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STRIPES



Tracking Tiger
Movements:
Insights for
Conservation and
Management

India Embarks on
the Sixth Cycle of
the World's Largest
Wildlife Survey

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Global Tiger Day 2025: Celebrating Conservation and Commitment



The day also witnessed the release of major publications, including the pioneering report “Status of Small Cats in the Tiger Landscapes of India”, the Global Tiger Day edition of STRIPES magazine, and visually compelling books on waterfalls and water bodies within tiger reserves. Together, these works expanded the conversation beyond tigers, drawing attention to associated biodiversity and natural heritage.

Adding to the momentum were virtual inaugurations, including the “Ek Ped Maa Ke Naam” plantation drive across all 58 tiger reserves, new forest nurseries in the Aravalli landscape, and the “Plastic-Free Tiger Reserves” campaign. These initiatives signaled India’s integrated approach to conservation - linking species protection, habitat restoration, and sustainability.

On July 29, 2025, India marked Global Tiger Day with a vibrant celebration at the National Zoological Park, New Delhi, reaffirming its role as a global leader in tiger conservation. The

day, which commemorates the landmark 2010 St. Petersburg Tiger Summit, served as both a reflection on progress and a call for renewed action to safeguard tigers and the ecosystems they anchor.

The event was inaugurated by the Hon’ble Minister for Environment, Forest and Climate Change, Shri Bhupender Yadav, along with Minister of State Shri Kirti Vardhan Singh. It brought together government officials, scientists, conservationists, frontline forest staff, NGOs, and students - creating a platform where diverse voices converged for a shared cause. An exhibition titled “Tiger Tales” showcased India’s conservation milestones, while tiger reserves from across the country displayed eco-shops and stories of community-led initiatives.

A key highlight was the felicitation of frontline forest staff, who were recognized for their extraordinary service in anti-poaching, wildlife rescue, habitat management, and eco-development. These awards underscored the indispensable role of ground-level protectors in sustaining India’s tiger landscapes.

The week-long celebration that followed engaged nearly 2,000 school students through exhibitions, interactive sessions, and creative activities like painting and mask-making. By blending science with storytelling and education, the program inspired the next generation to embrace conservation as a shared responsibility.

As the Hon’ble Minister reminded the gathering, the tiger is not only a symbol of strength but of balance and humility in nature. On Global Tiger Day 2025, India celebrated its achievements, honored its protectors, and renewed its commitment to ensuring that tigers - and the ecosystems they represent - continue to thrive for generations to come.



NTCA awards to frontline staff for extraordinary performance in field 2024-25

He served as an anti-poaching watcher in the Saptur Forest Range since 2010. On 23.03.2025, during patrol, he was tragically attacked by an Indian Gaur, sustaining fatal injuries to his right rib and shoulder. Despite medical care, he succumbed to his injuries. His dedicated service and ultimate sacrifice in forest conservation and anti-poaching efforts are deeply honored.

A. Chinna Karuppan
Anti- Poaching Watcher
Srivilliphutur- Megamalai Tiger Reserve, Tamil Nadu
(Posthumous)

Category: For Extraordinary Bravery in the Line of Duty



Mritunjay Biswas
Deputy Ranger
Sundarbans Tiger Reserve,
West Bengal

Category: Wildlife Protection and Anti-poaching Activities

With nearly 30 years of service in Sundarbans Tiger Reserve, he is a key expert in tiger tranquilization and relocation. He has safely relocated over 20 straying tigers, including high-risk rescues. His expertise has greatly reduced human-tiger conflict in this unique mangrove habitat.

She is the only female frontline staff in Pench Tiger Reserve's core and has bravely served for over 24 years. A dedicated patroller and key figure in 149 wildlife crime cases, she leads anti-poaching efforts and habitat management. Her fearless commitment and grassroots leadership embody true conservation spirit.

Jhunni Uikey
Forest Watcher
Pench Tiger Reserve, Madhya Pradesh

Category: Wildlife Protection and Anti-poaching Activities



Himanshu Sarma
Forester-I
Nameri Tiger Reserve, Assam

Category: Wildlife Habitat Management

Once devoid of tigers, Sonai Rupai Wildlife Sanctuary saw a historic comeback in 2024 with a tiger camera-trapped after decades. This was made possible by their efforts to recover 120 ha encroached land, 75 ha grassland restoration, anti-poaching efforts, waterhole creation, and strong community engagement—reviving habitat and enabling the tiger's return.

Krishna Das
Forester-I
Nameri Tiger Reserve, Assam





Md. Khadar Pasha
Forest Beat Officer
Amrabad Tiger
Reserve, Telangana

**Category: Wildlife
Habitat Management**

In the tough terrain of Lingal Range, this frontline warrior led lantana removal of over 95 ha, restored 10 ha grassland, built 350+ rock-fill dams, and created vital water sources—including a solar borewell at 750 m elevation. He recorded the highest patrolling distance in M-STripES, booked 106 wildlife crime cases, and raised awareness in schools—showcasing exceptional commitment to tiger conservation.



Basant Lal Maravi
Forest Watcher
Kanha Tiger Reserve,
Madhya Pradesh

**Category:
Wildlife
Monitoring**

Sukman Singh Kushre
Forest Watcher
Kanha Tiger Reserve,
Madhya Pradesh

They have been instrumental in caring for eight orphaned tiger cubs at the Ghorella Rewilding Centre, with four successfully rewilded. They continue to provide round-the-clock care to four cubs currently under rehabilitation. They've also contributed to wildlife monitoring using M-STripES and herbivore translocation in prey-deficient areas.



She led five successful operations based on intelligence inputs, resulting in the arrest of multiple poachers and the seizure of illegal wildlife products—including tiger bones, rhino horns, large tusks, 43 packets of deer meat, and other animal parts. Her efforts dealt a major blow to wildlife trafficking networks.

Papori Kachari
Forester-I
Manas Tiger Reserve,
Assam

**Category: Wildlife Crime
Detection, Investigation
and Prosecution**



Rajesh Patel
Forest Guard
Satpura Tiger Reserve,
Madhya Pradesh

**Category: People's
Participation & Eco
Development Activities**

He has been a master trainer for MP Forest Department's "Anubhuti" program, sensitizing over 6,000 students and 500 teachers on forest and wildlife conservation. He has played key roles in village relocation, forest crime prevention, and community engagement. As a trainer for Tiger Estimation and forest staff, his dedication has strengthened grassroots conservation efforts across the landscape.

He played a pivotal role in the voluntary relocation of over 52 hamlets from Kali Tiger Reserve, facilitating land transfers, resolving complex documentation, and ensuring timely benefits to villagers. He created 1,000 ha of inviolate space and has supported post-relocation welfare. A passionate naturalist, he has documented 242 spider species and trained forest staff and wildlife enthusiasts, contributing to both conservation and community development.

Gururaj S Gouda
Deputy Range Forest
Officer
Kali Tiger Reserve,
Karnataka

**Category: Village
Relocation Works**



Tracking Tiger Movements:

