limited follow up.	Fair			
Coordinated system logs and responds effectively to most complaints.	Good	✓		
All complaints systematically logged in coordinated system and timely response provided with minimal repeat complaints.	Very good			

**Does the TR maintains 'Suggestions Register'? What actions are taken to deal with suggestions?*

4.5 Does TR management addresses the livelihood issues* of resource dependent communities, especially of women?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No livelihood issues are addressed by TR management.	Poor		Document submitted by FD	
Few livelihood issues are addressed by TR management.	Fair			
Substantial livelihood issues are addressed by TR management.	Good	✓		
Livelihood issues of resource dependent communities especially of women are addressed effectively by TR managers.	Very good			

**The number of mandays generated in the last 3 years may be taken into account. Are funds received from District Agencies and other sources? Provide details of funds received in last 3 years.*

4.6 Has the TR planned and implemented the voluntary 'Village Relocation' from the Core/ Critical Tiger Habitat (CTH)?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No planning and no implementation	Poor			
Plans have been made but no implementation	Fair			
Plans have been made and some implementation is in progress	Good			
Plans have been made and are being actively implemented/ no human habitation in the CTH	Very good	✓		

***Assessment will look into the village relocation planning process including availability of manpower, financial resources and NGO support, if any. Is there a mechanism to address the complaints received in respect of relocation process? Effort must be made to assess post-relocation success or otherwise.**

5. Output

5.1 Is adequate information on TR management publicly available?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no information on TR management publicly available.	Poor		Website of Buxa TR www.buxatigerreserve.com	
Publicly available information is general and has limited relevance to management accountability and the condition of public assets.	Fair			
Publicly available information provides detailed insight into major management issues and condition of public assets.	Good	✓		
Comprehensive reports are routinely available in public domain on management and condition of public assets.	Very good			

5.2 Are visitor services and facilities appropriate and adequate?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Visitor services and facilities do not exist.	Poor			Based on field visit observation
Visitor services and facilities are very basic.	Fair			
Visitor services and facilities are monitored from time to time and are fairly effective.	Good	✓		
Visitor services and facilities are conscientiously maintained, regularly upgraded and monitored for visitor satisfaction	Very good			

***Include the existence and quality of visitor and interpretation centers, including skills and capabilities of personnel manning these, TR related publications, films, videos; arrangements of stay (including places serving refreshments and food owned and managed by TR), watch towers and hides including safety factors, vehicles assigned for visitors including riding elephants, if any and their deployment, drinking water, rest rooms, garbage disposal, attended and self guided services in the field, visitor feed back on the quality of wilderness experience.**

5.3 Are research/ monitoring related trends systematically evaluated and routinely reported and used to improve management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no systematic evaluation or routine reporting of trends.	Poor		TCP page # 69	
Some evaluation and reporting undertaken but neither systematic nor routine.	Fair	✓		
Systematic evaluation and routine reporting of trends undertaken.	Good			
Systematic evaluation and comprehensive reporting of trends undertaken and attempts made at course corrections as relevant.	Very good			

***Not all TRs attract projects and researchers and with exceptions, little research takes place on the TRs own steam because of systemic limitations. However, monitoring of some critical issues is expected e.g. population of tiger, co-predators and prey with insights into their demography and distribution (some opportunistic sampling by sightings, signs and spatial distribution during assessment would be extremely useful in terms of expert impression and as a pulse), monitoring incidence of livestock grazing, fires, weeds, sources of water, a variety of illegal activities typically associated with the reserve, wildlife health (e.g. epidemics, immunization of livestock) regeneration and change in vegetation, visitors and their activities, offence cases, ex-gratia payments etc. Efforts must be made to assess the planning and implementation of Phase-IV monitoring protocols and the success of implementation of M-Stripes (wherever applicable). Are the 'Sykes and Horill' monitoring plots maintained and data analyzed?**

5.4 Is there a systematic maintenance schedule and funds in place for management of infrastructure/assets?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No systematic inventory or maintenance schedule.	Poor			As per requirement the maintenance
Inventory maintenance is adhoc and so is the maintenance schedule.	Fair	✓		
Systematic inventory provides the basis for maintenance schedule but funds are inadequate.	Good			
Systematic inventory provides the basis for maintenance schedule and adequate funds are made available.	Very good			

