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TIGER~MEETR

MEASURING THE MANAGEMENT EFFECTIVENESS OF TIGER RESERVES IN INDIA



सत्यमेव जयते
Government of India



Ministry of Environment,
Forests & Climate Change

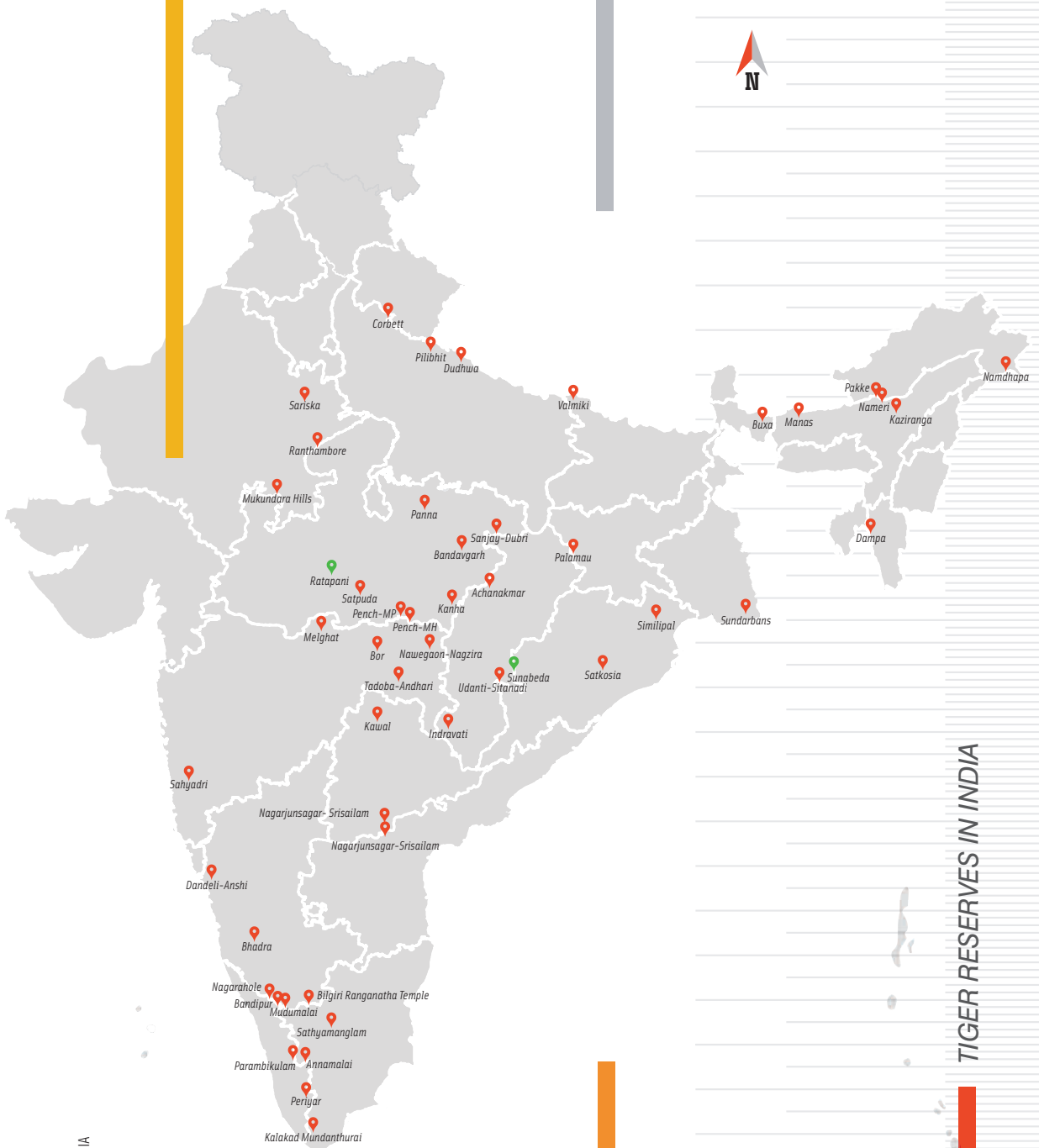


भारतीय वन्यजीव संस्थान
Wildlife Institute of India



**MEASURING THE
MANAGEMENT
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OF TIGER RESERVES
IN INDIA**

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-  EXISTING TIGER RESERVES 47
-  IN-PRINCIPLE APPROVAL GRANTED 02

Source: NTCA, 2014

TIGER RESERVES IN INDIA

FOREWORD



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 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.