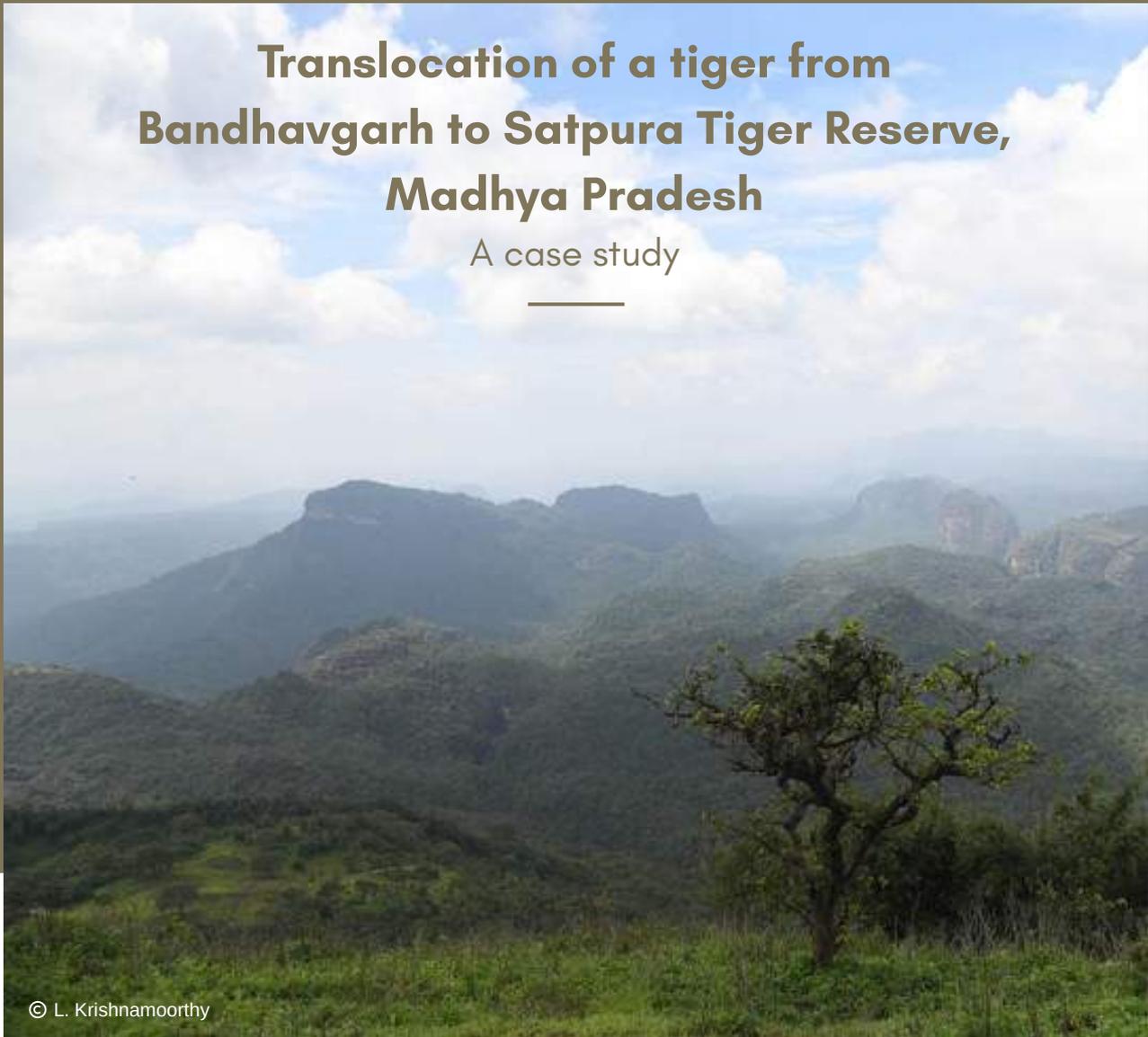
Insights for Conservation
and Management





Translocation of a tiger from Bandhavgarh to Satpura Tiger Reserve, Madhya Pradesh

A case study



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**Rakhi Nanda¹, Gurudutt Sharma¹, Prashant
Deshmukh² & Sumit Saha²**

¹Satpura Tiger Reserve, Narmadapuram, Madhya Pradesh - 461001

²Wildlife Conservation Trust, Mumbai - 400001

India hosts ~70% of the world's wild tigers, with an estimated population of 3,682 (NTCA & WII, 2022). Madhya Pradesh, often called the "Tiger State", supports the highest number of tigers (785). However, rapid habitat fragmentation, expanding human settlements, and an increasing interface between people and wildlife have heightened human-tiger conflicts. Translocation of conflict-tigers, guided by the NTCA Protocol for Tiger Re-introduction, offers an important conservation tool to reduce human-wildlife conflict and utilise underpopulated habitats to support the metapopulation.

In this case, a young male tiger (approx. 2 years old) was translocated from Bandhavgarh Tiger Reserve (BTR) to Satpura Tiger Reserve (STR) following a conflict incident that resulted in a human casualty.

This decision was based on:

- The need to prevent repeated conflict,
- The ecological suitability and low tiger density in STR's buffer and contiguous forest landscape,
- Assessments of the tiger's age, health, and behaviour, which indicated it had not yet fully established a territory.

This article presents the movement analysis of a tiger translocated from Bandhavgarh to the Satpura Tiger Reserve over a period of 7 months (January–July 2025). We examine daily movement patterns, net squared displacement (NSD), cumulative distance, and statistical summaries to understand its post-release adaptation.

Pre-project Planning and Assessments

In line with NTCA's protocol, a multidisciplinary team was constituted, comprising forest officers, wildlife veterinarians, biologists, and representatives of conservation NGOs. The planning process included:

- Team constitution: Multi-disciplinary team with the Forest Department, Wildlife Biologist, Wildlife Veterinarians, and NGOs
- Founder assessment: Selection of a young sub-adult male from the same landscape, without an established territory.
- Feasibility and habitat: Low tiger density in STR, with a suitable prey base and habitat connectivity.
- Health and disease screening: Veterinary examination and disease testing before translocation.
- Release strategy: A “Soft release” using a temporary enclosure to acclimatization before final release.

- Monitoring: Real-time GPS telemetry, VHF monitoring, and field verification to track movements
- Community engagement: Conducted local meetings, awareness campaigns, and formation of rapid response teams
- Post-release management: Provision of veterinary care in case of injury, ongoing tracking, and evaluations of space use and conflict risks

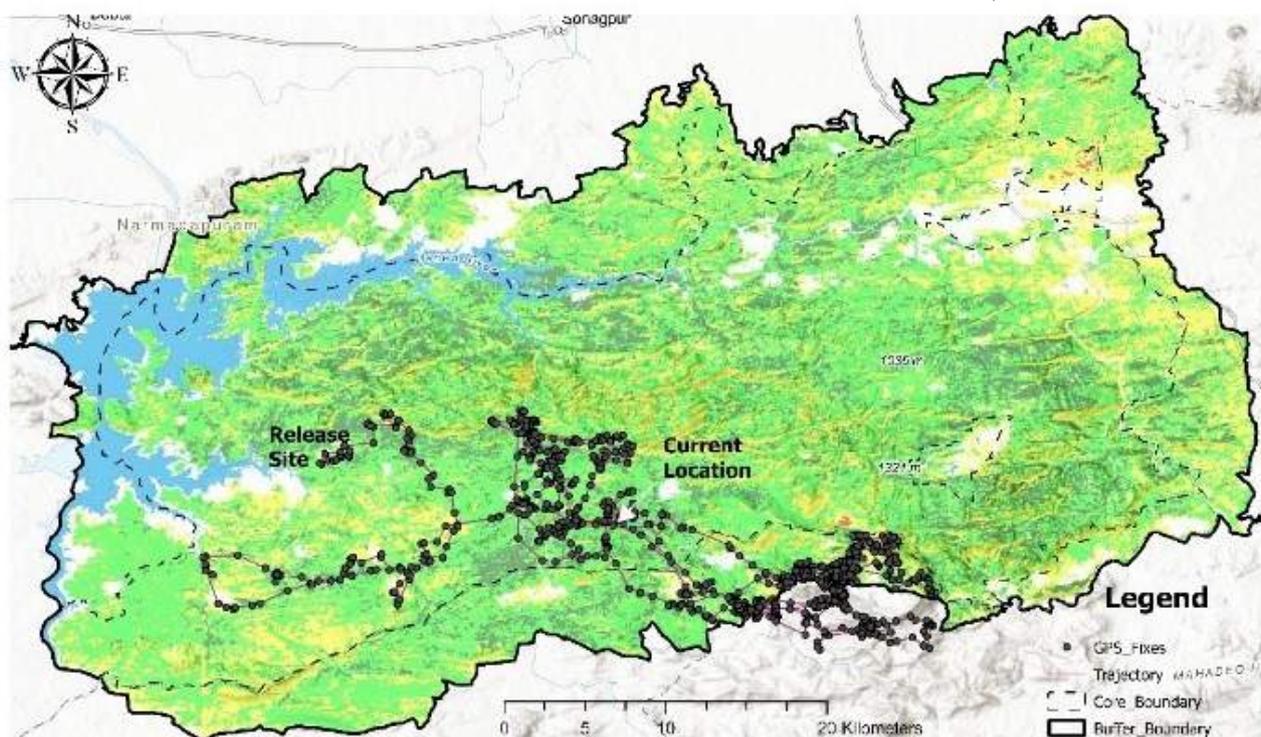
Capture, Health Checks, and Translocation

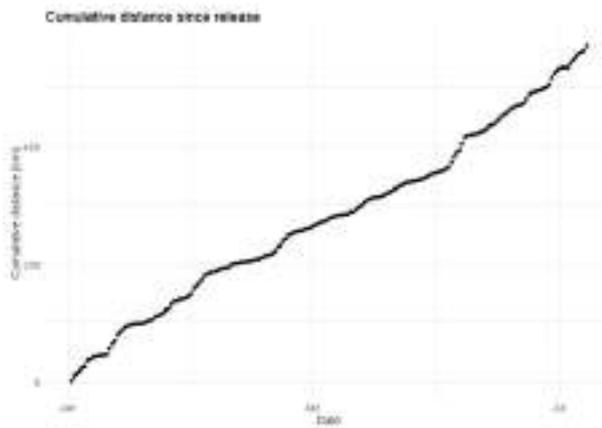
On 24 December 2024, the tiger was chemically immobilised following standard protocols under the Wild Life (Protection) Act, 1972. Pre-transport protocols included:

- A complete health examination by a veterinarian,
- Screening for infectious diseases,
- Fitting of a satellite-GPS collar for real-time monitoring,
- Road transport as per guidelines to minimize stress.