6. Outcomes

6.1 Are populations of threatened species declining, stable or increasing?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Populations of key threatened/ endangered species are declining.	Poor		TCP page # 44	
Some threatened/ endangered species populations declining, some are increasing, most others are stable.	Fair	✓		
Several threatened/ endangered species populations increasing, most others are stable.	Good			
All threatened/ endangered species populations either increasing or stable.	Very good			

***This needs to practically relate to the natural ecosystem potential rather than being driven merely by numbers and visibility. The assessment score may be elaborated under remarks.**

6.2 Is the population of tigers showing a declining, stable or increasing trend?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Population of tiger is showing a declining trend	Poor		CCMB and Aaranyak report	Still not a single tiger has been captured in camera
Population of tiger is stable	Fair	✓		
Population of tiger is showing an increasing trend	Good			
Population of tiger has significantly increased	Very good			

**This assessment should be based in the context of available population estimate (2010-11) and the outcomes of the currently ongoing Phase-IV analyses.*

6.3 Have the threats* to the TR being reduced/ minimized? Or is there an increase?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Threats to the TR have not abated but have enhanced.	Poor			Many new field camps are constructed to abate threats
Some threats to the TR have abated, others continue their presence	Fair	✓		
Most threats to the TR have abated. The few remaining are vigorously being addressed	Good			
All threats to the TR have been effectively contained and an efficient system is in place to deal with any emerging situation	Very good			

**Does the TR has a Disaster Risk Management Plan to deal with existing as well as emerging threats?*

6.4 Are the expectations of visitors* generally met or exceeded?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Expectations of visitors generally not met.	Poor			Interaction with visitors and local people
Expectations of many visitors are met.	Fair			
Expectations of most visitors are met.	Good	✓		
Expectations of all most all visitors are met.	Very good			

**What is the compliance status on Supreme Court/ NTCA Guidelines on Ecotourism in TRs?*

6.5 Are local communities supportive of TR management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Local communities are hostile.	Poor			Interaction with locals
Some are supportive.	Fair			
Most locals are supportive of TR management.	Good	✓		
All local communities supportive of TR management.	Very good			

**There could be many reasons for disenchantment. It could be real because of managerial neglect or the managerial efforts could be appropriate but there could be local elements/organizations who would like to keep the disaffection simmering for their own ulterior motives. Likewise success could be entirely because of the efforts of managers or they might be fortunate in striking partnerships with credible NGOs. Assessment may take the prevailing causes into account.*

7. MEE Score Card*

Framework Element Number	Framework Element Name	Number of Criteria (a)	Maximum Mark per question (b)	Total (a x b)	Marks obtained for the Element	Overall MEE Score and % age
1	Context	4	10	40	22.5	69.35%
2	Planning	7	10	70	52.5	
3	Inputs	5	10	50	35	
4	Process	6	10	60	42.5	
5	Outputs	4	10	40	25	
6	Outcomes	5	10	50	30	
Total		31		310	207.5	

**Efforts will be made by the NTCA-WII-MEE Team to address the issue of assigning 'differential' weightages to the 30 Assessment Criteria including 'normalization'.*

Assessment Criteria for addressing issues relating to Climate Change & Carbon capture in the Tiger Reserves (TRs)

3. Additional Criteria on Climate Change: Is the TR being consciously managed to adapt to climate change?

Condition	Category*	(Tick ✓)	Comment/ Explanation	Next Steps
There have been no efforts to consider adaptation to climate change in management	Poor		PA managers are having basic understanding about issues but unable to translate into action	PA managers need training to make them aware about the issue
Some initial thought has taken place about likely impacts of climate change, but this has yet to be translated into management plans	Fair	✓		
Detailed plans have been drawn up about how to adapt management to predicted climate change, but these have yet to be translated into active management.	Good			
Detailed plans have been drawn up about how to adapt management to predicted climate change, and these are already being implemented	Very good			

2. Additional Criteria on Climate Change: Is the TR being consciously managed to prevent carbon loss and to encourage further carbon capture?

