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TRUMPET

QUARTERLY JOURNAL VOLUME V ISSUE 01 AUGUST 2025

PROJECT ELEPHANT

MINISTRY OF ENVIRONMENT, FOREST & CLIMATE CHANGE

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Photo credit: Mohan Thomas M

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FROM THE DIRECTOR'S DESK

I am pleased to state that in this edition of the "Trumpet" newsletter, we are sharing the work done for the conservation and protection of elephants, along with the recent developments and achievements made by Project Elephant (PE) and the Elephant Cell, Wildlife Institute of India, during the period January–July 2025. This is a special edition; articles primarily focus on the theme "**Elephants and Tribes in India**." In the conservation news, the work done for the betterment of elephants and their habitats is highlighted. The last six months have been very active in PE, as a number of meetings and workshops were organized.

The 21st Steering Committee Meeting of Project Elephant was held on 26th June 2025 at Indira Gandhi National Forest Academy, Dehradun, under the chairmanship of Hon'ble Minister of Environment, Forests, and Climate Change, Government of India, Shri Bhupender Yadav. The meeting deliberated upon capacity building of frontline staff and mahouts; further, the deliberation on the need for collaborative efforts between different government departments to deal with human-elephant conflicts in a responsive manner was done. The following publications were also released during the steering committee meeting: Report on Suggested Measures to Mitigate Elephant & Other Wildlife Train Collisions on Vulnerable Railway Stretches: a consolidated report for 14 states; state-wise report on understanding elephant conflict issues for suggesting conflict reduction measures for the states of Assam, Chhattisgarh, and Jharkhand; advisory on tusk trimming; and TRUMPET Quarterly Journal—January 2025.

The 5th Meeting of the Captive Elephant Healthcare and Welfare Committee (CEHWC) was held on 7th March 2025, wherein deliberations on various aspects of captive elephant healthcare, welfare, and the capacity building of mahouts were undertaken. The eighth (8th) meeting of the Central Project Elephant Monitoring Committee (CPEMC), Project Elephant, was held on 17th March. It was noted by the chair that the progress of ongoing work is satisfactory, and many milestones have been achieved by Project Elephant in the last couple of years.

The project to create a repository database of captive elephants in India is progressing well; data of more than 1,900 captive elephant biological samples from 22 states have been collected.

One of the major tasks taken up by Project Elephant is the drafting of the regional action plan. The drafting subcommittee for the Southern region has been constituted, the data collection is completed, and the fieldwork is being done. Further, the process of formation of the drafting subcommittee for the Northeastern Region is underway.

The following events are on the calendar: Celebration of World Elephant Day at Coimbatore, Tamil Nadu. Various workshops on the experience sharing of good practices, a conference for the traditional communities and tribes associated with captive elephants, a workshop for young ambassadors to raise awareness about elephant conservation, and a national workshop for elephant reserve managers to strengthen reserve management across India.

I am confident that the habitats, landscapes, and corridors of elephants will be preserved, and that future generations will live in harmony with these magnificent creatures, thanks to the coordinated efforts of the central government, state forest departments, line departments, civil society, and other stakeholders.

Dr Sanjayan Kumar
Director, Project Elephant

Photo credit: naturepl.com / Felis Images / WWF

1 MUDUMALAI ELEPHANT CAMP AT THEPPAKADU: A CENTURY OF CONSERVATION AND CULTURAL HERITAGE

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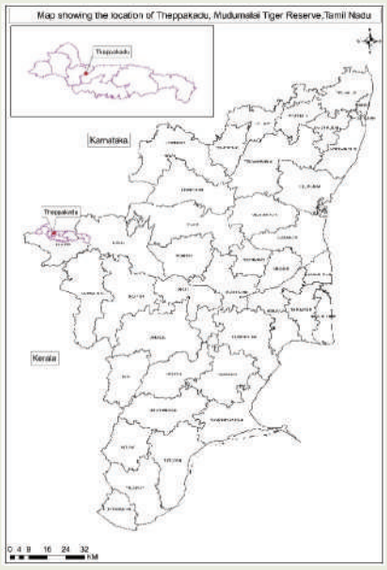
Photo credits: Black and white photo from TN FD archives, all other colour photos from Mudhumalai Tiger Conservation Foundation.

INTRODUCTION

Nestled within the verdant landscape of the Mudumalai Tiger Reserve in Tamil Nadu, India, the Elephant Camp at Theppakadu stands as a remarkable testament to the enduring bond between humans and elephants. The Elephant Camp in Mudumalai National Park is one of the oldest camps in the Country. It was established way back in 1910. This extraordinary facility represents far more than just an elephant camp—it embodies a living cultural tradition that spans millennia, bridging ancient wisdom with contemporary conservation practices.



Located at Theppakadu on the banks of the Moyar River, the camp occupies a strategic position within one of India's most biodiverse regions. The facility serves as the permanent core of a network that collectively houses 27 captive Asian elephants as of this date. These gentle giants, ranging in age from 1 to 76 years, represent the culmination of over a century of elephant management expertise that has made Theppakadu a model for similar facilities across Asia.

Aerial view of the Elephant camp

The camp's significance extends far beyond its operational achievements. It has gained international recognition through the 2023 Oscar-winning documentary "The Elephant Whisperers," which showcased the profound relationship between the camp's tribal caretakers and the elephants.