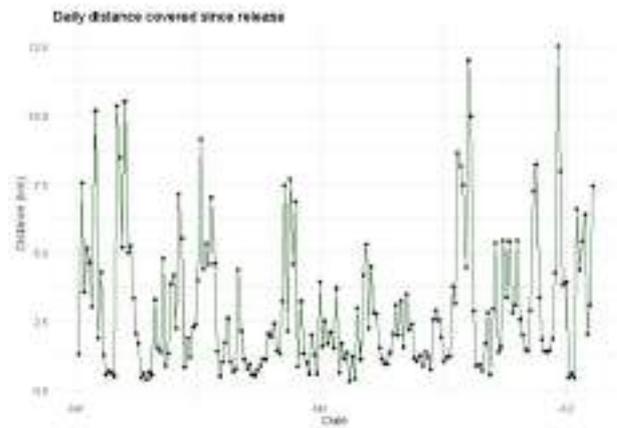
Due to a technical fault detected during collar testing, the tiger was initially released into a temporary enclosure in STR for observation. After successful verifications of its hunting ability (demonstrated by feeding on live prey) and overall health, it was hard-released into the wild on 1 January 2025.

The trajectory of translocated tiger since release depicting exploratory movements

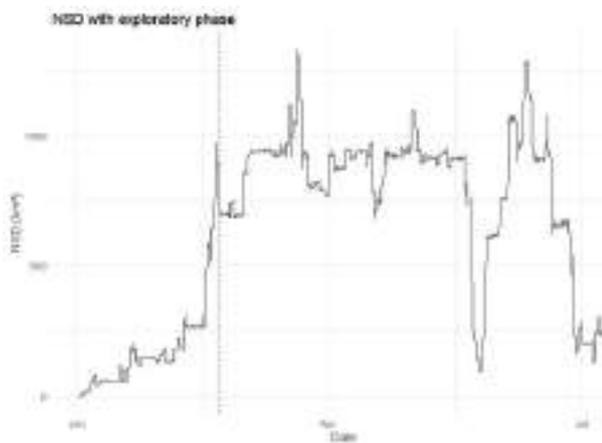




▲
Cumulative distance covered since release (km)



▲
Daily distance covered km/day since release



▲
The graph of net squared displacement from release site, the vertical dashed line represents exploratory phase followed by period of stabilization and then movement away

Post-release monitoring and findings

Following the hard release on January 1, 2025, the tiger's movements were monitored daily for over six months using GPS telemetry. The analysis focused on daily movement distances, displacement from the release site, and spatial clustering to understand how the tiger adapted to its new environment. Over the monitoring period (January–July 2025), the tiger travelled a cumulative distance of approximately 570 km.

The NSD (Net Square Displacement) plot revealed a distinct initial phase of steadily increasing displacement from the release point, corresponding to exploratory movements immediately after release. This exploratory phase lasted for approximately 51 days, during which the NSD curve rose consistently, indicating the tiger progressively moved farther away. After this period, the curve plateaued and began to

fluctuate around a relatively stable mean value, suggesting the tiger was making more localized movements. This visual change in the NSD curve was used to delineate the end of the exploratory phase and the beginning of the post-exploratory phase. Interestingly, the NSD plot also revealed two later excursions, where the tiger moved away from its established area to relatively distant locations before returning. These peaks in NSD, observed well after the exploratory phase, indicate episodic exploratory trips or excursions, possibly in search of resources or new territories, followed by a return to the settled range.

Tiger Movement Summary by Phase

The empirical variogram generated from the movement data using the *ctmm* package did not exhibit a clear plateau, which typically indicates range residency. Instead, the variogram showed a continuously increasing trend, suggesting that the animal's movements remained exploratory or directional over the study period rather than stabilizing within a confined area. Due to the absence of a plateau, conventional home range estimation methods such as auto-correlated kernel density estimation (AKDE) or occurrence distribution would likely overestimate the animal's range. Consequently, formal home range calculation was not performed.

Phase	Total Distance (km)	Mean Daily Distance (km)	Number of days
Exploratory	184	3.61	51
Post-Exploratory	385.7	2.75	140

▲
Tiger's movement summary by phase: exploratory vs. post-exploratory

Behavioural insights from gps clusters

To identify spatial–temporal GPS clusters, the ST-DBSCAN algorithm (Birant & Kut, 2007) was applied to the tiger GPS telemetry data. The following parameters were used:

- Spatial distance threshold: 350 meters
- Minimum number of points: 20
- Temporal search window: 24 hours

These parameters were chosen to capture biologically relevant stationary events, such as feeding sites, resting sites, or kill clusters, which typically persist within similar spatial and temporal scales.

Cluster summary statistics

After excluding noise points, a total of 39 clusters were analysed. Key summary metrics are as follows:

Metric	Value
Median cluster duration	62 hours (~2.6 days)
Mean cluster duration	78.2 hours (~3.3 days)
Min-Max duration	19 - 316 hours

The ground tracking team verified the clusters identified through this method to confirm kills or characterize the type of cluster. These field observations also helped assess the tiger’s health and detect injuries, allowing timely intervention if needed.

Conclusion

Translocation complemented by robust monitoring demonstrates:

- Conflict-involved young tigers can adapt to new landscapes.
- Strategic site selection reduces repeat conflict risk.
- In India’s context, with tiger population growth averaging ~6% per annum (NTCA & WII 2022), translocation can balance densities across landscapes and reduce pressure on saturated reserves.
- Robust GPS monitoring and cluster analysis provided managers with real-time insights into space use and excursions, helping assess conflict risk. Community engagement reduced human–wildlife tension in the new area.
- Absence of a stable home range within 7 months suggests that longer monitoring is needed to understand full settlement patterns. Larger studies could help guide future conflict mitigation and translocation strategies, ensuring better survival.



Tiger Radio-collaring, tracking and drop-off in Nagarhole Tiger Reserve, Karnataka

Seema PA¹, Gopi RK¹ & Yashas Shankar¹

¹Nagarhole Tiger Reserve, Hunsur, Karnataka 571105

Located in the Western Ghats of Karnataka, Nagarhole Tiger Reserve is one of India's premier tiger habitats and a vital part of the Nilgiri Biosphere Reserve. Rich in biodiversity and dense forests, it offers an ideal landscape for tigers to thrive. As per the Karnataka Forest Department report (2024), Nagarhole hosts a healthy and stable tiger population, with over 142 individual tigers identified within its boundaries and the surrounding landscape. The reserve boasts one of the highest tiger densities in the country, supported by abundant prey species and effective conservation management.

Nagarhole plays a critical role in maintaining genetic connectivity between tiger populations in neighbouring reserves like Bandipur, Wayanad, and Mudumalai, making it a key landscape for long-term tiger conservation in southern India.

The high density of tigers in Nagarhole Tiger Reserve is due to a combination of ecological, management, and geographical factors that make it one of the best tiger habitats in India.

To gain deeper insights into tiger behaviour and movement patterns, a tigress was recently radio-collared on the outskirts of Nagarhole Tiger Reserve. This scientific initiative aims to study territorial ranges, dispersal, prey preferences, and interactions with human-dominated landscapes. The data collected will play a vital role in improving conservation strategies, mitigating human-wildlife conflict, and enhancing the overall management of the tiger population in and around the reserve.

A tigress, designated Nagarhole21_MTK14, was radio collared and released back in Nagarhole Tiger Reserve. In line with established protocols, the animal was captured using a walkthrough cage.

Camera trap photo-capture of the collared tigress



The tigress was released back into the wild on 30th December 2024, following collaring. Subsequent to release, initial post-release movements were confirmed on 1st January 2025 by monitoring the tigress using a VHF receiver.

The tigress was then regularly monitored via GPS collar signals, and over time, she re-established her original territory, indicating successful reintegration into her home range.

To ensure consistent tracking - particularly during periods of GPS signal delays, the Garuda AI Camera alert system provided real-time updates, assisting in tracking the tigress during loss of GPS Signals.

Once the objectives of the collaring study were met and the tigress had exhibited stable territorial behaviour, a decision was taken to initiate the collar drop-off mechanism. Required permissions were obtained as per regulatory procedures.