Condition	Category*	(Tick ✓)	Comment/ Explanation	Next Steps
Carbon storage and carbon dioxide capture have not been considered in management of the TR	Poor	✓		PA managers need training to make them aware about the issue
Carbon storage and carbon dioxide capture have been considered in general terms, but has not yet been significantly reflected in management	Fair			
There are active measures in place to reduce carbon loss from the TR, but no conscious measures to increase carbon dioxide capture	Good			
There are active measures in place both to reduce carbon loss from the TR and to increase carbon dioxide capture	Very good			

Management Effectiveness Evaluation (MEE) of Sundarban Tiger Reserve

1. Context

1.1 Are the values of the TR well documented, assessed and monitored?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Values not systematically documented, assessed and monitored.	Poor		Page # 269 of TCP	Difficult working condition and understaffing are major hurdle to continue monitoring
Values generally identified but not systematically assessed and monitored.	Fair			
Most values systematically identified, assessed and monitored.	Good			
All values systematically identified, assessed and monitored.	Very good	✓		

1.2 Are the threats to TR values well documented and assessed*?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Threats not systematically documented or assessed.	Poor		Draft TCP	Most of the listed threats are beyond the capacity of TR management to assess on continuous basis
Threats generally identified but not systematically assessed.	Fair	✓		
Most threats systematically identified and assessed.	Good			
All threats systematically identified and assessed.	Very good			

***This assessment should be based on number, nature and extent of threats**

1.3 Is the 'Core Area' of TR free from human and biotic interference?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
The 'Core Area' has extensive human and biotic interference.	Poor			As per CTH notification no settlements are inside core area
The 'Core Area' has some human and biotic interference.	Fair			
The 'Core Area' has little human and biotic interference.	Good	✓		
The 'Core Area' has no human and biotic interference.	Very good			

***This assessment should be based on existence and the efforts made by TR management to address issues related to human settlements/ villages inside the core area; livestock grazing, cultivation, encroachments etc, resource extraction/ livelihood dependence of local communities and should reflect the overall interference due to all the above factors. The issue of 'Unified Control' of the 'Core' and 'Buffer' zones under the Field Director would also be taken into account.**

1.4 Has the TR complied with the four Statutory* Requirements (SR) along with Tripartite MoU and three Standard Operation Procedures (SOP)?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
None of the four SR, no compliance of Tripartite MoU and three SOPs met	Poor			1. No meeting took place of State Steering Committee
Two of the four SR, 50% conditions of the Tripartite MoU and SOPs complied	Fair			
Three of the four SR, 75% conditions of the Tripartite MoU and SOPs complied	Good			
All four SR, 100% conditions of the Tripartite MoU and SOPs complied	Very good	✓		

***Statutory requirements are (1) Legal delineation and notification of Core and Buffer Areas; (2) Establishment of Tiger Conservation Foundation; (3) Development of a Tiger Conservation Plan; and (4) Constitution of a State-level Steering Committee under the Chairmanship of the Chief Minister. TA refers agreement between Field Director, State Government and NTCA. The 3 SOPs are on (i) Straying of Tiger in human dominated landscape, (ii) Tiger Mortality and (iii) Disposal of Carcasses**

2. Planning

2.1 Status of Tiger Conservation Plan (TCP) +?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No TCP in place.	Poor		TCP and Comments of NTCA	
TCP is under preparation	Fair			
TR has a relevant TCP	Good			
TR has a comprehensive and relevant TCP, duly approved by the NTCA	Very good	✓		

***The scientific content and the participatory processes used in preparation of the TCP will be taken into account in assessing the quality of TCP.**

2.2 Does the TR safeguards the threatened biodiversity values?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR does not safeguard the threatened biodiversity values.	Poor		TCP	There is no human interference in core area of
TR safeguards a few threatened biodiversity values.	Fair			
TR safeguards a large number of threatened biodiversity values.	Good			
TR safeguards all threatened biodiversity values.	Very good	✓		

***Remarks need to elaborate on the kind of safeguards and how they work or are intended to work**

2.3 Are stakeholders given an opportunity to participate in planning process?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little, if any opportunity for stakeholder participation in planning.	Poor		Minutes of the meeting of JFMC	JFMC exist only in Sajnekhali and Bashirhat where almost every month meeting takes place
Stakeholders participate in some planning.	Fair			
Stakeholders participate in most planning processes.	Good			
Stakeholders routinely and systematically participate in all planning processes.	Very good	✓		

