

BI-MONTHLY OUTREACH JOURNAL OF NATIONAL TIGER CONSERVATION AUTHORITY
GOVERNMENT OF INDIA

s t r i p e s

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LANDMARKS



STRATEGIES

EVALUATION



ACHIEVEMENTS

PERSPECTIVES



INITIATIVES

Country-wise visits on www.tigernet.nic.in

2,834 visits from 49 countries/territories (Nov 1, 2011-Dec 31, 2011)

COUNTRY	VISITS	NO. OF PAGES	NEW VISITS	BOUNCE RATE
INDIA	2,113	3.48	46.10%	43.02%
UNITED STATES	268	2.84	43.66%	59.33%
UNITED KINGDOM	116	4.53	55.17%	18.97%
FRANCE	79	3.73	6.33%	62.03%
SWITZERLAND	77	2.73	55.84%	59.74%
HONG KONG	19	8.79	10.53%	5.26%
JAPAN	12	1.83	100.00%	75.00%
GERMANY	11	6.09	81.82%	54.55%
CANADA	9	1.22	100.00%	88.89%
AUSTRALIA	8	4.12	100.00%	62.50%
CHINA	7	1.57	85.71%	42.86%
ITALY	6	2.33	66.67%	33.33%
SAUDI ARABIA	5	2.80	100.00%	60.00%
MALAYSIA	4	2.75	75.00%	75.00%
BRAZIL	4	1.00	25.00%	100.00%
SINGAPORE	4	1.25	75.00%	75.00%
IRAN	3	1.00	100.00%	100.00%
UAE	3	1.00	100.00%	100.00%
SOUTH KOREA	3	1.67	100.00%	66.67%
NEW ZEALAND	2	2.00	100.00%	50.00%
THAILAND	2	2.00	100.00%	50.00%
SWEDEN	2	2.00	50.00%	50.00%
NETHERLANDS	2	1.00	50.00%	100.00%
NIGERIA	2	1.00	100.00%	100.00%
CZECH REPUBLIC	2	1.50	100.00%	50.00%
SOUTH AFRICA	2	1.50	100.00%	50.00%
SRI LANKA	1	1.00	100.00%	100.00%
UKRAINE	1	1.00	100.00%	100.00%
KUWAIT	1	2.00	100.00%	0.00%
NORWAY	1	1.00	100.00%	100.00%
FINLAND	1	1.00	100.00%	100.00%
SYRIA	1	1.00	100.00%	100.00%
PHILIPPINES	1	1.00	100.00%	100.00%
PAKISTAN	1	1.00	100.00%	100.00%
ARMENIA	1	1.00	100.00%	100.00%
SPAIN	1	2.00	100.00%	0.00%
ETHIOPIA	1	1.00	100.00%	100.00%
POLAND	1	1.00	100.00%	100.00%
BANGLADESH	1	3.00	100.00%	0.00%
EGYPT	1	1.00	100.00%	100.00%



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GOVERNMENT OF INDIA

s t r i p e s

n o t e f r o m t h e e d i t o r



THE 2010 country-level snapshot assessment of the North-Eastern landscape, including the Brahmaputra flood plains, highlights the conservation significance of Upper Bengal Dooars, Brahmaputra flood plains and the North-Eastern hill region.

Two important tiger conservation units exist here, viz. one stretching across Bhutan through Manas to Arunachal and the other from Kaziranga to Meghalaya. The Manas landscape is the only habitat where tigers are found close to the timberline, predating on mountain ungulates. Considerable evolutionary significance is also attached to the tiger population in this landscape is the entry point of tigers into the Indian subcontinent. Fragmentation of habitat, poaching and depletion of prey are serious overarching issues of the landscape.

The Management Effectiveness Evaluation (2010-11) of tiger reserves clustered in the 'red zone' highlights the actionable points for strengthening reserves like

Valmiki, Indravati, Achanakmar, Udanti-Sitanadi, Simlipal, Satkosia, Nagarjunasagar Srisailam and Palamau. Nagarjunasagar is showing recovery owing to committed management. However, the situation in Simlipal, Palamau, Indravati and Satkosia leave a lot to be desired. NTCA is actively engaging with the states.

Securing inviolate space through voluntary relocation is crucial for wild tigers with 100% assistance under Project Tiger through an enhanced package of Rs 10L per family. The case study of Nagarhole highlights good coordination and innovation by the local management.

The Tiger Conservation Foundation is an important statutory institutional framework available with the states for the development of tiger reserves with the active involvement of civil society. The operation manual of Dandeli-Anshi Tiger Reserve is encouraging.

Dr Rajesh Gopal
 Member-Secretary, NTCA

Northeast Hills & Brahmaputra

S P Yadav

This landscape can be divided into three zones: the Upper Bengal Dooars, the Brahmaputra flood plains and the north-eastern hill region. These zones are connected to the Indian mainland through the Siliguri Corridor or 'chicken's neck', which is about 20km wide (Datta 1995) and is located in the northern part of West Bengal.

The Bengal Dooars are fertile plains in the foothills of the Himalayas, to which several mountain passes open, providing accessibility to parts of Bhutan. The Brahmaputra flood plains are about 750 km long and 80 km wide with hills rising on all sides except the west (Rao 1974). The north-eastern region comprises of several hill ranges which can be categorised as the Eastern Borderlands and the Eastern Himalayas.

This landscape stretches across the floodplains of River Torsa in West Bengal, to the peaks of Khangchendzonga in Sikkim, includes the Brahmaputra flood plains and the hills of Assam and Myanmar along with the Eastern Himalayas.

The region includes seven Tiger Reserves — Buxa in northern West Bengal, Manas, Kaziranga and Nameri in Assam, Pakke and Namdapha in Arunachal Pradesh and Dampa in Mizoram.



STATUS OF TIGERS, CO-PREDATORS AND PREY IN INDIA, 2011

CONSERVATION SIGNIFICANCE

Apart from being located at the meeting place of the Himalayas and peninsular India, this region also incorporates the transition zones of the Indian, Indo-Malayan and Indo-Chinese bio-geographic realms (Mani 1974). The biological importance of this area is reiterated through its declaration as a 'Global Biodiversity Hotspot' by Conservation International (Myers et al. 2000), its recognition as an 'Endemic Bird Area (EBA)' by BirdLife International (Stattersfield et al. 1998) and it

harbouring three of the 200 global 'Terrestrial Eco-regions of the World' of the WWF (Olson and Dinerstein 1998). A common feature to all these accolades is the recognition of this area as a region with high species diversity, high levels of endemism, taxonomic uniqueness of species, serious habitat loss and threatened status of the floral and faunal diversity of the area.