A handwritten signature in black ink, appearing to read 'Prakash Javadekar', with a horizontal line underneath.

Prakash Javadekar
Minister of State (Independent Charge)
Environment, Forests & Climate Change
Government of India



INTRODUCTION

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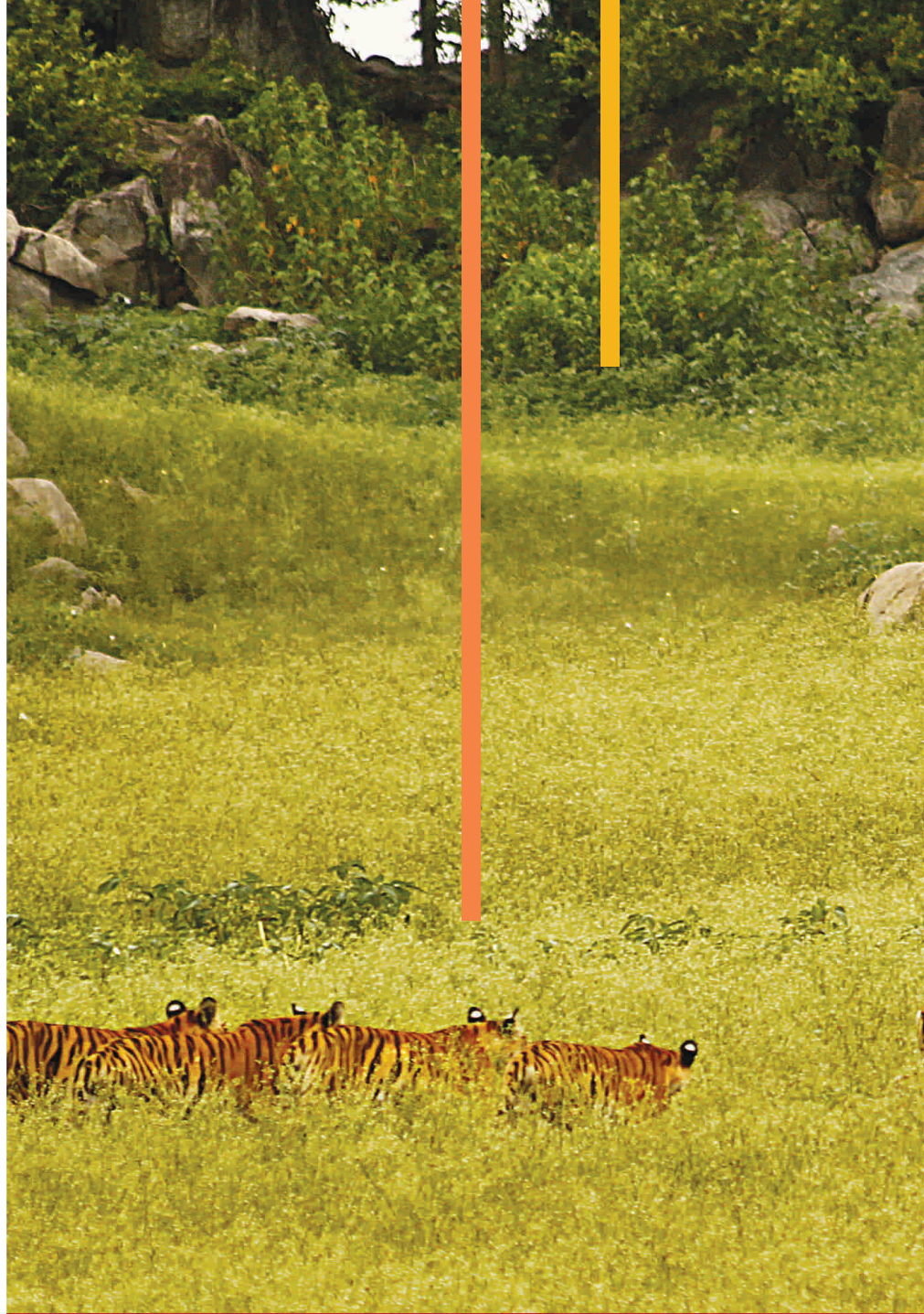
Management Effectiveness Evaluation (MEE) is the assessment of how well protected areas such as national parks, wildlife sanctuaries, conservation reserves, community reserves and tiger reserves are being managed and their effectiveness in conserving target flora and fauna.