From the Sky: Theppakadu Elephant Camp at Mudumalai Tiger Reserve

HISTORICAL FOUNDATIONS

The practice of capturing, training, and utilising elephants in India traces its roots back to the Indus Valley Civilisation, making it one of the world's oldest human-animal partnerships. Early Tamil literature from the Sangam period (300 BC - 300 AD) contains extensive documentation of elephant training and management techniques, establishing a rich literary and practical foundation that continues to influence modern practices.

The specific history of Theppakadu Elephant Camp begins with the British colonial administration's need for timber extraction in the Western Ghats. The British East India Company, having established its base near Chennai, found the forests of the Nilgiris particularly attractive due to their accessibility and rich timber resources. The challenging terrain and dense forests necessitated the use of elephants for logging operations, as these powerful animals could navigate areas inaccessible to other forms of transport.

Elephant capture operations in the Mudumalai region began as early as the 1850s, initially conducted from temporary camps. A significant milestone came in 1910 when a temporary camp was established at Game Hut. However, the permanent Theppakadu Elephant Camp was formally established in 1927, marking the beginning of what would become nearly a century of continuous operation. This establishment represented a shift from purely extractive practices to a more systematic approach to elephant management and training.

The colonial period saw the development of sophisticated capture techniques and management systems, many of which were based on traditional Indian methods refined over centuries. The British administrators, recognizing the expertise of local tribal communities, incorporated indigenous knowledge into their operations. This collaborative approach laid the foundation for the participatory management model that continues to characterize the camp today.

Following India's independence, the camp's role evolved significantly. The cessation of commercial logging in 1975 marked a turning point, transforming the facility from a timber operation support centre into a conservation

and rehabilitation facility. This transition reflected the changing attitudes toward wildlife conservation and the recognition of elephants' intrinsic value beyond their utility as working animals.

A timeless bond: Born and raised in the camp, Vijay and Sujay, the twin elephants, stand as a testament to their enduring journey.

CULTURAL HERITAGE AND INDIGENOUS WISDOM

The Theppakadu Elephant Camp serves as a living repository of indigenous knowledge systems that have been developed and refined over millennia. The camp's operations are fundamentally dependent on the expertise of tribal communities, particularly the Malasar, Kurumbar, and Kattunayakar people, who have maintained intimate relationships with elephants across generations.

These indigenous communities possess an intuitive understanding of elephant behaviour, psychology, and needs that cannot be replicated through formal training alone. Their knowledge encompasses everything from reading subtle behavioural cues to understanding the complex social dynamics that govern elephant interactions. This expertise is passed down through oral traditions, hands-on experience, and deep cultural connections that view elephants as sacred beings worthy of reverence and respect.

The linguistic dimensions of this cultural heritage are particularly fascinating. Elephants at the camp are trained to understand commands in multiple languages, including Tamil, Malayalam, Kannada, with elements of Urdu and Hindi. The mahouts and cavadies use a specialised vocabulary that represents a unique fusion of South Indian languages, reflecting the multicultural nature of the region and the diverse backgrounds of the elephant handlers.

The tribal communities living in three hamlets near the camp—Light paadi, Teak paadi, and Yaanai (elephant) paadi—maintain their traditional lifestyles while serving as the primary source of skilled elephant handlers. Their daily routines are synchronised with the elephants' needs, creating a harmonious relationship that extends beyond mere caretaking to genuine companionship and mutual respect.

The spiritual significance of elephants in Indian culture adds another layer to the camp's cultural importance. Elephants are revered as embodiments of Lord Ganesha, one of Hinduism's most beloved deities, and their presence in the landscape is considered auspicious. This spiritual dimension influences every aspect of the camp's operations, from the gentle training methods employed to the reverent care provided to elderly and retired elephants.

Elephants being trained at Theppakadu Elephant Camp

A bond forged in trust: The unbreakable connection between mahout and elephant.

Elephant feeding at Theppakadu Elephant Camp

CONSERVATION INNOVATION: BEYOND TRADITIONAL APPROACHES

The Theppakadu Elephant Camp has pioneered several innovative approaches to elephant conservation that have influenced practices across Asia. Perhaps most significantly, the camp has completely eliminated the use of ankush (sharp hooks) in elephant training, instead relying on positive reinforcement techniques using treats like sugar cakes, bananas, and jaggery. This humane approach has proven highly effective while maintaining the strong bonds between elephants and their handlers.

The camp's network model represents another innovative conservation strategy. Rather than housing all elephants in a single location, the facility operates through a system of one permanent camp and seven satellite camps. This approach provides several advantages: it allows for better distribution of elephants based on seasonal resources, reduces stress on local ecosystems, enables specialised care for different groups of elephants, and provides flexibility in responding to human-wildlife conflict situations.

The Theppakadu Elephant Camp rehabilitates conflict' elephants that enter human habitations and come into conflict with people. These elephants are given proper training at these camps and converted to Kumki elephants. This rehabilitation function has become increasingly important as human settlements expand into traditional elephant habitats. Rather than eliminating problem elephants, the camp provides them with a second chance through careful training and socialisation.