From the perspective of the tiger, this region has two important Tiger Conservation Units (TCUs), one comprising the

Manas Tiger Reserve, stretching across Bhutan to Arunachal in the northeast, while the other includes the Kaziranga Tiger Reserve in Assam and stretches upto Meghalaya. While the former is supposed to be the only landscape in south-Asia sustaining the phenomenon of tigers living close to the timber line and predated upon mountain ungulates, the latter encompasses the best preserved grassland habitat in the global tiger range (Wikramanayake et al. 1998). Much of the prey is depleted in these forests as the hunter-gatherer tribes are efficient hunters and depend a lot on wild game for subsistence (Aiyadurai 2007).

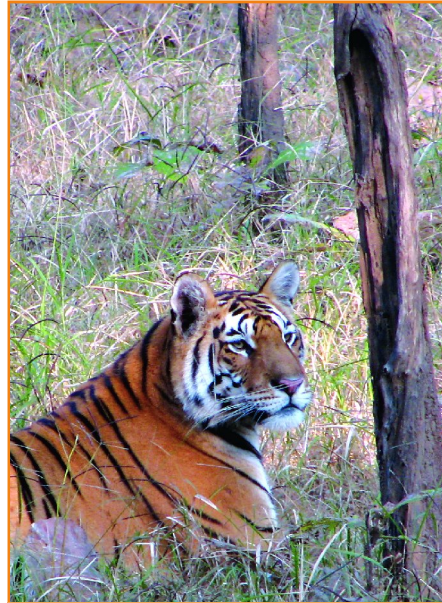
CONSERVATION STATUS

Currently tiger occupancy was recorded from an area of 4,565 sq km of forests within the Brahmaputra Valley and the North East Hills landscape, with an estimated population of about 143 (113 to 172) tigers. The important tiger populations in this landscape include:

a) The largest contiguous forested region in this landscape is over 136,000 sq km. This landscape unit commences in the north-west from Pakke Tiger Reserve through the forests of Palia, Tale Valley Wildlife Sanctuary, Mouling National Park and Daying Ering Wildlife Sanctuary into Dibang Wildlife Sanctuary and upto the Namdapha Tiger Reserve in the east. The landscape continues south through some degraded areas into the Intanki National Park, and further south to the Dampa Tiger Reserve and Blue Mountain National Park. The Kaziranga National Park in the Brahmaputra flood plains is connected through the Karbi-Anglong Hills to Intanki in the south.

This connectivity through Karbi-Anglong is crucial for dispersal of tigers from their source

population in Kaziranga, which has lost its connectivity to the north (to Pakke) due to intensive agriculture on northern banks of the River Brahmaputra. Intanki National Park is also connected westwards through priority III forests upto the Balphakram National Park. This landscape has



Tiger populations in this landscape have evolutionary significance as they share the connecting gene pool with the south eastern tiger populations and represent the entry point of tigers into the Indian sub-continent

contiguous forest across the international border with Myanmar. The weak links in this landscape are the forests in the districts of Mon, Mokokchung, Tuensang, Zuheboto, Wokha, and Phek in the east. The landscape between the Balphakram National Park and Intanki National Park through the districts of Karbi-

Anglong, West Khasi Hills, East Khasi Hills and East and West Garo Hills is fragmented. The major source population of tigers in this landscape are in Kaziranga and Pakke in India and dispersing tigers from Bhutan and Myanmar. This landscape holds the largest tiger population in the North-Eastern region consisting of about 125 tigers. It is connected to the southern parts of the North East Landscape via the Karbi-Anglong Hills, for which it acts as a major source. The Kaziranga population connects to the tiger population of Nameri-Pakke through riverine corridors (Fig. 4.1).

b) Manas-Ripu Chirang-Buxa/Jaldapara-Gorumara-Singhalila landscape unit is about 7,200 km² with a single block of 5,000 km² from northern West Bengal (Gorumara) to the coniferous forests of Sikkim (Singhalila). The forest connectivity in the Brahmaputra plains is patchy and fragmented, but the landscape is connected through the forests of Bhutan.

On the Indian side, "stepping stone" connectivity exists between Gorumara, Jaldapara, Buxa, and Ripu Chirang through the district of Jalpaiguri. Connectivity between Ripu Chirang and Manas is degraded on the Indian side. This landscape needs to be managed through transboundary international cooperation with the Government of Bhutan.

The tiger populations in this landscape have historical evolutionary significance as they share the connecting gene pool with the south eastern tiger populations and represent the entry point of tigers into the Indian sub-continent.

ASSAM | The state has three Tiger Reserves, five National Parks and 17 wildlife sanctuaries and three proposed wildlife sanctuaries.

a) The Kaziranga Tiger Reserve covers an area of 1,033 sq km. The National Park is located in Nagaon, Golaghat and Sonitpur districts, bounded in the north by the Brahmaputra and to the south by the Karbi-Anglong Hills. National Highway 37 separates it from the Karbi-Anglong hills while about 150 villages are located along this road, within the zone of influence of the reserve. The Kaziranga tiger population is contiguous with that of the Rajiv Gandhi Orang National Park connected through island systems of the Brahmaputra. This is the single largest population in this Landscape consisting of about 125 tigers. The Kaziranga population connects with Nameri through riverine corridors, which is an important connectivity maintaining gene flow between the plains and the hill population of tigers (in Arunachal). This region being extremely fertile is in demand for agriculture and the Protected Areas are increasingly becoming isolated islands. In light of this the connectivity with Nameri in the north, Karbi Anglong in the south as well as the riverine islands, "stepping stones" through Laokhowa and Burachapori Wildlife Sanctuaries to Orang form the crucial elements for targeting conservation efforts.

b) Manas Tiger Reserve spans the districts of Kokrajhar, Bongaigaon, Barpeta, Nalbari, Kamrup and Darrang in north-west Assam, across 2,837 sqkm of which 470 sqkm designated as the core area. To the north, it is separated from the Royal Manas National Park of Bhutan by the River Manas and its tributaries — Beki and Hakua; while to the west, it is separated from the Buxa Tiger Reserve of West Bengal by the river Sankosh. Around 62 villages are located within 2km of the reserve boundary between rivers Sankosh and Dhansiri. The region is affected



Dr Venkat

by high levels of extremist activities, thus making conservation and scientific monitoring in the area a challenge till date. The reserve shares the area with the Ripu Chirang Elephant Reserve and further westwards continues with the forests of Buxa in West Bengal. The entire area inclusive of the Bornadi Wildlife Sanctuary in Assam covers 7,200 sqkm. The Manas Tiger Reserve was camera trapped with almost a total coverage and its current tiger density is estimated to be 1.8 tiger per 100 sqkm. However, the region has high potential and is on its path to recovery.

c) The Nameri Tiger Reserve is located in the Sonitpur district of north-east Assam. It is contiguous with Pakke in Arunachal to its north and covers 344 sqkm of which 200 sqkm forms the core demarcated by the rivers Bhorali and Bordikarai. Within the reserve are located 13 villages of which eight are forest villages with predominantly tribal population. The population of tigers is small (about 9) and is shared with Pakke. Though the area has potential for higher densities and ability to sustain a larger population of tigers, the depletion of prey by subsistence poaching as well as other anthropogenic disturbances is responsible for the

current situation.