***The result of participation must show in the field and not merely reported as a routine exercise.**

2.4 Are habitat management programmes systematically planned, relevant and monitored, and contribute effectively to Tiger and other endangered species conservation?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Habitat management programmes are entirely adhoc.	Poor		TCP	There is no need for any major habitat management intervention
Limited planning and monitoring programmes are in place for habitat management.	Fair			
Habitat management programmes are generally planned and monitored.	Good	✓		
Habitat management programmes are thoroughly planned and monitored.	Very good			

***This assessment should be primarily based on habitat management programmes in relation to habitats for species that are threatened (IUCN categories), are habitat specialists, subjected to seasonal movements, wide ranging with emphasis on the breeding and rearing habitat and may include factors such as food, water, shelter (all connotations).Habitat structure, composition, unique patches of vegetation and sensitive sites, sources of water and their distribution are integral. Corridors within buffer zone are critically important. For example, all riparian habitats. Have these been addressed? Is their a planning process in place? The management practices dealing with invasive species such as Lantana, Michania etc. would be examined.**

2.5 Does the TR has an effective Protection Strategy (PS)* and Security Plan and Security Audit (SA) in place?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR has little or no PS and SA.	Poor		Protection related control forms and registers in camps	Very effective protection strategy exist
TR has an adhoc PS and SA.	Fair			
TR has a generally relevant PS and SA but is not very effective.	Good			
TR has a comprehensive and very effective PS and SA.	Very good	✓		

***This assessment takes inter-alia into account the nature of threats, the number and location of patrolling camps and foot and mobile patrolling, needs that relate to available manpower, terrain difficulties, practicability of area coverage, readiness to contain specific threats with necessary support and facilities. The constitution and functioning of Special Tiger Protection Force (STPF), Number of offences reported, arrests made, prosecution initiated and conviction achieved will be taken into account.**

2.6 Has the TR been effective in the mitigation of human-wildlife conflicts?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Human-wildlife conflicts are significant but poorly addressed.	Poor		Page 39 of annual report	The current disbursement process is very effective. In last FY there was no a single incidence of straying tiger towards human population
TR has been able to mitigate few human-wildlife conflicts.	Fair			
TR has been able to mitigate many human-wildlife conflicts.	Good			
TR has been effective in mitigating all human-wildlife conflicts.	Very good	✓		

*The assessment will take into account the number of incidences reported and payment of compensation made and its timeliness.

2.7 Is the TR integrated into a wider ecological network/ landscape following the principles of the ecosystem approach?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR not integrated into a wider network/ landscape.	Poor		TCP	Good attempts are being made to integrate in a wider ecological network
Some limited attempts to integrate the TR into a network/ landscape.	Fair			
TR is generally quite well integrated into a network/ landscape.	Good			
TR is fully integrated into a wider network/ landscape.	Very good	✓		

*Assessment needs to consider the scope of opportunities on the landscape scale that exist. Consider whether any attempts have been made and what are these? Have all the important corridors been identified? What actions are planned/implemented for their security? Have the Forest Working Plans and Forest Development Corporation Plans within the identified landscapes taken cognizance of such new requirement? These should have been reflected in TCPs. Is there is any effort to rationalize landuse around TR? Is any effort being made to plan and use 'Smart Green Infrastructure'?

3. Inputs

3.1 Are personnel adequate, well organized and deployed with access to adequate resources in the Tiger Reserve (TR)*?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Few, personnel explicitly allocated but poorly supported for TR management.	Poor		TCP and list of sanctioned/vacant post	Major vacancy at forest guard level
Some personnel explicitly allocated for TR management but not adequately supported and systematically linked to management objectives.	Fair	✓		
Some personnel with fair support explicitly allocated towards achievement of specific TR management objectives.	Good			
Adequate personnel appropriately supported and explicitly allocated towards achievement of specific TR management objectives.	Very good			

*This assessment should inter-alia be based on number of personnel allocated for attainment of TR objectives at the Range , Round, Beat and Patrolling camps levels or as relevant to the needs (sanctioned posts vis- a- vis existing personnel and needs beyond the sanctioned strengths. It is possible that posts have last been sanctioned several years back that do not now account for the current needs)

3.2 Are resources (vehicle, equipment, building etc.) adequate, well organized and managed with desired access?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Few, if any, resources explicitly allocated for TR management.	Poor		Page # 14-15 of annual report	Updating of boats and equipment are required
Some resources explicitly allocated for TR management but not systematically linked to management objectives.	Fair			
Some resources explicitly allocated towards achievement of specific TR management objectives.	Good			
Adequate resources explicitly allocated towards achievement of specific TR management objectives.	Very good	✓		