From January, 2014 to December, 2014 the National Tiger Conservation Authority (NTCA) in partnership with the Wildlife Institute of India (WII) undertook an independent Management Effectiveness Evaluation of 43 tiger reserves in the country.



SALIENT FEATURES

© Dr. Anirudha Majumdar



*EVALUATION WAS DONE BY
ADAPTING A GLOBALLY
USED FRAMEWORK THAT
IS USED IN OVER 140
COUNTRIES IN THE WORLD*



*43 TIGER RESERVES
WERE EVALUATED
INCLUDING THE FIVE IN
'RED CORRIDOR'*

02



*FIVE INDEPENDENT
TEAMS CONDUCTED
THE EVALUATION.*



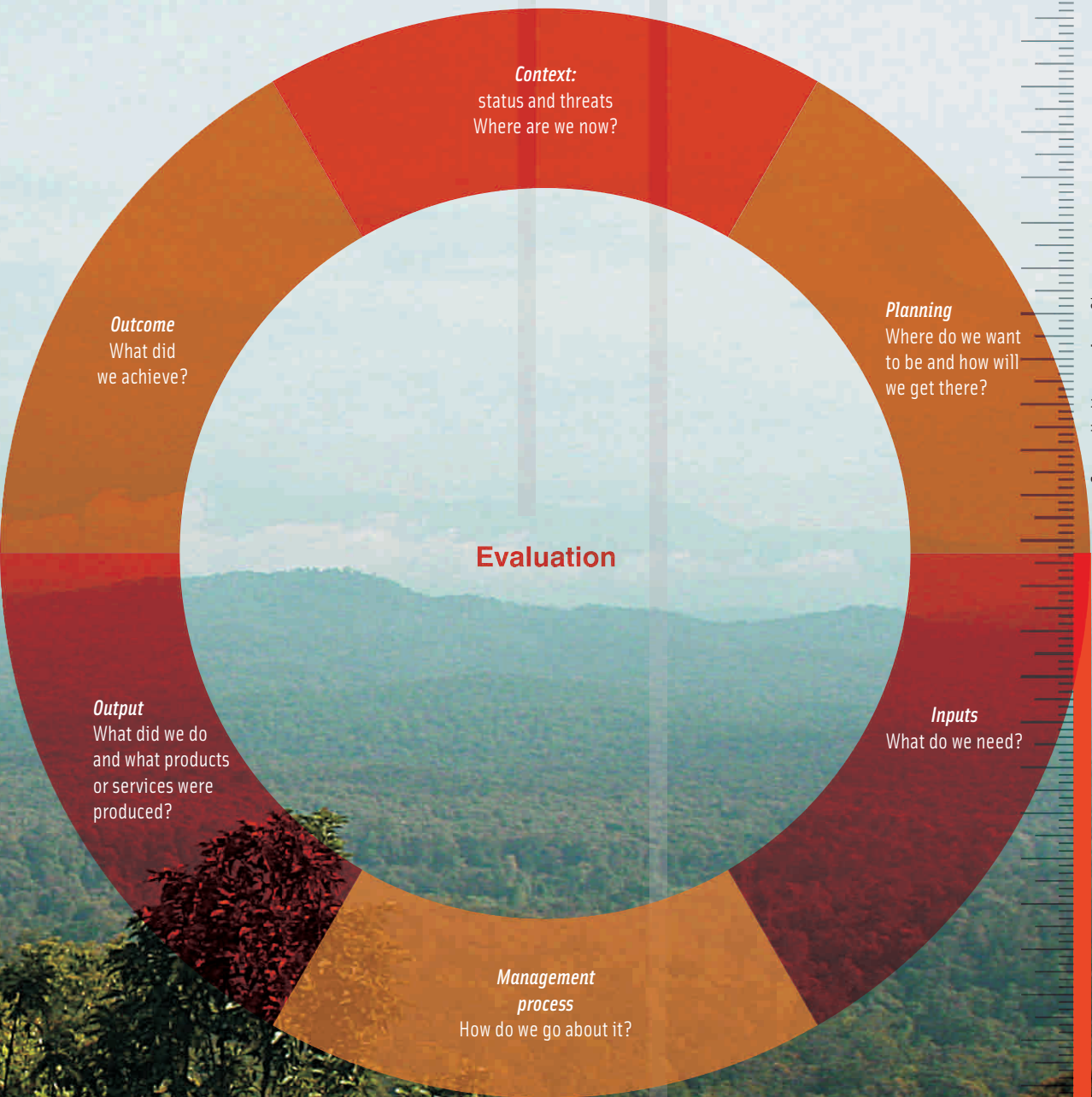
*31 HEADLINE
INDICATORS,
DEVELOPED
ESPECIALLY FOR THE
INDIAN SITUATION.*



03

The Framework consists of six elements viz. Context, Planning, Inputs, Process, Output and Outcome; each of them has a precise focus of evaluation. This Framework assesses the importance of each tiger reserve for conservation in the face of current threats to the species.

THE FRAMEWORK



© Dr. Bitapi C. Sinha

Source: Hockings et al., 2006*

MEASURING THE MANAGEMENT EFFECTIVENESS OF TIGER RESERVES IN INDIA

For this, the resources used for the successful implementation of programmes that meet management objectives are evaluated for measurable results of their effectiveness and relevance.