ARUNACHAL PRADESH

The largest tract of forest in the north-east of India is located in Arunachal Pradesh, covering 67,353 sqkm which constitutes 80.4% of the total geographical area of the state (State of the Forest Report 2009). The state is a biodiversity hotspot with two tiger reserves, Namdapha and Pakke.

a) Namdapha Tiger Reserve covers 1,985 sq km in Changlang district of eastern Arunachal. While most of the area is free of human presence, around six small patches of cultivation still exist within the reserve, covering around 25 hectares. On the peripheries of the reserve are settlements such as Gandhigram, Deban and M'pen with mostly Lisu population. Hunting for cultural and subsistence reasons appears to be the greatest threat to biodiversity. Namdapha is connected to the forests of Kamlang Wildlife Sanctuary and further eastwards to the forests of Myanmar which is a contiguous forest patch of 1,36,000 sqkm.

b) The Pakke Tiger Reserve covers 862 sqkm in the East Kameng district along the boundary with Assam. Around 27 villages are located on the fringes of

the reserve and several conservation initiatives such as formation of self help groups (SHGs), Village Forest Development Councils and implementation of eco-development schemes have been undertaken to increase the awareness of biodiversity and reduce the dependence of people on the park. The largest tiger population of Arunachal is within pockets of this landscape. The tiger population of Pakke is shared with that of Nameri Tiger Reserve (Assam) and was estimated to be around 9 tigers.

The Namdapha region was not surveyed systematically but targeted areas were sampled by the WWF-India, Aaranyak and the Wildlife Trust of India. Population estimate for the state could not be derived due to the nature of the data recorded which was limited to tiger sign coordinates. The current distribution of tigers in Arunachal Pradesh is the reflection of this limited survey effort which has resulted in recorded tiger occupancy of 1,304 sqkm.

MIZORAM

Mizoram has an area of 19,240 sq km under forest cover which constitutes over 91% of the total geographical area as per State of the Forest Report (2009). Of this, 9,084 sqkm is categorized as Tiger Conservation Priority I and II area. The state has one tiger reserve, Dampa.

The Dampa Tiger Reserve is located in the Mamit district and covers an area of 500 sqkm of which 340 sqkm is categorised as the core area. To the west, it is separated from Bangladesh by River Saza, while metalled roads demarcate it on the east and north. About 20 villages are located on the peripheries of the Reserve and exert high pressure on the Reserve. In 2006, tiger occupancy was recorded to be 482 sqkm in this area while in 2010 the recorded tiger occupan-

cy was 416 sqkm with a population estimate of about 5 tigers. Sporadic tiger occurrences have also been reported from the Ngegpui Wildlife Sanctuary which covers an area of 110 sqkm close to Indo-Myanmar and Indo-Bangladesh borders.

The high hunting levels in the region primarily for subsistence and cultural reasons along with the nature of forests do not support high tiger presence in this landscape. However, with larger areas being brought under high levels of protection, this region could support a viable tiger population if managed as a trans-boundary population with Myanmar. The current policy of fencing the international borders to prevent infiltration can be a major barrier to sharing the gene pool of tigers across the larger landscape.

NORTHERN WEST BENGAL

The total forested region in the northern districts of West Bengal comprising of Darjeeling, Jalpaiguri, West Dinajpur and Cooch-behar districts is 4,904 sqkm. Other than the Sundarbans, this is the only forested region in the state and comprises several PAs, most of which are restricted to the Siliguri Corridor of the Dooars and include the Singhalila National

Park, Senchal Wildlife Sanctuary, Mahananda Wildlife Sanctuary and Neora Valley National Park in Darjeeling district.

Buxa Tiger Reserve, spread over 760.87 sqkm in Alipurduar sub-division of Jalpaiguri district, is demarcated on the west by tea estates and the Joygaon-Nimti State Highway. To the north of it is the international boundary with Bhutan while on the south a mosaic of agricultural land, tea estates and the NH 31C are located.

The Reserve has 37 forest villages while 7000-8000 pilgrims visit the Mahakal Temple, located in the reserve in March each year. The other factors adding to existing disturbance levels in the area include existence of a number of PWD roads, a national highway and a metre gauge railway line from Damanpur to Hasimara.

The reserve has weak connectivity to the Jaldapara Wildlife Sanctuary and Gorumara National Park and is better connected to Manas and Bornadi Wildlife Sanctuary in Assam and Royal Manas National Park in Bhutan. The population of tigers in Buxa was estimated from fecal DNA by NGO Aaranyak to be a minimum of 15 (Borthakur et al. 2010).

Dr Venkat



Red Zone Clusters

Management Effectiveness & Evaluation 2010-11

Photos: S P Yadav

A unique but unfortunate characteristic of Cluster III that comprises Valmiki, Indravati, Achanakmar, Udanti-Sitanadi, Simlipal, Satkosia Gorge, Nagarjunsagar-Srisailem and Palamau is that it falls in the 'red corridor', with some of the reserves either currently under siege by Naxalites ie Indravati and Palamau; or Udanti-Sitanadi, which has deteriorated sharply in the past year or two. Simlipal saw 25 attacks in March 2009, and is gradually recovering, as is Nagarjunsagar Srisailem which was under the grip of Naxalism for 16 years, but has shown remarkable recovery since.

These reserves must be viewed through the prism of Left Wing Extremism (LWE) which cripples every aspect of management, from protection to monitoring to relations with the local communities. Though the forest department is apparently not the direct target, there has been tragic loss of life due to Naxal attacks, and the impact goes beyond the tangible, impacting the psyche and morale of the staff who work here.

NAGARJUNASAGAR SRISAILAM Strengths | The biggest strength of NSTR is its sheer size. The reserve encompasses 3,568 sqkm. Additionally to the south of NSTR, there is a contiguous protected area of 1,140 sqkm, the Gundla Brahmeshwaram Sanctuary that has been proposed as an extended core-critical habitat of the reserve. Good, committed leadership. The reserve has shown remarkable recovery in the past three years after over 15 years of Naxalism. Focus on protection, and orientation toward conservation, involving local tribals and communities.

Weaknesses | Paucity of staff. Number of anti-poaching camps,



These reserves must be viewed through the prism of Naxal extremism which has been crippling

staff is insufficient, given the area of the reserve. The temple town of Srisailem is expanding, leading to increase in traffic. Also of serious concern is the Mannanoor-Dornal road which cuts through prime tiger habitat. Presence of breeding tigresses with cubs has been well-documented close to this road. The irrigation township of Sundipenta in

the heart of NSTR is expanding rapidly, and must be contained. Encroachments in the Nagarjunsagar Division have severely fragmented this part of the reserve which is already impacted by the Nagarjunsagar reservoir.