These highly trained Kumki elephants are also crucial in resolving human-animal conflicts, safely guiding wild elephants away from human settlements, and actively participating in anti-poaching patrolling within the reserve, serving as an invaluable asset in wildlife protection.

A unique feature of the camp is its dedicated approach to rearing orphaned elephant calves from the wild. These vulnerable young elephants receive comprehensive care that seamlessly blends the invaluable traditional knowledge of the tribal communities with advanced veterinary medical attention. This holistic approach ensures their healthy development and successful integration into the camp's elephant family.

The delicate process of securing a conflict elephant, made possible by the strength and calm presence of Kumki elephants.

The delicate process of securing a conflict elephant, made possible by the strength and calm presence of Kumki elephants.

The camp's contribution to research and education cannot be overstated. It serves as a living laboratory where researchers from around the world study elephant behaviour, physiology, and psychology under controlled conditions. The insights gained from these studies have contributed to improved welfare standards for captive elephants globally and have enhanced understanding of wild elephant behaviour and conservation needs.

A pivotal figure in this regard was Dr. V. Krishnamurthy, affectionately known as 'Dr. K,' who served as the camp's resident elephant veterinarian for decades. His profound understanding of elephant health, behaviour, and management, combined with his compassionate approach, made him a legendary figure in elephant conservation, significantly shaping the camp's veterinary practices and contributing immensely to the well-being of its elephants.

The facility's role in breeding has also yielded significant conservation benefits. Since its establishment, the camp has recorded 51 elephant births, including the rare occurrence of twins—Vijay and Sujay, born to an elephant named Devaki in 1971. Both twins remain active in the camp today, serving as valuable contributors to conservation efforts and as living testaments to the camp's successful breeding.

Dr. K: the elephant doctor.

Moyar River mornings: A serene scene as elephants enjoy a playful dip and wash

FUTURE PROSPECTS

Tourism management presents both opportunities and challenges for the camp. While tourism provides important revenue and raises conservation awareness, it also requires careful management to prevent stress on the elephants and maintain the camp's primary conservation mission. The camp's future success depends on maintaining the delicate balance between tradition and innovation. Plans for modernisation include upgrading visitor facilities, expanding research capabilities, and enhancing educational programs. However, these developments must be implemented carefully to preserve the traditional management practices and cultural elements that make the camp unique.

GLOBAL RECOGNITION AND CONSERVATION IMPACT

The camp's influence extends far beyond India's borders. Trained elephants from Theppakadu have been transferred to other countries, including Sri Lanka and Thailand, where they have contributed to local conservation efforts. Similarly, elephant handlers from various Indian states, including Chhattisgarh and Maharashtra, have received training at the camp, spreading its methodologies and approaches across the subcontinent.

The camp has hosted numerous international delegations and researchers, serving as a showcase for humane elephant management practices. Study tours to the Thailand Elephant Conservation Centre have facilitated knowledge exchange and cross-cultural learning, contributing to improvements in elephant care standards.

"The Elephant Whisperers" documentary Short Film brought global attention to the camp's conservation efforts and the remarkable relationships between indigenous caretakers and orphaned elephants. This recognition has validated decades of quiet, dedicated work by the camp's staff and has highlighted the importance of traditional ecological knowledge in modern conservation efforts.

Moyar River mornings: A serene scene as elephants enjoy a playful dip and wash

Mahout Village in Theppakadu

Honourable President of India Smt. Droupadi Murmu and Honourable Prime Minister of India Thiru. Narendra Modi visits to Theppakadu Elephant Camp, marking a historic moment of national recognition for wildlife conservation efforts.

In recognition of the mahouts and cavadies, Honourable Chief Minister of Tamilnadu Thiru. M.K. Stalin announced 44 Mahouts' quarters and inaugurated the same in Theppakadu elephant camp, built at the cost of Rs. 4.4 crores.

CONCLUSION

The Theppakadu Elephant Camp stands as a remarkable example of how traditional knowledge, cultural respect, and modern conservation science can combine to create sustainable solutions for wildlife conservation. As it prepares to celebrate its centenary in 2027, the camp faces the future with a rich legacy of achievement and a clear vision for continued service to both elephants and the communities that depend on them.

The camp's success lies not merely in its longevity or its impressive statistics—85 elephants trained, 51 births recorded, countless conflicts resolved—but in its demonstration that humans and elephants can coexist in mutually beneficial relationships. The deep bonds between tribal caretakers and their elephants represent something increasingly rare in our modern world: a genuine partnership between humans and wildlife based on respect, understanding, and love.

Looking ahead, the Theppakadu Elephant Camp's role as a conservation leader, research centre, and cultural heritage site will only grow in importance. As wild

elephant populations face increasing pressure from habitat loss and human encroachment, facilitators like Theppakadu serve as crucial bridges between wild and human-dominated landscapes. They provide sanctuary for problem elephants, contribute to scientific understanding of elephant behaviour and needs, and maintain cultural traditions that represent thousands of years of human-elephant coexistence.

In an age of environmental crisis and species extinction, the Theppakadu Elephant Camp offers a different narrative—one of successful conservation, cultural preservation, and the enduring power of traditional wisdom. The story of Theppakadu is a continuing testament to the best of human nature and our capacity to serve as protectors rather than destroyers of the natural world we share.