** These form a variety of resources. These may be segregated into immovable (structures) and movable categories and each further may be considered under the essential and desirable categories. It is best to start with what are the minimum needs to attain each objective, what is available and manner of use/deployment. The proportions of the 'essentials' and 'desirables' along the importance gradient of objectives would serve as pointers for score categories. Specific remarks would be vitally important.*

3.3 Are financial resources other than those of the State linked to priority actions and are funds adequate, released timely and utilized?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Resource allocation is adhoc, funds are inadequate and seldom released in time and not utilized.	Poor		Office record	
Some specific allocation for management of priority action. Funds are inadequate and there is some delay in release, partially utilized.	Fair			
Comprehensive planning and allocation that meets the most important objectives. Generally funds released with not much delay and mostly utilized.	Good	✓		
Comprehensive planning and allocation of resources for attainment of most objectives. Funds generally released on-time and are fully utilized.	Very good			

**Obtain details of funds released by NTCA and their utilization by TR in the last 3 years and indicate them under 'Remarks'. Also comment on the problems associated with fund allocations and their utilization.*

3.4 Are financial resources from the State linked to priority action and funds adequate, timely released and utilized for the management of Tiger Reserve?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Resource allocation is adhoc, funds are inadequate and seldom released in time and not utilized.	Poor		Office record	
Some specific allocation for management of priority action. Funds are inadequate and there is some delay in release, partially utilized.	Fair			
Comprehensive planning and allocation that meets the most important objectives. Generally funds released with not much delay and mostly utilized.	Good	✓		
Comprehensive planning and allocation of resources for attainment of most objectives. Funds generally released on-time and are fully utilized.	Very good			

**Obtain details of funds released by State and their utilization by TR in the last 3 years and indicate them under 'Remarks'. Also comment on the problems associated with fund allocation and their utilization.*

3.5 What level of resources are provided by NGOs?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
NGOs contribute nothing for the management of the TR.	Poor		Office record	Major NGOs are WWF, WCT, Sher, NEWS, ACT, Jyotibari, WPSI and local groups
NGOs make some contribution to management of the TR but opportunities for collaboration are not systematically explored.	Fair			
NGOs contributions are systematically sought and negotiated for the management of some TR level activities.	Good			
NGOs contributions are systematically sought and negotiated for the management of many TR level activities.	Very good	✓		

4. Process

4.1 Does the TR have manpower resources trained in wildlife conservation for effective TR management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No trained officers and frontline staff in the TR.	Poor		Office record	
Some trained officers and few trained frontline staff, posted in the TR.	Fair	✓		
All trained officers and fair number of trained frontline staff posted in the TR.	Good			
All trained officers and most of the trained frontline staff is posted in the TR.	Very good			

**Indicate % of trained staff in various categories. The number and thematic areas of the 'Internal Training' programmes organized in the TR in the last 3 years may be taken into account. Has the TR prepared a 'Staff Development Plan'? Is it being implemented?*

4.2 Is TR staff management performance linked to achievement of management objectives?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No linkage between staff management performance and management objectives.	Poor		List of awardees shared by FD	More systematic approach is needed
Some linkage between staff management performance and management objectives, but not consistently or systematically assessed.	Fair			
Management performance for most staff is directly linked to achievement of relevant management objectives.	Good	✓		
Management performance of all staff is directly linked to achievement of relevant management objectives.	Very good			

4.3 Is there effective public participation in TR management* and does it show in making a difference?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no public participation in TR management.	Poor		Minutes of meeting with stakeholders	
Opportunistic public participation in some of the relevant aspects of TR management.	Fair			
Systematic public participation in most of the relevant aspects of TR management.	Good	✓		
Comprehensive and systematic public participation in all important and relevant aspects of TR management.	Very good			

**The involvement of NGOs/ NGLs in population estimation may be taken into account)*

***Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

4.4 Is there a responsive system for handling complaints and comments* about TR management?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Ad-hoc approach to handling complaints.	Poor		Compliant and complaint register	
Complaints handling system operational but not responsive to individual issues and with limited follow up.	Fair			
Coordinated system logs and responds effectively to most complaints.	Good			
All complaints systematically logged in coordinated system and timely response provided with minimal repeat complaints.	Very good	✓		