Action Points | The region must be a focal landscape for tiger conservation as is the Terai Arc,

Western Ghats and the Central Indian landscape. The state government must fast-track the process of notifying 1,140 sqkm of GBM sanctuary as the core critical habitat of NSTR. The Mannanoor-Dornal road cannot be expanded into a four-lane, as proposed, as this will only accentuate threats to tigers and wildlife. The state government must also take steps to immediately divert all heavy vehicles to the alternate highway for Guntur-Kurnool State Highway which divides NSTR and GBM Sanctuary.

SIMLIPAL

Strengths | The reserve encompasses 2,750 sqkm which is part of the Simlipal Biosphere Reserve and the Mayurbhanj Elephant Reserve and represents the largest, most viable source population of tigers in the entire Chhotanagpur plateau. The park saw a Naxalite attack in March 2009, but is on the recovery path with immense efforts under able leadership. One village Jennabil was successfully relocated which has freed a valley with a perennial water source for wildlife.

Weaknesses | The field director has only the 'old' core area under him — not even the entire core critical tiger habitat, while the regional chief conservator of forests at Mayurbhanj commands the buffer and other territorial ranges. The field director no longer has control over three DFOs who manage the 1,555 sqkm of buffer zone. Practice of traditional mass hunting coupled with the new threat of commercial poaching of tuskers and prey species for bush meat. Shortage of staff. Lack of commitment from state in receiving funds.

Action Points | The core and buffer of Simlipal TR must be brought under command of the field director. Staff strength must be augmented. Need for paramili-



tary force, given the kind of mass hunting in the reserve, influx of armed poachers and timber smugglers.

VALMIKI

Strengths | Valmiki's contiguity with National Park and Parsa Sanctuary in Nepal makes solid chunk of 3,550 sqkm productive tiger landscape. A mosaic of habitats supporting biodiversity. Active support of strong NGO and less pressure of tourism. Efforts of proactive reserve officials to control mining bordering the reserve.

Weaknesses | Core/critical area, buffer not notified. Lack of priority or commitment on the part of the state government. Weak protection infrastructure. Staff not sufficient, need training in basic wildlife skills. Dearth of grasslands. Connectivity between eastern and western part

of the reserve has been encroached near Kotraha and Lakshmipur, which has broken connectivity to Madanpur range (western Valmiki). Bagha-Valmiki road and Bagha-Chhitauni railway line cuts through the park.

Action Points | Immediate notification of core critical habitat and buffer area. Streamlining management of the reserve to ensure there is dedicated field director, deputy director and ACF. Timely release of funds and filling up vacancies. Local communities must be part of the protection force. Re-establishing connectivity of Madanpur Range to ensure viability of tiger population in Madanpur which is contiguous to the Sohagi Barwa Wildlife Sanctuary in Uttar Pradesh.

PALAMAU

Strengths | Comprises a large forested tract, across the northern

slopes of the Chhotanagpur plateau in Jharkhand, extending upto Bandhavgarh on one side and into Orissa from another connectivity also through to the forest of southern West Bengal. Harbours excellent tiger habitat, has a sound population of elephants and harbours rare grey Indian wolf.

Weaknesses | 40% of the reserve out of control of administration and inaccessible to the management. General lawlessness. Over 80% staff shortage. Funds delayed hugely. Administrative structure of the park is weak and counter-productive. The field director is a CF level post and the officers assigned for the core and buffer zone working under him are also of the same level. 20km of railway tracks pass through the TR. Political instability leading to low priority for conservation.

Action points | Timely release of funds. Fill staff shortages immediately. Pay daily wagers on time. Build and strengthen relations with local communities, especially in view of the Naxal threat. Appoint a dedicated field director along with DFOs and ACFs to enable systemised management.

INDRAVATI

Strengths | Indravati is perhaps the last known remaining habitat

for the Asiatic wild buffalo of central India (a very small population believed to be about 15-20). Rich biodiversity and diverse habitat. It is a large reserve, encompassing 2,799 sqkm of forest area. Indravati and the entire Bastar region for that matter, has some of Central India's finest mixed, moist and dry deciduous tiger bearing forests.

Weaknesses | Has been under the grip of LWEs for the past two decades. There has been no permanent base in Indravati for about a decade. Visit of frontline staff to the core area of the reserve has become rare after 2003 and almost nil after 2005. This has impacted every aspect of reserve management. There is no protection (no staff presence, no patrolling) and management within the reserve. No infrastructure, no communication systems. The buffer area is not under the control of the field director.

Actionable Points | The buffer must be brought under the control of the field director, since it is the only area in which they can operate effectively. Strengthening the protection in the buffer and building relations with the people will contribute to making the habitat in the core safer. There must be an immediate

process to identify areas which are least affected by Naxalism to make them the focus of conservation, with sound habitat interventions. Building better relations with local communities. Focus on Asiatic wild buffalo population here.

SATKOSIA

Strengths | Satkosia's rich forests located in the very heart of Orissa are a crucial biodiversity 'hub' with direct or indirect corridors with almost every other major forest patch in the state. Satkosia has a unique gorge ecosystem which once had a viable population of the critically endangered gharial. It is the only other source population of tigers in Orissa besides Simlipal, along with proposed tiger reserve, Sunabeda. Working jointly with law enforcement officials, the forest department timber smuggling has been controlled to some extent in the reserve.

Weaknesses | The reserve has failed to save the gharial in its only non-Himalayan river system, even though this was where the Indian Crocodile Project was initiated. Poor protection, little wildlife orientation and no monitoring. Faulty management structure: The CCF, Angul, who has under him six territorial divisions, was given



additional charge as field director of Satkosia. He has under his control only part of the reserve i.e. Satkosia Wildlife Sanctuary. The DFOs also have additional territorial responsibilities. Immense pressure with 106 villages within the tiger reserve — all of whom depend on the reserve for fuel, timber, fodder and fishing in the reserve. Tourism not in sync with wilderness.

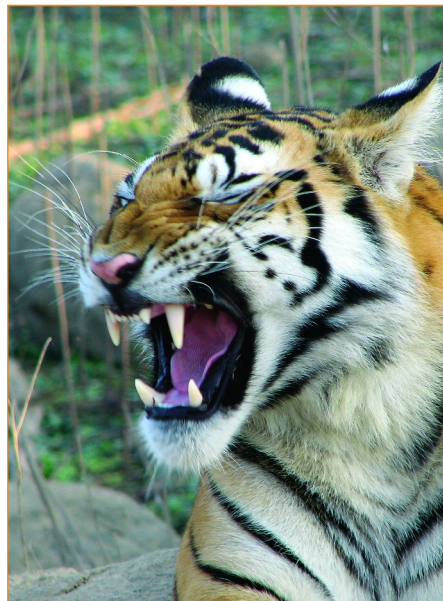
Action Points | Streamlining management structure with dedicated field director, deputy directors, ACFs. Staff augmentation and skill building. Traffic must be regulated on the PWD road from NH 42 (Cuttack-Sambalpur) to Tikarpada. It is recommended that this road be handed over to the forest department, since it terminates at the Satkosia gorge. Tourism (camping) must cease on the Mahanadi riverbank. Rehabilitation of villages from core critical tiger habitat. The Narsinghpur (West) range which adjoins the TR may be handed over to Satkosia wildlife division as it is a very vulnerable entry point for ivory and timber smugglers.