Photo credit: Anuradha Marwah

2 TRIBAL COMMUNITIES, CONFLICTS AND CONSERVATION OF ASIAN ELEPHANTS IN AND AROUND INTANKI NATIONAL PARK, PEREN DISTRICT OF NAGALAND, INDIA: TOWARDS A TRUCE WITH THE GIANTS

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INTRODUCTION

The relationship between wildlife and indigenous tribes has long been a source of contention in conservation discussions. This association is not just theoretical rather it is lived, negotiated and reinvented daily in the Intanki National Park (INP) of Nagaland. INP is one of the important designated elephant reserves of the state, and thus it plays an important role in both ecological connection and human-wildlife interaction. This article reports the interaction of INP and its peripheral tribal surrounding with a focus on discussion to promote natural coexistence with the giants. It also investigates how people and elephants are forging a truce across a shared and transforming terrain using the perspective of cultural memory, developing governance frameworks, and participatory conservation techniques.

Species conservation requires adequate knowledge and understanding of their behaviour and interaction of the population and the ecosystem. Nature of selective habitat behaviour depends on their co-existence amongst their intra- & inter-specific community, food & water availability, seasonal & climatic variations, and their breeding habit (Charnov, 1976; Neupane *et al.*, 2019; Oliver & Morecroft, 2014; Sukumar, 1989). However, in recent years, due to number of anthropogenic activities to meet the demand

Photo 1: Camera Trap Image of Intanki NP resident elephants (P.C: - Imnawapang Jamir)

and supply of growing human population, forest outside protected areas have suffered extensive depletion. This has led to the degradation of half of the tropical forest mostly due to conversion of lands for agricultural expansion, mono-plantations, mining, urbanization, and industrialization. These activities have ultimately led to habitat fragmentation which has been the major driving force of human-elephant conflict (HEC) as their normal hereditary corridors are disturbed forcing the mammals to look for food and water from their usual path, especially in the hills of the Nagaland.

ELEPHANTS AND THE NAGAS:

The relationship between the Naga tribes and the elephant is a profound interplay of reverence and reality, deeply embedded in their cultural fabric. Elephants do not hold much religious significance for the Nagas, except for the Dimasa Kachari tribe of Nagaland, who worship it in the form of Ganesha. However, the cultural memory of elephants among most Naga tribes of Nagaland is associated with their cultural folklore, myth and in traditional ornaments which extends beyond ecological knowledge into folklore, symbolism, and societal values. In Zeme oral tradition, an elephant features as a powerful creature to whom a desperate woman promises her unborn daughter in exchange for water to quench her thirst. Years later, when the elephant took her as bride, she proclaimed to marry the one who saves her. Two young warriors confronted and outwit the elephant in a battle of strength and wit. The cowardly companion betrays the other and steals the girl. The brave man escapes an evil spirit, finds his way back to the village, punishes the traitor, and marries the girl (Naga Journal. 2023).

Amongst the Ao Nagas, the sacred site of 'Shitilong', meaning 'Elephant Rock' (see photo 2), located in Mongsenyimti village under Mokokchung district, is portrayed as both a powerful spirit and a formidable force of nature. The folklore story speaks of a sacred stone, worshipped by forefathers (no longer worshipped in modern era) during the paganism/animism era after been discovered by Suwameren as he stumbles upon a small pebble repeatedly for several days while on his to paddy field. A spirit's dream warned him that the rock was eternally rooted, prompting its reverence as the village's guardian spirit. This sacred stone emerged to save its village from enemies by taking the form of a giant elephant during a time of headhunting, securing its role as a revered protective deity in the days of our ancestors (Apokla, n.d.). Amongst the Lotha tribe during the forefather's headhunting era, an individual who succeeded in killing an elephant, a tiger or is taking the head of an enemy was considered highly honourable. Such achievements were portrayed along the path to the Land of Death in a *Nritangpeng* (a bamboo structure), a rare and respected distinction (See photo 3). This was done after observing six of genna (mourning) for a male and five days for a female (Mills, 1922).

Material culture also reflects this reverence: elephant motifs appear in traditional architecture, particularly in the Morungs (see photo 4) and homes of high-ranking individuals of those days. In prestigious shawl of Ao tribe

Photo 2: Shitilong (Elephant Rock). Stone inscript translation: Suwameren from Nokojungba clan found this rock. This rock was first named as Suwameren Tsüngmetsülong (Suwameren stumbling stone) or Süngoko long. The rock was worshipped as the guardian of the village. Later, the stone took the form of an elephant and saved the village from the headhunting enemies. Thus, the rock has been named as Shitilong (P.C: - Imnawapang Jamir).