- The various criteria within the major elements of the evaluation framework include parameters such as:
- vulnerability of tiger populations within
- protected area design
- management planning
- suitability of these plans in the context of the major threats

*Hockings, M., Stolton, S., Leverington, F., Dudley, N. and Courrau, J. 2006. Evaluating Effectiveness: A framework for assessing management of protected areas, (2nd edn.) World Commission on Protected Areas, IUCN, Gland, Switzerland.

LANDSCAPE RESULTS

The 43 tiger reserves in 17 States were grouped into the same Landscape Clusters as the tiger estimation exercise. The five clusters had an overall MEE of 69.63 percent.

Arranged in descending percentages, the Landscape Cluster MEE scores were:

<i>Cluster Number</i>	<i>States</i>	<i>No. of Tiger Reserves</i>	<i>Mean MEE Score %</i>	<i>Mean Score Range %</i>
II	Madhya Pradesh	6	79.44	70-89
IV	Karnataka, Kerala and Tamil Nadu	11	76.69	61-91
I	Uttar Pradesh, Uttarakhand, Rajasthan and Maharashtra	9	71.50	52-78
V	Arunachal Pradesh, Assam, Mizoram and West Bengal	8	62.90	48-85
III	Bihar, Chhattisgarh, Odisha, Andhra Pradesh and Jharkhand	9	57.62	45-75
Total		43	69.63	45-91