***Does the TR maintains 'Suggestions Register'? What actions are taken to deal with suggestions?**

4.5 Does TR management addresses the livelihood issues* of resource dependent communities, especially of women?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No livelihood issues are addressed by TR management.	Poor		List of livelihood scheme implemented in buffer area	
Few livelihood issues are addressed by TR management.	Fair			
Substantial livelihood issues are addressed by TR management.	Good			
Livelihood issues of resource dependent communities especially of women are addressed effectively by TR managers.	Very good	✓		

***The number of mandays generated in the last 3 years may be taken into account. Are funds received from District Agencies and other sources? Provide details of funds received in last 3 years.**

4.6 Has the TR planned and implemented the voluntary 'Village Relocation' from the Core/ Critical Tiger Habitat (CTH)?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No planning and no implementation	Poor			There is no human population in CTH
Plans have been made but no implementation	Fair			
Plans have been made and some implementation is in progress	Good			
Plans have been made and are being actively implemented/ no human habitation in the CTH	Very good	✓		

***Assessment will look into the village relocation planning process including availability of manpower, financial resources and NGO support, if any. Is there a mechanism to address the complaints received in respect of relocation process? Effort must be made to assess post-relocation success or otherwise.**

5. Output

5.1 Is adequate information on TR management publicly available?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no information on TR management publicly available.	Poor		Website of WB forest department and facebook	
Publicly available information is general and has limited relevance to management accountability and the condition of public assets.	Fair			
Publicly available information provides detailed insight into major management issues and condition of public assets.	Good	✓		
Comprehensive reports are routinely available in public domain on management and condition of public assets.	Very good			

5.2 Are visitor services and facilities appropriate and adequate?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Visitor services and facilities do not exist.	Poor			Grading is based on field observation
Visitor services and facilities are very basic.	Fair			
Visitor services and facilities are monitored from time to time and are fairly effective.	Good			
Visitor services and facilities are conscientiously maintained, regularly upgraded and monitored for visitor satisfaction	Very good	✓		

**Include the existence and quality of visitor and interpretation centers, including skills and capabilities of personnel manning these, TR related publications, films, videos; arrangements of stay (including places serving refreshments and food owned and managed by TR), watch towers and hides including safety factors, vehicles assigned for visitors including riding elephants, if any and their deployment, drinking water, rest rooms, garbage disposal, attended and self guided services in the field, visitor feed back on the quality of wilderness experience.*

5.3 Are research/ monitoring related trends systematically evaluated and routinely reported and used to improve management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no systematic evaluation or routine reporting of trends.	Poor		TCP	
Some evaluation and reporting undertaken but neither systematic nor routine.	Fair			
Systematic evaluation and routine reporting of trends undertaken.	Good	✓		
Systematic evaluation and comprehensive reporting of trends undertaken and attempts made at course corrections as relevant.	Very good			

**Not all TRs attract projects and researchers and with exceptions, little research takes place on the TRs own steam because of systemic limitations. However, monitoring of some critical issues is expected e.g. population of tiger, co-predators and prey with insights into their demography and distribution (some opportunistic sampling by sightings, signs and spatial distribution during assessment would be extremely useful in terms of expert impression and as a pulse), monitoring incidence of livestock grazing, fires, weeds, sources of water, a variety of illegal activities typically associated with the reserve, wildlife health (e.g. epidemics, immunization of livestock) regeneration and change in vegetation, visitors and their activities, offence cases, ex-gratia payments etc. Efforts must be made to assess the planning and implementation of Phase-IV monitoring protocols and the success of implementation of M-Stripes (wherever applicable). Are the 'Sykes and Horill' monitoring plots maintained and data analyzed?*

5.4 Is there a systematic maintenance schedule and funds in place for management of infrastructure/assets?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No systematic inventory or maintenance schedule.	Poor			Grading is based on field observation
Inventory maintenance is adhoc and so is the maintenance schedule.	Fair			
Systematic inventory provides the basis for maintenance schedule but funds are inadequate.	Good			
Systematic inventory provides the basis for maintenance schedule and adequate funds are made available.	Very good	✓		