UDANTI-SITANADI

Strengths | It represents the westernmost limit of the Central Indian Tiger Landscape. The Udanti-Sitanadi Sunabeda (proposed Tiger Reserve) landscape is a single compact forest of about 3,000 sqkm and together represents a large, rich and diverse habitat.

Weaknesses | The department and the state have failed the state animal, the Asiatic wild buffalo, which has now whittled down to a mere eight, four of which are in captivity. The presence of tigers is questionable, though late signs were reported. Though earlier totally accessible, the past 18 months or so the park has come under the influence of Naxals.

The field director of the Udanti-Sitanadi Tiger Reserve is stationed at Raipur, which is at least four hours away from the field. The superintendent of both Udanti and Sitanadi sanctuaries supervise the fieldwork, who are under administrative control of DFOs, who report to the Raipur Circle. The buffers are almost



These reserves must be viewed through the prism of Naxalism which cripples every aspect of management, from protection to monitoring to relations with the local communities

out of bounds for the park management.

Action Points | streamline management structure. The wild buffalo is almost extinct, and one wonders if there is any point of yet another 'Conservation programme' when the recovery plan made a mockery of the exercise. Fill staff shortage and skill building of existing staff. A proper assessment of tiger status is required. Areas which are least

impacted by Naxalism must be mapped, and concentrated conservation-oriented community works and habitat management.

ACHANAKMAR

Strengths | The park is part of Achanakmar-Amarkantak Biosphere Reserve in the Satpura landscape and is part of the Central Indian tiger landscape, it is contiguous to the rich Kanha-Pench landscape and serves as a link between Kanha and Palamau. Is a rich habitat, much like Kanha-Pench, with the ability to support good prey density and tigers. Six villages have been relocated creating inviolate tiger habitat.

Weaknesses | Lack of proper protection strategy. Though currently the habitat supports a decent prey base, there is reported to be a dramatic decline of late. Poaching of 'game' and poisoning waterhole has also been reported. The reserve does not have a field director and deputy director and both these positions are held by Territorial CF and DFO respectively. The reserve is being managed like a territorial division. The core area has extensive human and biotic interference. There were 25 forest villages in the park, six of which have been relocated. There appears to be a lack of commitment from the state towards tiger reserves and conservation.

Action Points | The alternate road proposed for Bilaspur-Amarkantak national highway dividing the park in two must be made operational with immediate effect. Until then, speed regulations and no night time traffic must be enforced. Skill building of staff for wildlife orientation. A protection strategy and controlling grazing pressure. A systemized method of monitoring tigers and other wildlife must be inculcated. Village relocation process needs to be closely monitored. Tourism must be in sync with wilderness.

A Fresh Start



Relocation of tribals from Nagarhole Tiger Reserve in 2010-11 B K Singh, PCCF (Wildlife) & R V Singh, Dy Director, Nagarhole TR

Section 38V of Wildlife (Protection) Act 1972 provides that a Tiger Reserve should be inviolate. Prior to promulgation of 'The Scheduled Tribes and other Traditional Forest Dwellers (Recognition of Forest Rights) Act 2006', 643sqkm of Nagarhole National Park was declared as core critical tiger habitat. Though the relocation of people from inside Nagarhole National Park is in progress since 1998-99, nearly 1,700 families still resided in the park at the time of recognition of rights under the forest rights act. Recognition of rights in Mysore district of the park has proceeded smoothly, while there have been some roadblocks in Coorg district.

At Shettihalli Lokpattana (20km from Hunsur), 150 houses were constructed in the forest area for occupancy of tribals. After taking over charge of Hunsur Wildlife Division in November 2009, Vijay

Ranjan Singh, deputy conservator of forests, has taken action to give final touches to these houses, arranging for wiring, drainage, road construction and development and preparation of the 3-acre plot attached to each of these houses.

Several questions were raised regarding the facilities created at Shettihalli Lakpattana.

Two members from tribal department were brought on the district level committee headed by deputy commissioner, Mysore, and all complaints relating to civil works were dealt with.

Complainants were also invited for the meeting along with PWD engineers, revenue officers etc.

Finally, National Institute of Technology (NITK), Suratkal, was entrusted with the work of checking the quality of civil works and they certified the houses.

The deputy conservator of forests and his offi-



cers took up the challenge of contacting Kurubru tribals in their hadis (colonies) inside the national park. Details of the rehabilitation package were explained. Option I of the package entails that each family be paid Rs 10 lakh to relocate while option II requires the provision for housing, alternate agriculture land for subsistence and providing facilities for meeting their socio economic needs. Under option II, Rs 2 lakh is to be spent on the house, Rs 1 lakh for community development such as road, water supply, electricity, temple, school etc, Rs 3.5 lakh for the cost of land, including development charges, Rs 3 lakh is to be provided to each family for settlement of right and Rs 50,000 is to be paid as incentive.

To select 150 beneficiaries to be relocated under option II, the deputy conservator of forests and his officers visited interior tribal colonies and held consultations with the families. Many tribal families opted for it but several tribal NGOs tried to dissuade them, arguing that relocation should not be taken up without recognizing their rights under the forest rights act, 2006 and that relocation should not be forced and that the culture and traditions of tribals should not be destroyed. The deputy conservator of forests countered that their rights are already recognized in Mysore district, while tribals of Coorg district are also willing to be relocated, thus there is no forced relocation. He also explained that the tribals would have access to better health facilities, and their children, to better education. He said the tribals, now working as labourers in adjoining coffee plantations, would be trained to cultivate the 3-acre land assigned to each family, which is always a better livelihood option.

Coffee estate owners also opposed the relocation efforts



Maize harvest by relocated tribals; a festival in progress

and misguided several tribal families. In effect, the decision of several families swung back and forth. These families were involved in all decisions, right from the construction of houses and all were shown houses and lands on July 30, 2010. Despite all opposition, 143 families were shifted between November 15, 2010 and December 16, 2010.

Among these, 42 families shifted in D B Kuppe range, 60 in Kallahalla, 15 in Anther Santhe, 13 in Nagarhole and 17 in Anechowkur.

Though several families from other tribal colonies are willing to occupy the seven vacant slots, but the deputy conservator continues to make effort in convinc-

ing the remaining seven families of Dalimbe Kolli colony. A divorced woman along with 8 dependents including her children from Madenoor hadi, were declared ineligible by junior officers and she was asked to join her husband in one of the coffee estates in Coorg. The woman represented to the deputy conservator of forests and it was found that she could not return to her husband as he had already divorced her. Overruling his officers, the deputy conservator of forests declared her eligible for relocation.