MEE Ratings of Tiger Reserves within each cluster in 2014 evaluation

Cluster Number	States	Tiger Reserves	MEE Ratings
I	Uttarakhand	Corbett	Very Good
	Maharashtra	Melghat	Very Good
	Maharashtra	Pench	Very Good
	Maharashtra	Tadoba-Andhari	Very Good
	Uttar Pradesh	Dudhwa	Good
	Rajasthan	Ranthambore	Good
	Maharashtra	Sahyadri	Good
	Rajasthan	Mukundara Hills	Fair
II	Madhya Pradesh	Kanha	Very Good
	Madhya Pradesh	Pench	Very Good
	Madhya Pradesh	Satpuda	Very Good
	Madhya Pradesh	Bandhavgarh	Good
	Madhya Pradesh	Sanjay-Dubri	Good
III	Bihar	Valmiki	Very Good
	Chhattisgarh	Achanakmar	Fair
	Andhra Pradesh	Kawal	Fair
	Orissa	Satkosia	Fair
IV	Tamil Nadu	Annamalai	Very Good
	Karnataka	Bandipur	Very Good
	Tamil Nadu	Kalakad-Mundanthurai	Very Good
	Tamil Nadu	Mudumalai	Very Good
	Karnataka	Nagarhole	Very Good
	Kerala	Parambikulam	Very Good
	Kerala	Periyar	Very Good
	Karnataka	Bhadra	Good
	Karnataka	Biligiri Ranganatha Temple	Good
	Karnataka	Dandeli-Anshi	Good
Tamil Nadu	Sathyamanglam	Good	
V	West Bengal	Sundarbans	Very Good
	West Bengal	Buxa	Good
	Mizoram	Dampa	Good
	Assam	Kaziranga	Good
	Assam	Manas	Good
	Arunachal Pradesh	Pakke	Good
	Arunachal Pradesh	Namdapha	Fair
	Assam	Nameri	Fair
	Red Corridor	Andhra Pradesh	Nagarjunsagar-Srisailam
Chhattisgarh		Indravati	Fair
Jharkhand		Palamau	Fair
Orissa		Similipal	Fair
Chhattisgarh		Udanti-Sitanadi	Fair
Tiger Reserves that had lost all tigers	Madhya Pradesh	Panna	Very Good
	Rajasthan	Sariska	Good

Ratings in %: Poor – Upto 40; Fair - 41 to 59; Good - 60 to 74; Very Good – 75 and above



OUTCOMES OF THE MEE PROCESS (2014)

Category-wise outcome of MEE Process

S. No.	Category	Name of Tiger Reserve
1	Very Good	Annamalai, Bandipur, Corbett, Kalakad-Mundanthurai, Kanha, Melghat, Mudumalai, Nagarhole, Panna, Parambikulam, Pench (MH), Pench (MP), Periyar, Satpuda, Sundarbans, Tadoba-Andhari and Valmiki
2	Good	Bandhavgarh, Bhadra, Biligiri Ranganatha Temple, Buxa, Dampa, Dandeli-Anshi, Dudhwa, Kaziranga, Manas, Nagarjunsagar-Srisaillam, Pakke, Ranthambore, Sahyadri, Sanjay-Dubri, Sariska and Sathyamanglam
3	Fair	Achanakmar, Indravati, Kawal, Mukundara Hills, Namdapha, Nameri, Palamau, Satkosia, Similipal and Udanti-Sitanadi
4	Poor	-

Category-wise outcome of MEE Process of Tiger Reserves falling in the 'Red Corridor'

S. No.	Category	Name of Tiger Reserve
1	Very Good	-
2	Good	Nagarjunsagar-Srisaillam
3	Fair	Indravati, Palamau, Similipal and Udanti-Sitanadi
4	Poor	-

Category-wise outcome of MEE Process of Tiger Reserves which had recently lost all the tigers

S. No.	Category	Name of Tiger Reserve
1	Very Good	Panna
2	Good	Sariska
3	Fair	-
4	Poor	-

Summary of MEE Process of Tiger Reserves

Rating	Number of Tiger Reserves	Percentage
Very Good	17	40
Good	16	37
Fair	10	23
Poor	-	-