A dedicated team was formed to execute the collar drop-off operation. The team comprised:

- Deputy Conservator of Forests (DCF) & Director, Seema PA IFS Nagarahole Tiger Reserve.
- Veterinary Officer, Ramesha H Nagarahole Tiger Reserve
- Yashas Shankar, Advisory Member
- Assistant Conservator of Forests (ACF), Madhu S D Metikuppe Sub-Division
- Range Forest Officer (RFO), Rashmi M R, Metikuppe Wildlife Range
- Naturalist, Gopi R K, Nagarahole Tiger Reserve
- Elephant team and Metikuppe Field Staff



An initial reconnaissance was conducted using VHF telemetry to confirm the tigress's location and signal strength.

From 11th to 13th June 2025, active tracking of the tigress was carried out with the assistance of kumki elephants to facilitate safe and efficient field operations. On 13th June 2025, the collar drop-off mechanism was successfully triggered, the collar was subsequently retrieved on 16th June 2025 from the field.

The tigress continues to be monitored using the Garuda AI Camera alert system, ensuring ongoing post-collar tracking and behavioural assessment.



Beyond the Reserves: The Dispersing Tigers of India's Wild Landscapes

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Tigers are fiercely territorial animals. Adult tigers maintain exclusive home ranges, with area ranging from 20-100 km² depending on prey density and habitat type. Young tigers disperse from their mother's territory at around 2–3 years of age to establish their own independent ranges. Males typically roam the farthest, often covering hundreds of kilometres, because they must avoid established rivals. Females usually settle closer to their natal areas, but occasionally, an individual will undertake a surprisingly long-distance movement, which can expand the species' range. A dispersing tiger is essentially searching for three things: space, food, and mates. When its natal forest is saturated with tigers, dispersal becomes the only way to survive. If prey is scarce, the animal must seek areas with adequate prey populations.

Moreover, reaching sexual maturity, the urge to find mates can drive tigers to venture even farther.

Over the last decade, India has documented tigers dispersing farther than ever recorded. These are bold pioneers, navigating fragmented landscapes, highways, farmlands, and human settlements in search of territory, mates, and prey. Their presence in non-traditional tiger habitats signals a powerful story of recovery, resilience, and the urgent need to think beyond protected areas.

In 2016, a young male from Bor Tiger Reserve defied expectations by crossing NH-6 and several human-made obstacles to reach the Katol forests near Nagpur, a journey spanning over 140 km, demonstrating the value of even small forest patches for tiger movement.





Another Bor cub was later recorded moving nearly 70 km to Umred-Karhandla Wildlife Sanctuary, pioneering a vital corridor. A GPS telemetry study on the dispersal of a sub-adult male tiger (Hussain et al. 2022) revealed that the individual movement over 2,000 km in a year from Tipeswar Wildlife Sanctuary, through a multi-use human-dominated landscape, before establishing its territory in Dnyanganga Wildlife Sanctuary in Maharashtra. The displacement of the tiger from its natal area was about 300 km. Another study from Panna landscape in Madhya Pradesh (Sarkar et al. 2021) showed the movement of a radio-collared sub-adult female with approximately 340 km of cumulative movement across 78 days during its dispersal phase. These wanderings highlight how satellite reserves in human-dominated landscapes serve as stepping-stones in the dispersal of tigers.

Further east, surveys in Manas (Assam)- Buxa (West Bengal) have uncovered signs linking tigers across the India-Nepal-Bhutan border, proof that tigers are moving through international corridors, maintaining vital gene flow in the Eastern Himalayas.

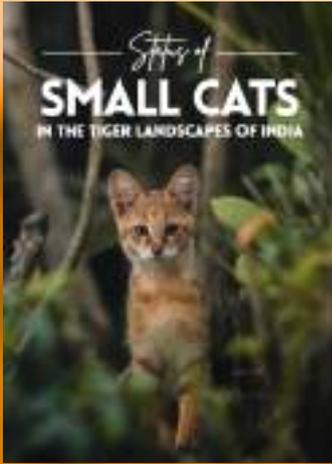
Early reports from Gujarat in the 1980s and 1990s, later confirmed through fieldwork, documented a male dispersing into Kheda from Rajasthan in 1992. Then, in 2019, a tiger from Ratapani (Madhya Pradesh), after a 27-year hiatus, was caught on camera in Dang, a historic first. This year, another male was sighted in Ratanmahal Sanctuary (Dahod), likely having travelled via forested corridors from Madhya

Pradesh into Gujarat, underscoring the growing ecological relevance of the state. In another recent event, photographic evidence of a tiger recorded in Kalesar National Park, Haryana, after 110 years, in 2023, this animal is believed to have travelled from Rajaji Tiger Reserve in Uttarakhand.

These multi-use areas outside tiger reserves have become critical dispersal corridors, buffer zones, and sometimes even breeding habitats, underscoring their ecological and conservation importance. The stories of dispersing tigers represent more than a simple urge to wander; they unequivocally reveal a species responding to rising numbers by stretching its range and reconnecting fragmented landscapes. They emphasize the need to move beyond static reserves in favour of landscape-scale protection, effective conflict mitigation, and cross-border conservation strategies. For every dispersing tiger that journeys far from its birthplace, there lies an opportunity- to stitch back the ecological tapestry and safeguard the routes they dare to tread. India's tigers are reminding us of their remarkable ability to adapt, roam, and reclaim space. The boundaries on our maps may separate tiger reserves from the rest, but for a tiger on the move, the landscape is interconnected. The future of tiger conservation will depend on how well we protect the diverse paths that tigers choose to walk.

References:

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The Lesser-known Wild Cats of the Tiger Forests of India



India is home to 11 species of small wild cats, inhabiting various landscapes ranging from the cold deserts of Ladakh to the dense tropical forests of Northeast India and semi-arid regions of Central India. Among these, nine species share their habitats with the largest wild cat - the tiger. Despite their ecological importance, threats like habitat loss, poaching, increasing urbanization, and human-wildlife conflict have pushed many small cat species toward the margins. Most protected areas were established for tigers and leopards, providing incidental protection to small cats. However, targeted conservation planning often overlooks these species.

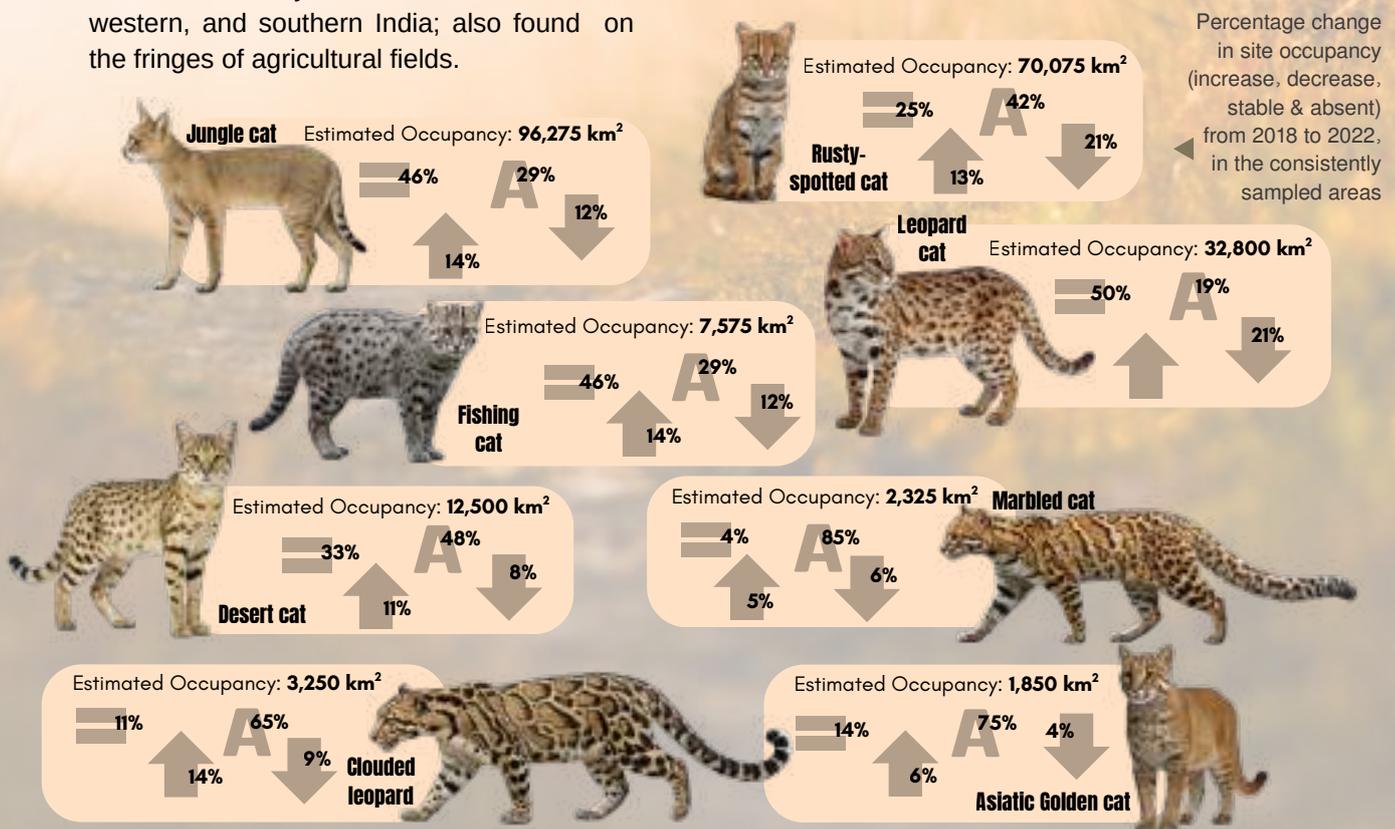
The first nationwide assessment of small wild cats in India utilized camera trap data from the All-India Tiger Estimation in 2018 and 2022, to estimate the occupancy at a fine-scale of 25 km² grids. Covariates included habitat features (NDVI, forest type, terrain, prey abundance), protection level, water sources, and human footprint.