M/s Rockwood Farms of Gopinath from the National Horticulture Mission has offered to train tribals for free in raising

and maintaining horticulture species such as mango, sapota, papaya, etc. The tribals are not traditionally farmers and would be discouraged if they were asked to take up any dry land farming of ragi, maize etc.

The incentive amount of Rs 50,000 per family was used for transportation of goods, providing one month ration, clearing the debt, advances to engage labour etc and the balance kept in a savings bank account opened in Kaveri Kalpataru Gramin Bank, Hanagodu Branch in favour of the head of each family.

Several tribal colonies such as Gangoor, Madenoor, Hebbala Bogapur and Murkal have become completely free from people, which will help in a big way in tiger conservation. Bogapura tribals used to indulge in illegal fishing, while that of Dalimbe Kalli tribals indulged in teak smuggling. Thus, some of these tribals were a threat to the park.



Newly constructed houses for villagers; (below) a family poses in front of its harvest

Hebbala and Murkal, where tribal families have multiplied because of departmental elephant camps, are also becoming inviolate. Elephants from Hebbala are already shifted to Mattigod, along with other elephants in the camp near Anechowkur. Murkal elephants will also be shifted to Mathigod.

A large number of departmental elephants in the interior of National Parks inflict lot of damage to the habitat. These elephants trample vast areas, where

no regeneration ever comes up.

During an inspection of the rehabilitation area on December 21, 2010, all 147 families were found living happily. They have not started working on the agriculture land assigned to them, but some enterprising families have opened shops. Some have added temporary structures to their houses. Two families are found adding permanent

structure to the buildings handed over to them. Teachers from adjoining Shettihalli Lokpattana school are persuading the families to send their children to school. Construction of 130 more houses is in progress.

Though NTCA has not released adequate funds for rehabilitation, funds from the Tiger Foundation of Bandipur and Nagarahole is being used to expedite the rehabilitation. Hopefully, NTCA would make good the amounts spent from the two tiger foundations.



INDO-NEPAL Cooperation

The fifth Indo-Nepal trans-boundary consultative meeting was held on October 21-22, 2011 in Pokhara, Nepal. The Indian delegation comprised Member-Secretary of NTCA Dr Rajesh Gopal, DIG (NTCA) Dr H S Negi, DIG (WL) Prakriti Shrivastava, deputy director of Wildlife Crime Control Bureau Ramesh Pandey, AIG (NTCA) Rajeev Sharma and first secretary (economic), Embassy of India, Kathmandu, Rajesh Kumar Mishra. The Nepalese delegation was led by Dr K C Paudel, Environment Division, MFSC, Nepal.

The issues on the agenda ranged from trans-border cooperation to Indo-Nepal collaboration on biodiversity conservation.

Trans-border cooperation and wildlife trade | The issues discussed included mechanism for sharing wildlife crime intelligence specially on trans-national linkages, tripartite meeting between India-Nepal-China and the border meetings between enforcement officials. The high demand for wildlife parts in international markets with Nepal as a transit point for illegal wildlife trade, trans-boundary wildlife movement and conservation, trans-boundary timber trade (eg Valmiki to Chitwan), concentrated trans-boundary efforts required to control the illegal wildlife trade etc were also highlighted.

Illegal trade in High Value Forest Product | Discussions were held regarding seized Red Sanders (*Pterocarpus santalinus*). Nepalese authorities said their government was ready to repatriate around 17

MT of seized Red Sanders to the government of India. The Indian delegation informed that a suspension on international trade of Red Sanders material from India has been imposed by the Standing Committee of CITES.

Maintenance of corridor and connectivity | Mechanisms relating to communication system between trans-border PA managers, PAs in Trans-Sharada region of Pilibhit, synchronization of periodic estimation in trans-border PAs, establishment of linkage between Bardia National Park and Dudhwa-Katerniaghat Tiger Reserve and others, eco-development in Nepal bordering Dudhwa and Katerniaghat, extension of Koshitappu Wildlife Reserve in Koshi Barrage were discussed.

Landscape level biodiversity conservation strategy | Identification of priority areas of Suklaphanta-Laggabagga-Pilibhit, Bardia-Katerniaghat-Khata, Valmiki/Betia-Chitwan/Parsa, Banke-Sohelwa, Jhapa-Darjeeling, Koshitappu etc. were discussed.

Joint Management Planning, Capacity Building & Knowledge sharing | Special attention to flagship species like tiger, elephant and rhino, joint monitoring of wildlife population in the adjoining areas, information sharing, regular trans-border meetings, efficient and smart intelligence on wildlife crime,

voluntary relocation from key habitats/corridors, managing encroachment and support to secure trans-boundary corridors were discussed.

Indo-Nepal collaboration on Biodiversity Conservation | Delegates discussed implementation of Convention on Biological Diversity (CBD) and CITES. Dr Gopal spoke about the need for "active tiger management" involving practices like reintroduction of tigers in habitats which have suffered from local extinction, establishing monitoring and surveillance systems like e-eye, periodic tiger status assessment through double sampling using camera traps, effective use of statistical methods and strategy for addressing man-animal conflicts.



The two sides agreed to, among other measures,

- Formalize the draft MoU between India and Nepal

- Expedite redressal of issues relating to seized Red Sanders
- Early funding support for a rescue centre at Chitwan National Park, through the Global Tiger Forum
- Facilitate regular trans-boundary meetings and information sharing at central and field levels and exchange visits of officials
- Undertake landscape level assessment of tiger, rhino and elephant
- Support innovative wildlife research, scientific studies, assessment and monitoring including source-sink population with mutual exchange of scientific advancements.
- Facilitate functioning of South Asia Wildlife Enforcement Network (SAWEN).

Dandeli Anshi

Operation Manual of Dandeli Anshi Tiger Conservation foundation
By Dr Sunil Panwar, DCF Dandeli Tiger Reserve

Photos: S P Yadav



The government of Karnataka established three tiger conservation foundations in Karnataka ie Bandipur tiger conservation foundation with its office in Bandipur, Bhadra tiger conservation foundation with its office in Shimoga and Anshi Dandeli tiger conservation foundation with its office in Dandeli as per an order on December 13, 2007.

OBJECTIVE | The main aim of the foundation is to facilitate and support the tiger reserve management for conservation of tiger and biodiversity, through multi-stakeholder participation as per

approved management plans, and to support similar initiatives in adjoining landscapes, consistent with the national and state legislations. The functions of the foundation has to be undertaken through the implementing agency and its staff and or sponsored/supported by it or through other institutions, agencies or individuals collaborated by the implementing agency.

To achieve this main aim, the foundation will facilitate ecological, economic, social and cultural development in the tiger reserve and adjoining landscape; provide support to safeguard the natural environment; solicit tech-

nical, financial, social and other support; and support ecotourism, eco-development, research, environmental education, training, management and advisory aspects.