05

COMPARISON OF MEE TR
EVALUATIONS FROM
2005-06 TO 2014-15

Cluster Number	Tiger Reserves	MEE Ratings			Change Status	
		Year No. of notified TR	2005-06 28	2010-11 39		2014-15 43
I	Corbett		Very Good	Good	Very Good	↑
	Dudhwa		Very Good	Good	Good	-
	Melghat		Very Good	Good	Very Good	↑
	Mukundara Hills		-	-	Fair	-
	Pench (MH)		Good	Good	Very Good	↑
	Ranthambore		Fair	Good	Good	-
	Sahyadri		-	Fair	Good	↑
	Sariska		Poor	Fair	Good	↑
	Tadoba-Andhari		Good	Good	Very Good	↑
II	Bandhavgarh		Good	Very Good	Good	↓
	Kanha		Very Good	Very Good	Very Good	-
	Panna		Very Good	Very Good	Very Good	-
	Pench (MP)		Very Good	Very Good	Very Good	-
	Sanjay-Dubri		-	Fair	Good	↑
	Satpuda		-	Very Good	Very Good	-
III	Achanakmar		-	Fair	Fair	-
	Indravati		Poor	Poor	Fair	↑
	Kawal		-	-	Fair	-
	Nagarjunsagar-Srisaillam		Fair	Good	Good	-
	Palamau		Very Good	Poor	Fair	↑
	Satkosia		-	Poor	Fair	↑
	Similipal		Very Good	Fair	Fair	-
	Udanti-Sitanadi		-	Poor	Fair	↑
Valmiki		Fair	Fair	Very Good	↑↑	
IV	Annamalai		-	Very Good	Very Good	-
	Bandipur		Good	Very Good	Very Good	-
	Bhadra		Good	Very Good	Good	↓
	Biligiri Ranganatha Temple		-	-	Good	-
	Dandeli-Anshi		-	Very Good	Good	↓
	Kalakad-Mundanthurai		Fair	Very Good	Very Good	-
	Mudumalai		-	Very Good	Very Good	-
	Nagarhole		Good	Good	Very Good	↑
	Parambikulam		-	Very Good	Very Good	-
	Periyar		Good	Very Good	Very Good	-
	Sathyamanglam		-	-	Good	-
V	Buxa		Good	Good	Good	-
	Dampa		Good	Good	Good	-
	Kaziranga		-	Very Good	Good	↓
	Manas		Fair	Good	Good	-
	Namdapha		Fair	Fair	Fair	-
	Nameri		Good	Fair	Fair	-
	Pakke		Fair	Good	Good	-
	Sundarbans		Very Good	Very Good	Very Good	-

NEW FINDINGS OF ASSESSMENT

06

- *Two percent increase in Very Good Category; Six percent increase in Good Category; Two percent increase in Fair Category; and Ten percent decrease in Poor Category*
- *Tiger Reserves such as Panna and Sariska that had lost all their tigers are performing well.*
- *The MEE Assessment 2014 indicates most tiger reserves have complied with statutory requirements such as declaration of buffer zone, tiger conservation plans and have carried out a good assessment of their threats.*
- *Better trained manpower is required to decrease biotic interferences in the core area.*
- *Population trends of all the endangered species need to be monitored effectively.*

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THE WAY AHEAD



The 2014 Management Effectiveness Evaluation (MEE) indicates an improvement in the overall management of tiger reserves. The management in five tiger reserves in the 'Red Corridor' has improved compared to earlier evaluation but still requires special measures to deal with their current situation. The NTCA in collaboration with WII and Zoological Society of London (ZSL) has developed a "Monitoring System for Tigers - Intensive Patrolling and Ecological Status" (M-STrIPES) for managers to assess the status of protection, ecological and biotic pressures and when adaptive management is necessary. The pilot testing of M-STrIPES in 7 tiger reserves has inter-alia provided quantitative data/information which complements the findings of MEE process. The M-STrIPES will now be implemented in all tiger reserves. The recommendations for all 43 tiger reserves contained in MEE Report 2014 will have to be speedily implemented. The strengths, weaknesses and immediate actionable points coming out of the MEE process will have to be taken into account in the Tiger Conservation Plans (TCPs) and Annual Plan of Operations (APOs) and the Regional Offices of the NTCA will have to play a major role in further enhancing the management effectiveness of tiger reserves.

A photograph of a tiger's paw resting on a gravel path in a savanna landscape. The paw is in the lower-left foreground, showing the characteristic orange and black stripes. The path is made of reddish-brown gravel and dirt. To the right of the path is a field of tall, dry, yellowish-brown grass. The background is a blurred expanse of green foliage and trees. The image is overlaid with several vertical orange bars of varying heights and widths, and a vertical ruler-like scale on the right side.

07

For more information, contact:

Dr. Rajesh Gopal
Member Secretary,
National Tiger Conservation Authority, New Delhi
Email: rajeshgopal8155@gmail.com

Dr. Vinod B. Mathur
Director,
Wildlife Institute of India, Chandrabani, Dehradun
Email: dwii@wii.gov.in

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