Photo 3: Effigy of an elephants portrayed in a Nritangpeng (bamboo structure), after genna (mourning) to portray the achievements done by the deceased Lotha hunter/warrior. [P.C: - Mills, J.P. (1922)]

like the '*Tsüngkotepsü*' also has the imprint symbol of elephant which signify power and strength, which in early days were earned and allowed to wear only if the warrior has taken head of an enemy or the person has performed a feast of merit, today it is an identity for males belonging to Ao tribe with an exception to women of Anichari clan of Longkhum tribe who are also privileged to wear this warrior shawl (Changkija, 2017; Thoudam & Mathu, 2018). Even in times of historical exchange, such as paying tribute to the Ahom rulers by the Naga tribal chiefs, elephant tusks apart from other gifts held significant economic and political value in return of which Nagas were able to barter the products brought from hills for materials/produce not found in the hills (Enie, 2016: History of Northeast India,

Photo 4: Elephant motifs crafted on a morung of Phom Clan in Longleng district, Nagaland (P.C: - Imnawapang Jamir).

2016; Konyak, 2020). These diverse strands of folklore, symbolism, and live interaction with elephants enrich the cultural landscape and can inform more culturally rooted conservation.

In Ao Naga's ancestral culture, armlets made of ivory were only worn by the Putu Menden (village governing body). The armlet signifies the great power supplied by the people to raise the community and direct it towards growth, like an elephant's mighty tusk. Today, these armlets are made of either bamboo or wood and, almost all Naga males proudly wear them as a symbol of their ancestral power, strength, and courage during traditional festival dances.

STUDY AREA

Nestled within the forested foothills of western Nagaland's Peren district lies Intanki national park, the state's sole national park, which was also declared as an elephant reserve on Feb 28, 2005. Where the rhythms of tribal life intersect with the ancient migratory paths of elephants, a fragile yet vital relationship is unfolding. Thus, the INP not only stands as a haven for wildlife but also as a stage where the evolving relationship between tribal communities, elephants, and forest authorities plays out daily. In this landscape, co-existence is not a romantic ideal, but an emerging strategy born out of urgent necessity, and the truce, yet to be achieved, has been forged in real-time through grassroot cooperation, conflict mitigation, and community-led conservation.

This INP covers an area of ca. 202 km^2, which is cradled by hills and bordered with 16 local villages (see Fig 1). Significantly, it connects with Assam's Dhansiri Reserve Forest in Karbi Anglong to form a vital contiguous wildlife corridor, stretching approximately 57 km long and 40 to 70 meters wide strip of Dhansiri river, allowing the free movement of animals. The park's landscape ranged from 180 to 693 m altitude formed a rich mosaic of East Himalayan lowland dense forests featuring subtropical

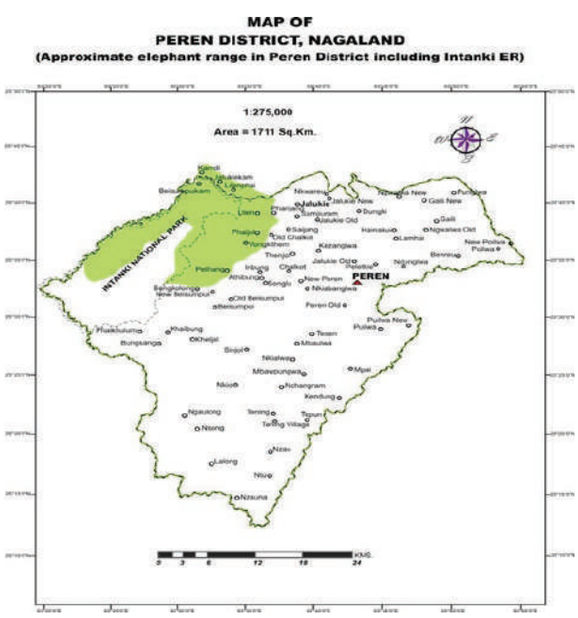

Fig 1: Map showing Intanki national Park and HEC affected areas along with rest of fringe villages

Photo 5: Glimpses of Intanki national park, Peren, Nagaland (P.C: - Imnawapang Jamir).

evergreen growth like dense bamboo brakes and moist mixed deciduous trees. This entire landscape is a crucial part of the Indo-Malayan biodiversity hotspot (Mittermeier *et al.*, 2011). Further, it serves as a rich repository for a spectacular variety of orchids and numerous medicinal plants traditionally used by local Naga tribes (Jamir *et al.*, 2022). The park also has rich animal diversity with reported 42 species of mammals, including the endangered Chinese pangolin, dhole, hoolock gibbon, 108 species of avifauna, 50 species of fish, and many butterflies. The recent all India synchronized elephant estimation for Northeast 2024 survey estimated that INP hosts a population of around 40 elephants (Jamir *et al.* 2015; Kumar and Kaul 2013; Das *et al.* 2018).

However, forest fragmentation along the fringes due to expanding roads, plantations, shifting cultivation and settlements is threatening this delicate balance which will negatively affect the elephant population in the area due to HEC. The continuous loss of biodiversity, however, also causes conflict when wildlife habitats and human settlements inevitably overlap at the edges of the park. The peripheral landscape of INP is inhabited by Zeliangrong, Kuki, Dimasa and other tribes who depend on agriculture and forest resources. This reliance has historically led to pressures on the park, including illegal hunting and poaching from local and neighbouring communities (Longchar, 2003; Kumar and Kaul 2013).