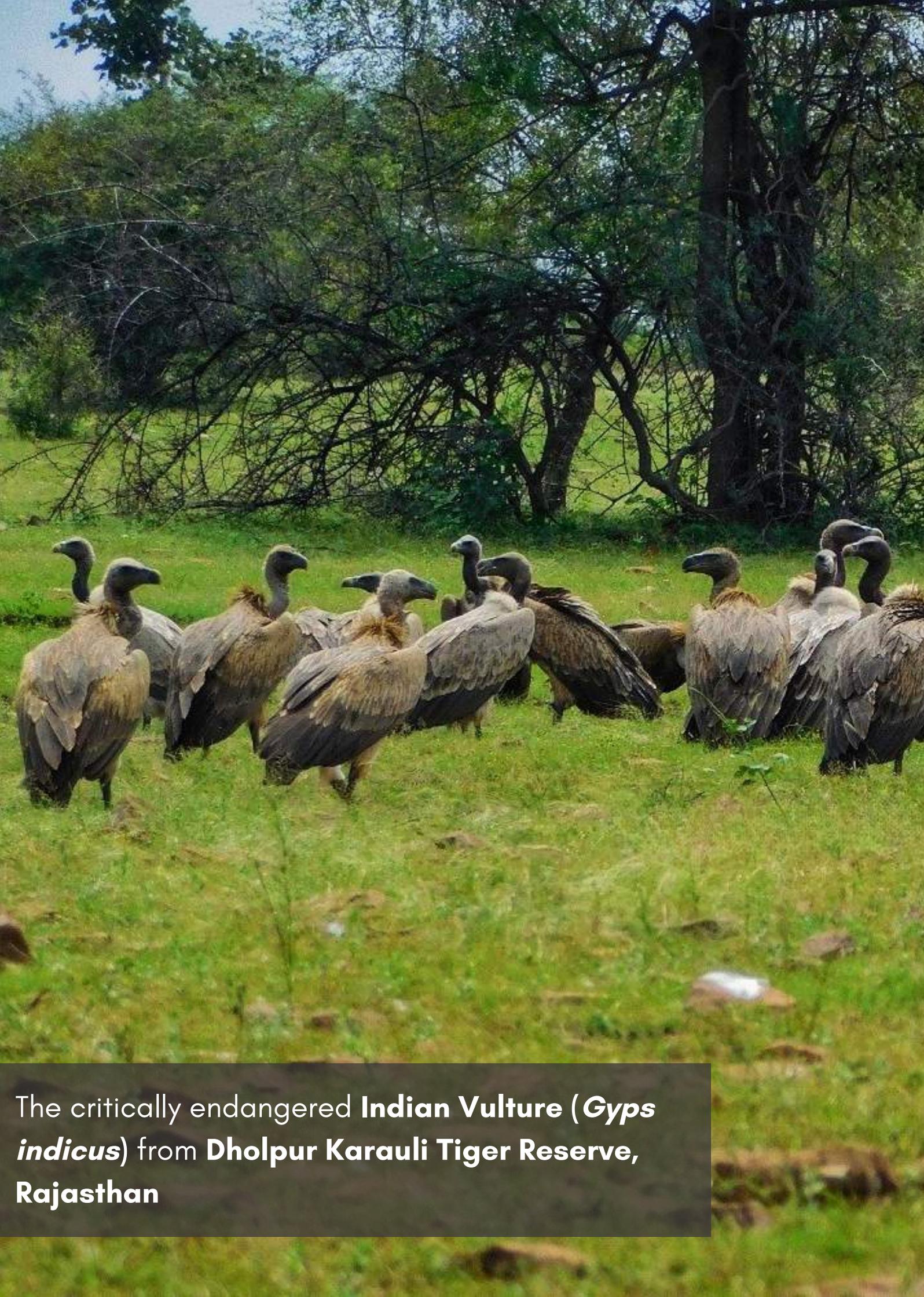
Major Findings of the Report

- **Jungle Cat** – The most widespread, thriving in scrublands, grasslands, and agricultural landscapes across India, often near human settlements.
- **Rusty-spotted Cat** – Prefers dry deciduous forests and rocky scrub habitats in central, western, and southern India; also found on the fringes of agricultural fields.

- **Leopard Cat** – Strongly associated with moist forests, mangroves, and wetlands in the northeast, northern Terai, eastern and southern India.
- **Desert Cat (Asiatic Wildcat)** – Found in arid and semi-arid landscapes of Central India, particularly grasslands and desert scrub.
- **Fishing Cat** – Dependent on wetlands, marshes, and mangrove ecosystems, especially in the Ganga-Brahmaputra floodplains and the Sundarbans.
- **Clouded Leopard** – A forest specialist of the northeastern states, preferring dense evergreen and semi-evergreen forests.
- **Marbled Cat** – Occurs in northeast India's tropical and subtropical forests, often in hilly terrain with dense canopy cover.
- **Asiatic Golden Cat** – Distributed in the eastern Himalayas and northeast forests, inhabiting mid-elevation evergreen and moist deciduous forests.
- **Caracal** – Highly restricted to arid and semi-arid regions of western India (Rajasthan, Kutch), favoring dry scrub, thorn forests, and open grasslands.

The report provides baseline information on the occurrence of small wild cats in India's tiger habitats, which will help shape future research on these species and inform targeted management and conservation.





The critically endangered **Indian Vulture** (*Gyps indicus*) from **Dholpur Karauli Tiger Reserve, Rajasthan**





India begins Sixth Cycle of All India Tiger Estimation 2026

O

n August 22, 2025, the NTCA and Wildlife Institute of India (WII) hosted a meeting of State Nodal Officers, in Dehradun, to formally commence the 6th Cycle of the All India Tiger Estimation (AITE)

2026. Organized by the National Tiger Conservation Authority (NTCA) in collaboration with WII, the meeting marked the beginning of preparations for the world's largest wildlife survey, reaffirming India's leadership in science-driven tiger conservation.

The day began with a warm welcome from the WII Director, followed by remarks from the Member Secretary, NTCA, who emphasized the critical role of the upcoming estimation exercise in guiding tiger conservation policy. The tone was clear: the AITE is not only about counting tigers but about evaluating the health of entire ecosystems and refining future conservation strategies.

An overview of the 6th cycle was presented by the Deputy Inspector General (DIG) of NTCA, highlighting the continuity of India's monitoring efforts since the first estimation in 2006. Each cycle has introduced methodological and technological refinements, and 2026 promises further advancements. Field protocols will be

further standardized, new tools will be integrated, and efforts will be intensified to ensure that the exercise captures not just tiger numbers, but patterns of distribution, prey density, and habitat quality.

Learning from the Past

One of the key strengths of the workshop was its focus on lessons from previous estimation cycles. Nodal and Associate Nodal Officers from the Tiger Cell presented on the crucial aspects of implementation, followed by an engaging session on lessons and challenges encountered during earlier surveys.

Practical insights came from case studies:

Madhya Pradesh, represented by Rajneesh Singh, Deputy Director of Pench Tiger Reserve, shared challenges and solutions ranging from field logistics to coordinating large teams across multiple reserves. Odisha, represented by Dr. J.D. Pati, discussed implementation of MSTripes-based ecological monitoring, a technology-enabled system that has become the backbone for real-time data collection and analysis in tiger landscapes.

These state-level experiences provided valuable context for addressing issues such as terrain diversity, staff training, and data reliability,

ensuring that the new cycle builds upon hard-earned knowledge.

Demonstration and Capacity Building

A highlight of the day was the demonstration exercise conducted by the NTCA-WII Tiger Cell, showcasing the essential aspects of field data collection and validation. The session emphasized the role of accuracy and uniformity, given the scale of the survey that spans over 500,000 km² of tiger habitat.