6. Outcomes

6.1 Are populations of threatened species declining, stable or increasing?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Populations of key threatened/ endangered species are declining.	Poor			1. Grading based on offence report particularly on hunting cases. 2. Most likely assessment of this parameter is difficult in STR
Some threatened/ endangered species populations declining, some are increasing, most others are stable.	Fair			
Several threatened/ endangered species populations increasing, most others are stable.	Good	✓		
All threatened/ endangered species populations either increasing or stable.	Very good			

**This needs to practically relate to the natural ecosystem potential rather than being driven merely by numbers and visibility. The assessment score may be elaborated under remarks.*

6.2 Is the population of tigers showing a declining, stable or increasing trend?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Population of tiger is showing a declining trend	Poor		Office record and TCP	
Population of tiger is stable	Fair			
Population of tiger is showing an increasing trend	Good	✓		
Population of tiger has significantly increased	Very good			

**This assessment should be based in the context of available population estimate (2010-11) and the outcomes of the currently ongoing Phase-IV analyses.*

6.3 Have the threats* to the TR being reduced/ minimized? Or is there an increase?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Threats to the TR have not abated but have enhanced.	Poor		Offence record	
Some threats to the TR have abated, others continue their presence	Fair			
Most threats to the TR have abated. The few remaining are vigorously being addressed	Good	✓		
All threats to the TR have been effectively contained and an efficient system is in place to deal with any emerging situation	Very good			

**Does the TR has a Disaster Risk Management Plan to deal with existing as well as emerging threats?*

***Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

6.4 Are the expectations of visitors* generally met or exceeded?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Expectations of visitors generally not met.	Poor		Visitors book	
Expectations of many visitors are met.	Fair			
Expectations of most visitors are met.	Good			
Expectations of all most all visitors are met.	Very good	✓		

***What is the compliance status on Supreme Court/ NTCA Guidelines on Ecotourism in TRs?**

6.5 Are local communities supportive of TR management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Local communities are hostile.	Poor			Grading based on field visit
Some are supportive.	Fair			
Most locals are supportive of TR management.	Good	✓		
All local communities supportive of TR management.	Very good			

***There could be many reasons for disenchantment. It could be real because of managerial neglect or the managerial efforts could be appropriate but there could be local elements/organizations who would like to keep the disaffection simmering for their own ulterior motives. Likewise success could be entirely because of the efforts of managers or they might be fortunate in striking partnerships with credible NGOs. Assessment may take the prevailing causes into account.**

7. MEE Score Card*

Framework Element Number	Framework Element Name	Number of Criteria (a)	Maximum Mark per question (b)	Total (a x b)	Marks obtained for the Element	Overall MEE Score and % age
1	Context	4	10	40	32.5	85.48
2	Planning	7	10	70	67.5	
3	Inputs	5	10	50	40	
4	Process	6	10	60	50	
5	Outputs	4	10	40	35	
6	Outcomes	5	10	50	40	
Total		31		310	265	

***Efforts will be made by the NTCA-WII-MEE Team to address the issue of assigning 'differential' weightages to the 30 Assessment Criteria including 'normalization'.**

Assessment Criteria for addressing issues relating to Climate Change & Carbon capture in the Tiger Reserves (TRs)

1. Additional Criteria on Climate Change: Is the TR being consciously managed to adapt to climate change?

Condition	Category*	(Tick ✓)	Comment/ Explanation	Next Steps
There have been no efforts to consider adaptation to climate change in management	Poor	✓	PA managers are having basic understanding about issues but unable to translate into action	PA managers need training to make them aware about the issue
Some initial thought has taken place about likely impacts of climate change, but this has yet to be translated into management plans	Fair			
Detailed plans have been drawn up about how to adapt management to predicted climate change, but these have yet to be translated into active management.	Good			
Detailed plans have been drawn up about how to adapt management to predicted climate change, and these are already being implemented	Very good			

2. Additional Criteria on Climate Change: Is the TR being consciously managed to prevent carbon loss and to encourage further carbon capture?

Condition	Category*	(Tick ✓)	Comment/ Explanation	Next Steps
Carbon storage and carbon dioxide capture have not been considered in management of the TR	Poor	✓		PA managers need training to make them aware about the issue
Carbon storage and carbon dioxide capture have been considered in general terms, but has not yet been significantly reflected in management	Fair			
There are active measures in place to reduce carbon loss from the TR, but no conscious measures to increase carbon dioxide capture	Good			
There are active measures in place both to reduce carbon loss from the TR and to increase carbon dioxide capture	Very good			



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