PERIPHERAL INTERACTION WITH THE GIANT

Subsistence practices such as *jhum* (shifting) cultivation and gathering of non-timber forest products (NFTPs) from forest further increases the conflict with the growing presence of elephants. Crop raiding, destruction of granaries, and damage to property are standard, especially during the harvest season. These confrontations, once infrequent and only seasonal, have become a more persistent issue in recent years. Fear now looms over daily life, forcing people to choose between protecting their livelihoods and facing confrontations with one of nature's most formidable creatures, which, once rare and seasonal, have become chronic. Fear now shadows everyday life. People must choose between safeguarding their livelihoods and confronting one of the nature's most powerful species.

INP is a vital elephant reserve in Nagaland, yet HEC in peripheral areas has sharply increased in recent years. Seasonal elephant movements from Dhansiri, especially during peak harvest month between July - August for jhum and kharif crops and Nov - Dec for wet rice cultivation and rabi crops, along with the resident elephants, often bring them into direct contact with local communities, leading to significant damage to crops, water sources, and homes, resulting in economic losses and emotional distress. This rise in conflict underscores the urgent need for effective mitigation strategies, including early warning systems, strong crop protection methods, and fair compensation mechanisms to protect both wildlife and human livelihoods.

DEPREDATION DUE TO HEC

The tangible impact of elephants on local communities is starkly illustrated by the significant crop and property damage recorded over the past five years. According to data received from Nagaland Forest department, reveals a severe and escalating trend in agricultural losses, peaking in 2023-2024, with a staggering 1,293 hectares of crops destroyed. Across the entire period, staple and commercial crops such as Paddy, Rubber, and Areca Nut consistently bore the brunt of the damage, directly impacting the food security and livelihoods of the villagers. Beyond agriculture, the conflict extends to property, with 431 huts and other structures like fencing walls damaged between 2020 and 2025. Thus, it has resulted in a direct financial property loss of over ₹32.8 lakhs for the affected families, highlighting the profound and multifaceted economic burden that HEC imposes on these fringe communities year after year (See Fig 2,3,4 & 5).

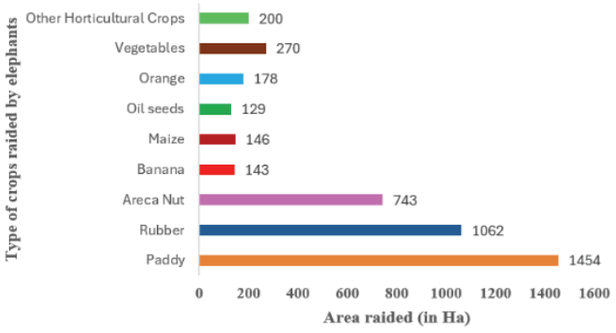

Fig 2: Total crop damage (in Ha) caused by elephants, organized by type and year (2020-2025)

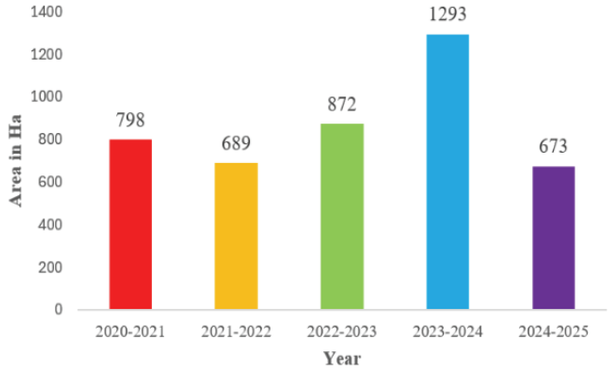

Fig 3: Annual crop area damage (in Ha) by elephants between 2020-25

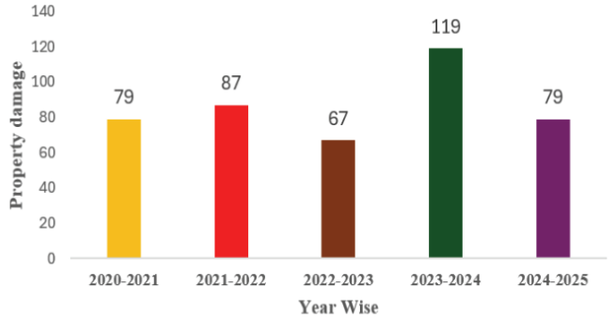

Fig 4: Property damage (Huts/Fencing) by elephants between 2020-25

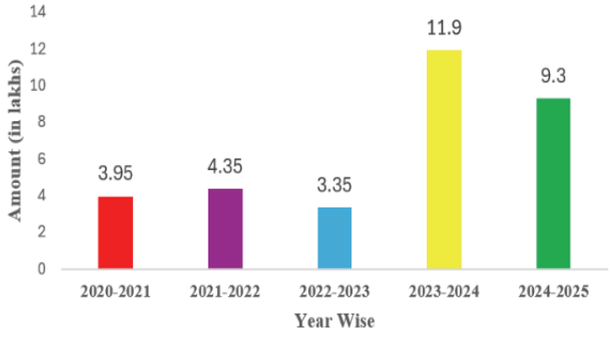

Fig 5: Total financial loss incurred due to property damage (in lakhs) between 2020-25

DISCUSSION

The long-term security of INP is dependent on a critical but unresolved strategic challenge: the paradox of the interstate corridor connecting it to Assam. The administrative border between Nagaland and Assam divides what is otherwise an ecologically continuous area for migrating elephants, tigers, leopards, etc. This jurisdictional gap prohibits coordinated, transboundary forest management, a shortcoming that directly jeopardises the corridor's continuity while exacerbating habitat degradation and conflict. Apart from its principal importance as a migratory route, this corridor performs an important secondary function: it operates as a critical buffer zone, safeguarding INP from agricultural encroachment despite ongoing illegal felling and encroachment on the Dhansiri reserve. The continuous presence of resident elephants in INP is the fundamental reason for conserving this forest cover. In this way, there is a symbiotic relationship: the corridor keeps the elephants moving, while the moving elephants keep the corridor—and, by extension, the park—alive.