Another crucial session focused on the role of State Nodal Officers in training trainers and ensuring data quality and timelines. Officers were reminded that they act as the backbone of the estimation process, bridging national protocols with state-level implementation. Their responsibilities include training frontline staff, ensuring adherence to survey guidelines, maintaining strict timelines, and troubleshooting challenges in the field.

Dialogue and Collaboration

The meeting allowed ample time for open discussions. Officers voiced concerns, raised logistical questions, and shared innovative ideas to improve efficiency. This interactive platform fostered collaboration, reflecting the shared ownership of the exercise across India's tiger-range states.

Significance of AITE 2026

The All India Tiger Estimation is more than a population survey-it is a comprehensive ecological assessment. By integrating advanced statistical models, remote sensing tools, and technologies like MSTripes, it produces data informing habitat management, prey-base restoration, corridor connectivity, and human-wildlife coexistence strategies. The 6th cycle will not only update tiger population numbers but also strengthen the understanding of ecosystem health and the challenges posed by climate change, infrastructure expansion, and human pressures. Its findings will shape national conservation priorities and contribute to global knowledge on large carnivore monitoring.

Looking Ahead

India's commitment to repeating this exercise every four years demonstrates its dedication to evidence-based conservation. The 2026 cycle will once again bring together thousands of forest staff, scientists, and volunteers in a coordinated national effort, showcasing the country's serious approach to wildlife protection.

The State Nodal Officers' meeting at WII successfully laid the foundation for this monumental task, ensuring that every detail is aligned for consistency and credibility. With preparations now underway, India is set to write another chapter in its pioneering journey of tiger conservation and ecological stewardship.



Country-wide Training of Trainers for the sixth cycle of AITE

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rom September to November 2025, a series of national-level Training of Trainers (ToT) workshops was successfully conducted across five major tiger landscapes of India. These capacity-building

programmes were designed to prepare master trainers from tiger-bearing regions to guide and mentor frontline forest staff in implementing the 6th Cycle of the All India Tiger Estimation (AITE).

The training sessions were strategically organized in five different landscapes, ensuring that the diverse ecological and logistical challenges of India's tiger habitats were adequately represented. The landscapes included the Shivalik Hills and Gangetic Floodplains, Central India and Eastern Ghats, Western Ghats, the Sundarbans, and Northeast India. Each venue brought together field officers and frontline representatives from surrounding states, ensuring a wide geographical outreach.

The training programmes were led by officers from the National Tiger Conservation Authority (NTCA) along with scientists and senior researchers from the Wildlife Institute of India (WII), Dehradun. Together, they ensured that participants received a thorough grounding in both theoretical knowledge and practical field techniques.

The training module was designed to strengthen understanding of India's tiger conservation journey, beginning with the inception of Project Tiger in 1973, the establishment of NTCA, and the evolution of the All India Tiger Estimation methodology based on robust scientific evidence. Trainers revisited key lessons from previous estimation cycles, reflecting on successes and challenges specific to each landscape. Emphasis was placed on essential do's and don'ts, best practices in data recording, and the importance of accuracy and consistency in field operations.

Participants were familiarized with the various scientific techniques deployed during AITE, including:

- Distance sampling and line-transect surveys for estimating prey abundance
- Carnivore sign surveys to record encounter rates of tigers, leopards, and other carnivores
- Habitat plots to assess vegetational health, prey availability, and disturbance factors
- Camera trapping to estimate absolute abundance and density of tigers and leopards

Given the distinctive ecological characteristics of certain regions, specialized modules addressed mangrove habitat protocols for the Sundarbans and rugged terrain methodologies for the Northeast hills. These tailored instructions ensured that teams from every landscape were equipped to collect meaningful data suited to their local conditions.

To support faster and seamless data collection, trainers received hands-on guidance on the M-STriPES Ecological app and M-STriPES Polygon app. Demonstrations of essential field equipment including compasses, range finders, and camera traps ensured that participants were well-versed in the handling of these field instruments. A highlight of each training session was the dedicated field practical component, where participants engaged in supervised line-transect walks, sign-survey and camera trap deployment exercises.

Throughout the workshops, open discussions allowed participants to raise operational concerns, share ground realities, and learn from one another's experiences. By the end of the ToT series, hundreds of master trainers returned to their respective tiger reserves and territorial divisions equipped with updated knowledge, improved skills, and a shared commitment to ensuring that the 6th cycle of AITE would be implemented with the highest scientific rigour.



Training of Trainers- Central India and Eastern Ghats

The first workshop took place from 15th to 17th September 2025, at Pench Tiger Reserve, catering to participants from Madhya Pradesh, Odisha, Maharashtra, Jharkhand, and Chhattisgarh. This landscape covers a substantial portion of India's central tiger presence areas.



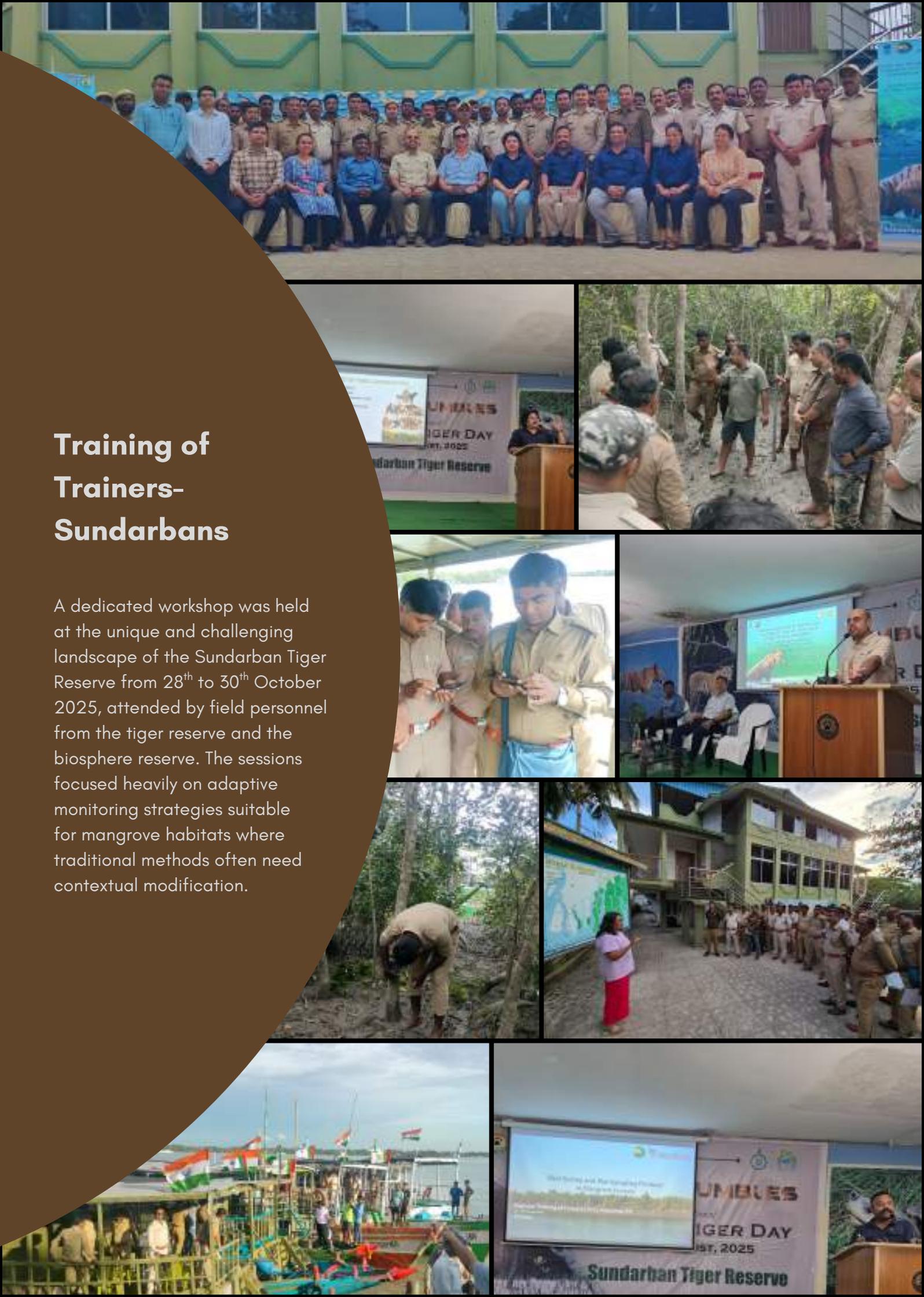


Training of Trainers- Southern Zone

The second workshop, from 24th to 26th September 2025, was jointly organized at Bandipur and Mudumalai Tiger Reserves, both part of the Nilgiri biosphere, one of the most critical tiger strongholds in the world. Forest personnel from Telangana, Andhra Pradesh, Karnataka, Kerala, and Tamil Nadu took part in this training.