GOVT POWERS | The government may review the functioning of the foundation and issue directions regarding affairs of the foundation.

GOVERNING BODY | Minister in charge of wildlife will be its president, principal secy (forest dept) the vice president, chief wildlife warden a member secy, and members include the principal

chief conservator of forests, field director(s), deputy director(s), two prominent scientists or qualified experts, MLA(s), representative(s) of district Panchayat etc

POWERS | The governing body will decide overall policy of the foundation; approve the balance sheet and audited accounts, annual report, annual budget of the foundation; secure effective coordination between different departments and other government/government-aided institutions and NGOs, among others.

EXECUTIVE COMMITTEE | Field director and conservator of forests (Kanara Circle, Sirsi) will be the chairperson, deputy conservator of forests (wildlife division, Dandeli) will be member secretary and members to include two representatives of eco-development committees working in the reserve and two members of frontline staff of the reserve among others

POWERS | Executive committee have under its control management of all affairs and funds of the foundation; ensure objectives and functions of the foundation are achieved; exercise all administrative and financial powers; enter into arrangement with other public or private organisations or individuals for furtherance of its objectives; raise funds (at national and international levels), secure and accept endowments, grants-in-aid, donations, or gifts to the foundation among others

FUNDS | The foundation derives funds from income generated from levying tourist entry fees and other charges for the services generated out of the reserve, contribution from other sources in terms of specific projects from national as well as international agencies and grants-in-aid, donation or assistance of any kind.



UTILISATION OF FUNDS | The funds of the foundation will be utilized after approval of work plan by the governing body. 10% of the fund will be kept in a fixed deposit as society fund. Remaining 90% will be used for strengthening EDC and VFCs in villages/hamlets situated in and around the tiger reserve; undertaking eco-development activities in villages located in and around the tiger reserves; creating awareness in the local communities; assisting adjoining territorial divisions in strengthening their forest protection and anti poaching efforts; formation of anti crop depredation squads to mitigate man animal conflict; providing

incentives and legal assistance to permanent and temporary staff called as witness in wildlife offence cases; granting of research projects to institutions/qualified individuals, among others. Up to 10% of this fund may be used as administrative expenses.

ACCOUNTS & AUDIT | The foundation shall maintain proper accounts and prepare annual accounts which will be audited annually by a qualified chartered accountant or any agency approved by the governing body. The accounts will also be subjected to the general provisions and directives of the Comptroller and Auditor General of India.

Indo-Russian joint strategies

The second meeting of the sub-group on tiger/leopard was held on November 17, 2011 in New Delhi, pursuant from the first meeting on May 26. The sub-group was decided upon by the India-Russia Inter Governmental Commission on Trade, Economic, Scientific, Technological and Cultural Cooperation in November 2010.

The Russian delegation was headed by Amirkhan Amirkhanov, deputy head of Federal Supervisory Natural Resources Management Services. The Indian delegation comprised Dr Rajesh Gopal, Member Secretary (NTCA), S P Yadav, DIG (NTCA) and K D Dewal, Under Secretary (Eurasia), Ministry of External Affairs, among others.



Delegations from the Russian Federation and India

The issues on the agenda:

Scientific field | Both countries are carrying out research on tiger using the non-invasive DNA extraction from scats. India is using this methodology to estimate the minimum population, individual identification for biological as well as forensic purposes. It was felt that Indian institutions like the Wildlife Institute of India, working in collaboration with the National Tiger Conservation Authority, may facilitate as a Focal Institution for cooperation in this field.

Tiger reintroduction and rehabilitation | Considering the interest evinced by the Russian side in leopard and tiger reintroduction, the Indian delegation offered to share their experiences with the Russian counterparts for mutual benefit. At the request from the Russian side for providing a Royal Bengal white tigress (1 to 2 years old) to the Siberian reserve “Royev Ruchey”, India offered a captive tiger from any Indian zoo for rearing in captivity (zoo).

Training and capacity building of Field Officers/ Specialists

The Wildlife Institute of India is a premier institute for capacity building in wildlife management which offers several short term and long term courses. Both sides agreed for building capacity of field officers/ specialists in the designated institutions of both the countries.

Landscape planning and smart green infrastructure in the tiger landscape

India has recently done the country level status assessment of tigers, co-predators, prey and their habitat based on scientific methodology, which has been peer reviewed and published in an international journal. It was agreed that the Indian experience may be shared with the Russian side for planning at the landscape level.

Cooperation on anti-poaching strategy & planning

It was stated that India has developed a set generic guidelines for security planning of tiger reserves besides creating the Special Tiger Protection Force for anti-poach-

ing activities. It was desired that the Indian experience in this field may be shared with the Russian side.

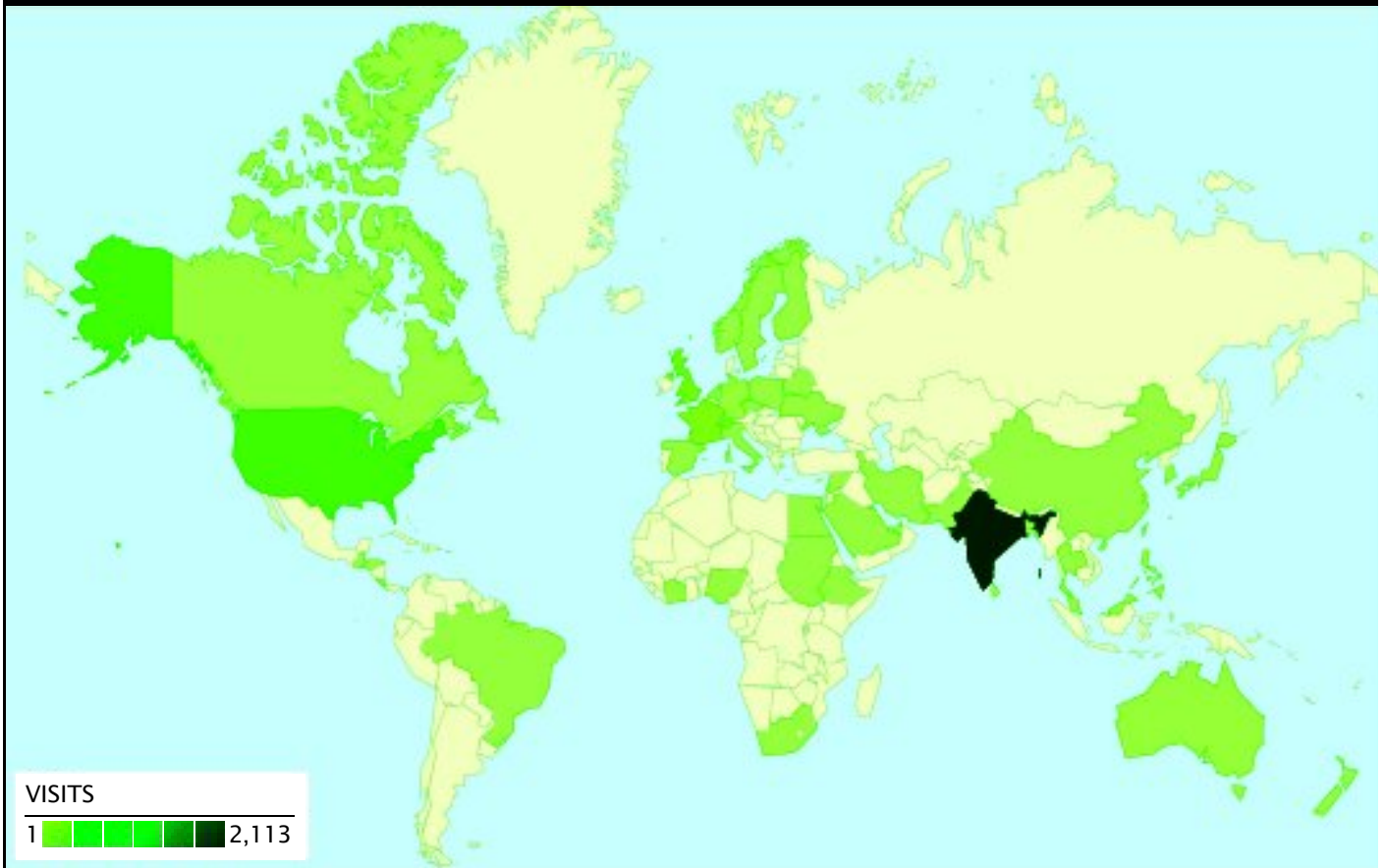
Exchange officers to share experience on good practices