Scientific research in and around the park has underscored the high ecological stakes and informed the direction of conservation efforts. A remote sensing study between 1999 and 2017, for instance, revealed a worrying trend of rapid forest loss and fragmentation, particularly in the vital buffer areas adjacent to human settlements (Liezietsu *et al.*, 2022). Simultaneously, assessments by organizations like Birdlife International have confirmed the high ecological integrity of the elephant corridor connecting INP to Assam, highlighting the park's critical role in the broader landscape.

More recently, modern tools (i.e. camera-trap data, remote sensing imageries etc.) are shaping mitigation efforts more effectively by providing a clearer picture of wildlife movement patterns which is further supplemented by community engagement through awareness and sensitisation programs. These efforts are aiding directly in conflict prediction and prevention. Recently, the department has also made an effort to put up a documentary titled "The Hidden Forest Intanki National Park". This is the first-ever wildlife documentary on Nagaland, offering a breathtaking glimpse into the rich biodiversity of Intanki National Park. Together, these findings make a compelling case for a conservation model that blends rigorous science with localized experience.

With the growing challenges associated with managing HEC along the fringes of INP, the emerging coexistence model aimed at fostering a collaborative effort between

Photo 6: Activities carried out by the forest officials at the Intanki National Park for the community

the Nagaland Forest Department, national park and the tribal communities faces an uphill task. This partnership is anchored in a shared commitment to both community cohesion and the conservation of the region's elephant reserves. Rather than simply enforcing wildlife restrictions, forest officials are taking a more supportive role, actively supporting and improving through engagement with the local village councils. This method allows community members to have an active role in decision-making processes that influence both their livelihoods and the preservation of their natural heritage along with elephants.

Photo 7: Community engagement with fringe villages by INP and Forest department officials

The coexistence paradigm emerging in INP signifies a substantial institutional change from a socio-ecological standpoint. In order to become a cooperative partner, the Forest Department is intentionally downplaying its enforcement function. According to our study, this is a direct reaction to previous top-down strategies demonstrated limitations to mitigate HEC. Rebuilding this relationship currently entails making direct investments in the community's quality of life through community engagement and essential developmental support such as road maintenance, solar lighting, water infrastructure, sapling distribution, and the distribution of poultry and livestock. This strategy accomplishes two goals: it provides for the urgent needs of the community while also establishing a forum for discussion and shared accountability. From cooperative afforestation initiatives within village authorities to youth-led patrols that supplement contemporary monitoring systems. The success of this social investment is demonstrated by the subsequent growth of robust, community-led conservation measures.

CONCLUSION

The story of INP is still developing, with strands of trial and error, persistence, and unwavering hope. This lively, biodiversity-rich area serves as a battleground for an ongoing truce between its human inhabitants and the majestic elephants that wander it. Every day, this delicate balance is maintained through meaningful community gatherings, committed forest patrols, and shared moments that represent the vulnerability and strength of individuals who live here. True peace will be achieved via harmonious synergy rather than division. Intanki is more than just a national park; it serves as a living experiment for coexistence. In this magical domain, elephants' thunderous footfall and farmers' resolute strides may one day converge—not in war, but in a profound partnership founded on deep mutual respect and the common desire for survival.

Photo 8: Drone image of foraging resident elephant captured near lush green Misapdisa area of Intanki national park

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3 TRIBES - ALL TIME COMPANION OF ELEPHANTS

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Asian elephants *(Elephas maximus)* are among the most endangered species and the largest terrestrial herbivore species in the world. Elephants are recognized as flagship species and have been conferred the status of 'National Heritage animal'. The major physical traits of Asian elephants are smaller ears and frame than African elephants; adult height up to ~3 m and weight up to 5 tonnes. Elephants are referred to as ecosystem engineers due to their transformative role in the ecosystems where they create water holes that are also used by other wildlife for their survival during dry season, clear understories to promote new plant growth in forests, and facilitate seed dispersal of several important tree species, due to their highly mobile nature.

Currently, elephants occur in highly fragmented populations across 13 range countries in Asia. Among these countries, India holds the largest (> 60%) and one of the most stable elephant populations. According to the 2017 census, the estimated population of elephants in India was approximately 29,000. The report of the latest census conducted in 2022 is yet to be released. Being a highly mobile species with large home range, spanning 100 to 3000 km^2, the integrity of elephant habitat rests on maintaining contiguity between habitat patches. Historically, the significance of the elephant in Indian culture and mythology, as well as its economic and military role in sub-continental armies, has also contributed to a remarkable level of tolerance and support of people towards its survival and conservation.