Training of Trainers- Sundarbans

A dedicated workshop was held at the unique and challenging landscape of the Sundarban Tiger Reserve from 28th to 30th October 2025, attended by field personnel from the tiger reserve and the biosphere reserve. The sessions focused heavily on adaptive monitoring strategies suitable for mangrove habitats where traditional methods often need contextual modification.



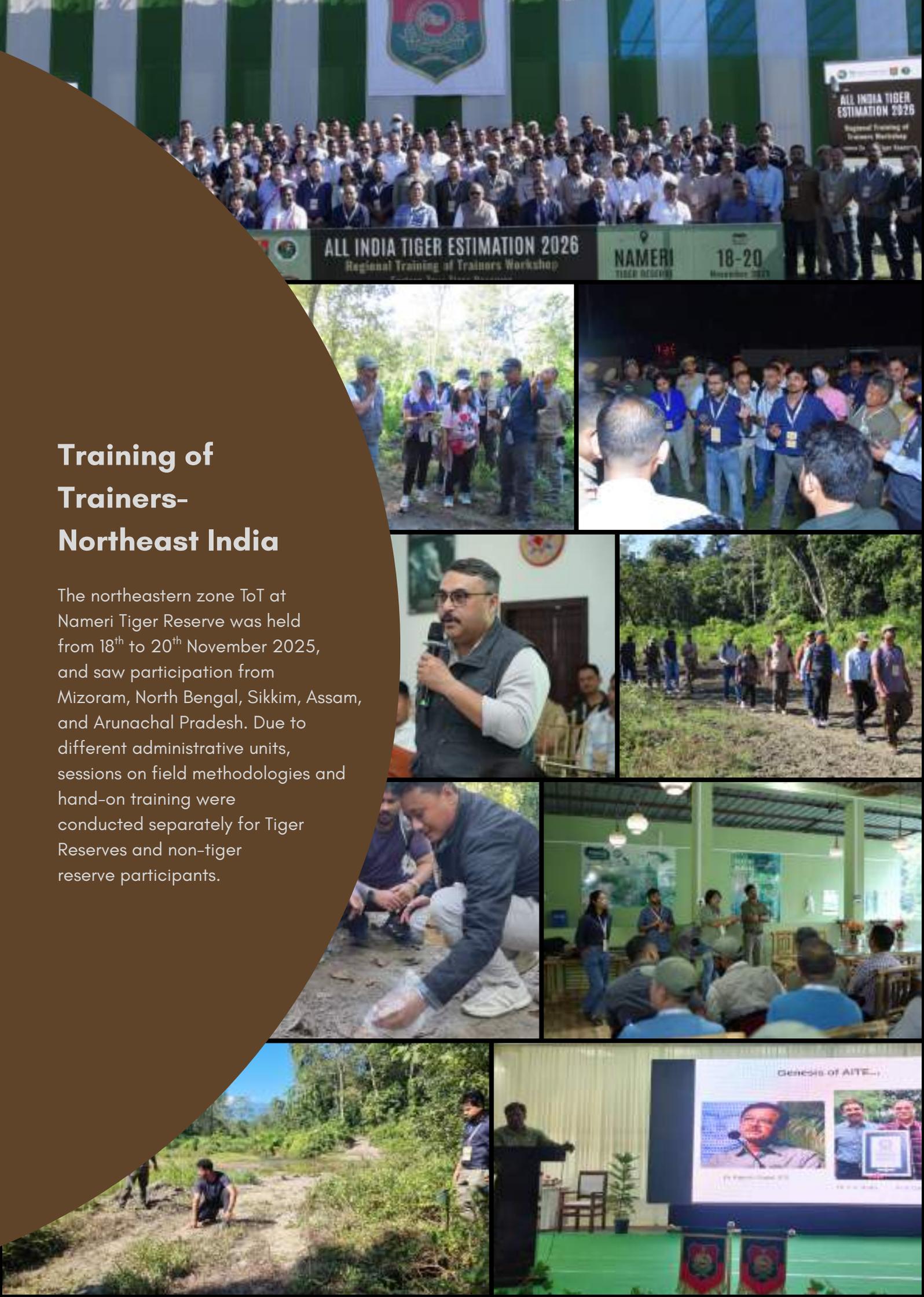


Training of Trainers- North and West Zone

Another key workshop was hosted jointly at the Wildlife Institute of India and Rajaji Tiger Reserve from 18th to 20th November 2025, bringing together teams from Rajasthan, Uttarakhand, Uttar Pradesh, and Bihar. The training focused on the tiger bearing regions of Shivalik Hills and Gangetic Plains, as well as the arid and semi-arid areas of Rajasthan.

Training of Trainers- Northeast India

The northeastern zone ToT at Nameri Tiger Reserve was held from 18th to 20th November 2025, and saw participation from Mizoram, North Bengal, Sikkim, Assam, and Arunachal Pradesh. Due to different administrative units, sessions on field methodologies and hand-on training were conducted separately for Tiger Reserves and non-tiger reserve participants.



Mukhi, the first Indian-born cheetah to reach adulthood, gave birth to five cubs in November 2025



Project Cheetah continues to make history, marking a remarkable chapter in global wildlife conservation. As of December 2025, the reintroduction program has recorded 30 cheetahs, including 19 cubs born in India. This milestone demonstrates India's growing success in restoring a species that went extinct from the subcontinent over seven decades ago.



In June 2025, an Indian delegation visited South Africa to discuss the progress of Project Cheetah, sharing key updates on achievements, challenges, and future plans. During the visit, India formally handed over all technical and monitoring reports detailing the cheetahs' adaptation, health, ecology, and habitat status. The two countries also finalized the Terms of Reference for the Joint Working Group (JWG), which will serve as an important mechanism to review ongoing progress and further strengthen bilateral cooperation in wildlife conservation. A delegation from South Africa visited India in November 2025 to advance discussions on the progress and future opportunities in Project Cheetah.



An Indian delegation visited Namibia from July 27–30, 2025, to discuss the next phase of Project Cheetah. Both sides agreed to advance cooperation under the MoU on Cheetah Conservation, with India formally seeking 8–10 cheetahs on August 20, 2025, and the High Commission of India, in coordination with Namibia's environment and foreign ministries and the Cheetah Conservation Fund, is actively pursuing the required documentation to facilitate the process.



An Indian delegation visited Botswana from September 8–12, 2025, to advance collaboration under Project Cheetah. The visit reaffirmed the strong partnership between India and Botswana in wildlife conservation and underscored shared commitment to the long-term success of global cheetah recovery efforts. The President of India visited Botswana in November 2025, where India was officially handed over 8 cheetahs by Botswana. These cheetah have been successfully released in quarantine facilities.



Initiated by India, the International Big Cat Alliance (IBCA) continues to build global partnerships for the conservation of big cats

Member Countries



Partner Organizations



Observer Countries



Kazakhstan



Thailand



Namibia

Strategic Partners



Food and Agriculture
Organization of the United
Nations, Italy

UN World Tourism
Organisation, Spain



United Nations Development
Program, USA





ART *for* CONSERVATION

Silent Conversation: From Margins to the Centre

In October 2025, the India Habitat Centre in New Delhi witnessed a remarkable convergence of cultural heritage and environmental consciousness through the fourth edition of *Silent Conversation: From Margins to the Centre*. The artworks showcased the deep-rooted connections between Indigenous communities and the ecological systems they have nurtured for centuries. Curated with the close involvement of tribal artists residing within these biodiverse regions, the exhibition provided a vivid window into how nature, ritual, and culture come together to form uniquely vibrant visual traditions.

A spectrum of revered tribal art forms was on display, including the Gond paintings of central India, the Warli art from Maharashtra, Bhil works of western India, Sohrai from Jharkhand, among others. The exhibition also displayed the stunning Lohakam metalwork along with other lesser-known tribal forms. Each piece represented inherited wisdom of the centuries-old relationships with forests, rivers, and wildlife that continue to shape daily life and cultural identity.

The exhibition also featured a dynamic cultural evening organized in collaboration with the Indira Gandhi Rashtriya Manav Sangrahalaya (IGRMS), Bhopal, and the Sankala Foundation. Held on 9 October 2025 at the India Habitat Centre Amphitheatre, the event celebrated tribal music, dance, theatre, and oral storytelling. These performances were not merely entertainment, they demonstrated the vibrancy of cultures shaped by generations of ecological harmony.

A significant highlight of the event was the *National Conference on Tribal Arts and India's Conservation Ethos: Living Wisdom*, held on 10 October 2025 at Silver Oak, IHC. It brought together artists, policy experts, conservationists, scholars, practitioners, and community leaders, to explore how tribal communities have shaped both India's ecological resilience and its cultural identity.