Both sides agreed for exchange of officers to share experiences on good practices covering the areas of cooperation relating to tiger and leopard conservation. The Russian side extended their invitation to the Indian delegation.

Global Tiger Forum | The Global Tiger Forum is an intergovernmental international organization, of which India is the founder member. Tiger range countries; non-tiger range countries like UK and US besides several international and national NGOs are members. The IUCN is willing to enter into MOU with the GTF for cooperation which has been assigned the status of “Special Invitee” of GTF. The Russian delegation evinced interest in this Forum and it was felt that their membership in the said Forum would further strengthen the tiger conservation at the global level.

Country-wise visits on www.tigernet.nic.in

MAP OVERLAY



2,834 VISITS
from 49 countries
territories

3.41
pages per visit

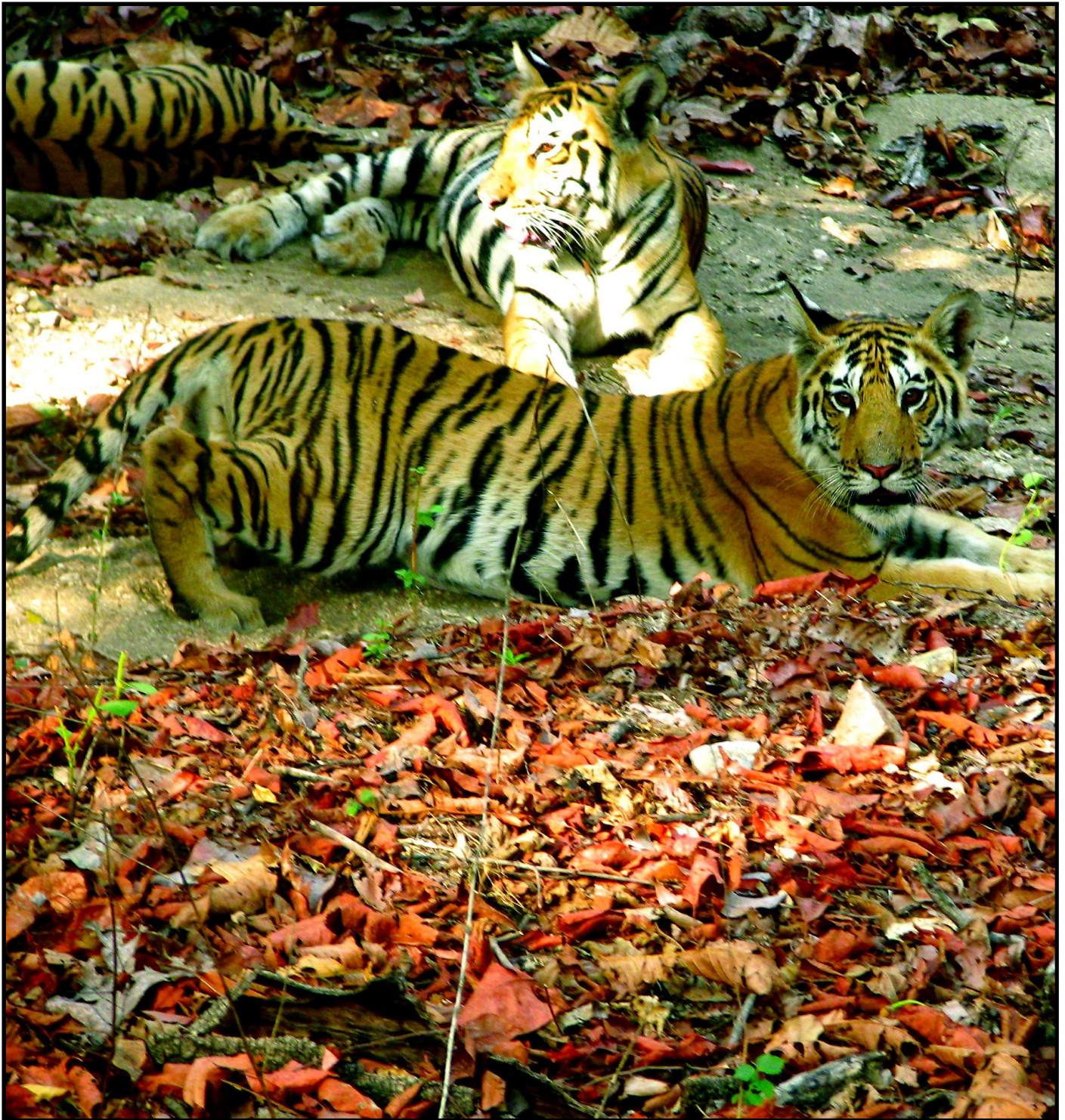
00:02:39
Average time on site

47.57%
New visits

45.66
Bounce rate

The 'tigernet' database is a collaborative effort of the National Tiger Conservation Authority (a statutory body under the Ministry of Environment and Forests, Govt. of India) and TRAFFIC-India, the wildlife trade monitoring network. The website aims to compile online authentic records on mortality of tigers and other key wildlife species across India. Compilation and analysis of such data will be valuable as a management tool for tiger conservation in India.





S P Yadav