The Silent Conversation: From Margins to the Centre exhibition has successfully created a platform where marginalized voices are honored, not as remnants of the past but as essential contributors to India's present and future. The exhibition has demonstrated that preserving tribal art is inseparable from preserving the relationships between people and nature, relationships that have safeguarded India's forests far longer than formal conservation laws. It encourages civilians, institutions, and policymakers to rethink how heritage is valued and protected.

Through art, performance, and thoughtful academic exchange, the fourth edition of Silent Conversation sparked meaningful contemplation on what it truly means to listen, to those who carry within them a powerful legacy of ecological wisdom. The conversation may have been silent, but the message resonated loudly: when tribal communities move from the margins to the centre, India moves closer to a more inclusive and sustainable future.



Roaring Back: The Dramatic Revival of Tigers in Western Rajaji

In a groundbreaking in-house effort, the Uttarakhand Forest Department successfully reintroduced tigers to Rajaji Tiger Reserve, leading to the birth of five cubs and marking the triumphant return of the apex predator to this critical habitat.

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SCIENTIFIC CORRESPONDENCE

First photographic evidences of two rare cats from Pakke Tiger Reserve, western Arunachal Pradesh

The Asiatic golden cat and marbled cat are popularly called small cat species among the wild felids. Both these cats are found distributed in the South East Asian region and come from a common lineage of bay cats and inhabit moist evergreen forests. They are placed in the 'Near threatened' and 'Vulnerable' category, respectively, according to the IUCN. Both are found in a variety of habitats. Nevertheless, both cats face numerous pressures from deforestation and hunting.^{1,2}

The marbled cat (*Paradoxipus amoenus*) is found in tropical Indo-Malaya westward along the Himalayan foothills westward into Nepal and eastward into

The Asiatic golden cat is rather heavily built with a uniform but highly polymorphic pelage ranging from black to golden red, that may also be marked with spots and stripes in a pattern similar to that of the leopard cat. The body size of the Asiatic golden cat is similar to that of the clouded leopard. It does not show any significant preference for particular habitats³ and is known to occur in forested habitats, including dry deciduous forest, evergreen forest and tropical rainforest⁴, as well as in near open habitats such as shrubs and grasslands⁵. Some studies have suggested it may be less common in mountain forests in the Karbi Wildlife National Park, Norenga, all re-

In India, the golden cat marbled cat are found in a where they occur mainly in and foothills of the Lesser Himalayas records within include Manipal National Park⁶, Kanheria Reserve, Siddin⁷, Jaypuri and Malhera⁸, and M Park in Assam⁹. The cats seem to be restricted to Malayan foothills below 3000 m altitude, associate deciduous and semi-ever habitats^{10,11}. It is found in well as in Jammu and Kashmir reports from India are fr

The wild dog that was spotted was completely black and the details about the sighting has been informed to the Divisional Forest Officer of the Sahyadri Tiger Reserve and Assistant Conservator of Forests. In order to track the moment of the wild animal, the forest staff have been instructed to install cameras



Colourful Monkey Puzzle butterfly spotted in MP's Pench Tiger Reserve

Forest guards turn lens-men with their cell-phones, help Madhya Pradesh's Pech Tiger Reserve spot and identify 100 butterfly and 44 wild mushroom species



Among the butterflies, the Monkey Puzzle 'Yadhu' was captured on camera—believed to be the first time it has been spotted in the forests of Central India.



A Forest Dept. Credit: NNTS

Muzfand. In what comes as a good news for birders, naturalists and conservationists, the elusive and endangered Forest Owl was spotted during a camp at the Melghat Tiger Reserve in the Amravati district of Maharashtra in January.

The animal was last reported in 1978 in southern areas of Gondia district; India is home to three other species



The Eurasian civet. Photo:Kharasika Forest Department/NNTS

The camera traps installed at the Naingaon-Nagrex Tiger Reserve (NNTS)—located 850 km northwest of Mumbai—recorded the first-ever photographic evidence of a Eurasian civet (*Lontra lutra*) within its landscape. NNTS is spread across Gondia and Bhandara districts, bordering

Eight new species found in herpetofauna survey at PTR

Five new species of amphibians and three new species of reptiles found. The survey from June 7 to 16 identified 63 species of amphibians and 81 species of reptiles

Updated: June 12, 2024 10:55 AM IST | 06:00 AM

THE HINDU JOURNAL

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A black panther cub that was spotted in Bhadra

A black panther cub that was spotted in Bhadra Tiger Reserve. | Photo Credit: Photo courtesy: Anirudh Ramachandri

"Another milestone in tiger conservation"

A tigress from Tadoba Tiger Reserve has been successfully translocated and released in Sahyadri Tiger Reserve, marking the beginning of the long drawn recovery efforts. The dedicated team of WII (Akash Patil, Susmita Patil, Harshita

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Releasing the endangered Mouse Deer in a special enclosure at Amrabad Tiger Reserve for acclimatisation before release into the wild. Let's help save this tiny icon from extinction! 🐿️ #SaveMouseDeer #WildlifeConservation @AmrabadTiger



Kalakad Mundanthurai Tiger Reserve, Tamil Nadu's largest, is prioritizing tiger conservation through grassland management to boost prey populations. Forest officials aim to address the challenge of low tiger numbers due to dense forests and limited grasslands. Efforts include controlled burning and habitat improvement to attract more prey, ultimately increasing the tiger population in the reserve.

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Modi praises role of Soligas in tiger conservation

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Prime Minister Narendra Modi made a reference to Soligas of SRT Tiger Reserve in the 19th edition of Hissar ki Khas which was broadcast on Sunday and appreciated their contribution to tiger conservation.

4 rare tiger beetle species spotted for first time in UP's Dudhwa Tiger Reserve

KNNV AgNews / The7 / Aug 14, 2023, 08:28 AM

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The study was carried out by tiger expert Samp Prasad Ojha and more than 100 volunteers, under the guidance of Bangaluru-based wildlife group KOAR.

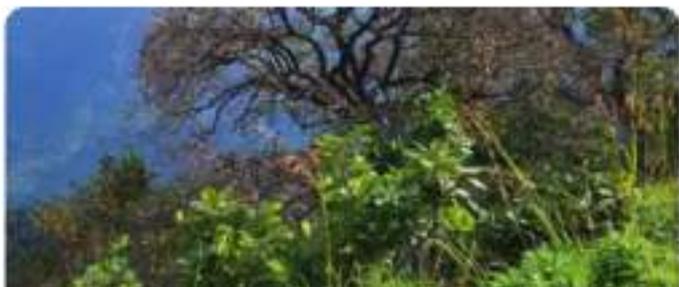


Tiger beetle on mud, showing the brown and black spots.

PILIBHIT: A 25-day field survey at Dudhwa Tiger Reserve (DTR) in July has led to the discovery of 19 tiger beetle species—four of them rare and never recorded before in Uttar Pradesh. This marks a significant addition to India's insect biodiversity.

The study was carried out by Vipin Kapoor Saini from DTR and Rohit Ravi from WWF-India, under the guidance of Bangaluru-based wildlife group KOAR. Their findings were officially documented, confirming the presence of *Lophyra*

naniguttata, *Rhytidoponera histata*, *Cicadella cyanea*, and *Cylindera venosa*—species whose known range has now been extended by over 400 km.



Established in 1988, the Kalakad Mundanthurai Tiger Reserve (KMTR) was the first in the state. Spanning 1,601 sq km, it is the largest of the five reserves in Tamil Nadu. Yet, it's better known for its dense evergreen forests, rich vegetation, and high diversity of flora, most of which includes

Tamil Nadu is giving tigers more room to roam: In a first of its kind move in southern India, the govt has acquired patta lands and once-upon-a-time ganja plantations to create a wildlife corridor to protect the big cat

Parambikulam Tiger Reserve adds 15 new species to its biodiversity checklist

A biodiversity checklist in Parambikulam Tiger Conservation Zone (PTCZ) in association with Tamil Nadu State Biodiversity Institute and other non-governmental organisations, spread 12 km across the reserve's diverse habitats

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Tiger in Madhavali. Picture credit: Rakesh Kumar Dogra

Tamil Nadu's tigers are on the move, and the govt is helping them by pushing boundaries.

The state is pushing tiger conservation beyond reserve boundaries. In 2022, the forest department acquired 38.5 acres of private land near Megamalai to create a corridor linking it to the Srivilliputhur-Megamalai Tiger Reserve (SMTR). Other strategies include acquiring more land with consent, extending M-Stripe monitoring to spillover and human-inhabited areas, removing invasives, involving local communities, tapping



eco-development funds and recruiting more than 1,900 forest staff.





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