Elephants in natural grasslands

Elephants in the changing environment

RELATIONSHIP OF INDIAN TRIBE WITH THE ELEPHANT

In India, tribes and elephants have shared a deep and complex relationship for centuries, rooted in coexistence, cultural reverence, and mutual dependence. Many tribal communities perceive elephant as sacred animals. They incorporate elephants in their festivals symbolizing for prosperity and rain. They also believe the presence of elephant at celebrations is auspicious and sacred. This bond is particularly strong among indigenous communities living near forests, such as the **Malasar, Kurumba, Kadar, Irula, Kattunayakan** and **Soliga** tribes in **South India, and the Mishing, Bodo,** and **Adivas** tribes in the Northeast.

1. Cultural and Spiritual Connection:

• *Elephants in Tribal Mythology:* Many tribes consider elephants sacred and associate them with deities or ancestral spirits. For example, the **Kattunayakan tribe** (Kerala/Tamil Nadu) worships Lord Ganesha (Hindu elephant god) as manifestations of their gods.

• *Festivals & Rituals:* Some tribes participate in elephant festivals, like the **Jenu Kuruba** tribe in Karnataka, which celebrates elephants during local temple processions. Tribal festivals sometimes include elephant-themed dances and rituals.

• *Totemic Beliefs*: Certain clans within tribes identify elephants as their totems, forbidding harm to them.

2. Economic and Practical Relationship:

• *Traditional Mahouts*: Many tribal communities, like the **Malasar** (Tamil Nadu) and **Gonds** have hereditary roles as elephant caretakers (mahouts), passing down knowledge of elephant behaviour and training.

• *Forest-Based Livelihoods:* Tribes often coexist with wild elephants, relying on the same forests for resources like honey, herbs, and fodder.

• *Conflict & Coexistence:* While human-elephant conflict is a growing issue due to habitat loss, many tribes have traditional methods to deter elephants without harming them, such as using chili smoke, beehive fences, or drums.

3. Conservation and Traditional Knowledge:

• *Tribal Tracking Skills*: Tribes like the **Bonda** (Odisha) and **Soligas** (Karnataka) have deep knowledge of elephant movement patterns, helping in conservation efforts.

• *Ethno-Veterinary Practices:* Some tribes use herbal remedies to treat sick or injured elephants.

• *Anti-Poaching Efforts:* Many tribal communities oppose elephant poaching and ivory trade, as they view elephants as part of their natural heritage.

SOME NOTABLE TRIBES IN INDIA ASSOCIATED WITH ELEPHANTS

1. Kadar tribes (Kerala & Tamil Nadu): The Kadar tribe resides in the **Anamalai hills** and is known for their harmonious coexistence with elephants. They traditionally worked as **elephant trackers** and **mahouts** (elephant handlers) for forest departments. Their folklore and songs often celebrate elephants.

2. Malasar tribes (Tamil Nadu & Kerala): The **Malasar tribe** has historically worked with elephants in **logging operations**. They are skilled in **training** and **managing elephants,** often passing down knowledge through generations.

3. Kani tribes (Kerala & Tamil Nadu): The **Kani tribe** inhabits the Western Ghats and has traditional knowledge about elephant behaviour. They believe in elephant-friendly practices and avoid harming them, even during human-wildlife conflicts.

4. Irula tribes (Tamil Nadu & Karnataka): The **Irula tribe** has experience in tracking and capturing wild elephants (historically for domestication). They have deep knowledge of elephant movements and behaviour in the Nilgiri Biosphere.

5. Bonda (Odisha): The **Bonda tribe** in Odisha's forests occasionally interacts with wild elephants. Their myths and rituals sometimes involve elephant symbolism.

6. Soliga (Karnataka): The **Soliga trib**e in the Biligiri Rangana Hills shares its habitat with Asian elephants. They practice sustainable forest use and have traditional conflict-resolution methods with elephants.

7. Mishing (Assam): The **Mishing tribe** lives near the Brahmaputra floodplains, where elephants frequently roam. They have rituals to appease elephant deities for protection.

8. Jenu Kuruba (Karnataka & Tamil Nadu): The **Jenu Kuruba** ("Honey Gatherers") tribe in Nagarhole, Bandipur and Mudumalai forests has a historical connection with elephants. Many were traditional mahouts before being displaced from forests.

TRADITIONAL KNOWLEDGE OF MAHOUTS AMONG TRIBES IN INDIA

The deep relationship between elephants and tribal communities in India, focusing on the essential knowledge, practices, and traditional methods used by indigenous tribes (elephant handlers). These tribes are not only caretakers but also cultural custodians of ancient elephant-handling knowledge. To become a mahout, one must meet several essential qualifications rooted in both physical ability and mental discipline. The important virtue is common sense, quick and sharp mind at work and also during crisis.

A qualified tribal mahout must be at least 18 years old and in excellent physical condition, with the stamina to work long hours under physically demanding conditions. It is essential that they know how to swim and climb trees or platforms (since elephants have the tendency to break chains at any available opportunity and move away in water as they are expert swimmers), skills particularly relevant in forested and riverine elephant habitats.

Mahouts from tribal backgrounds possess in-depth knowledge of elephant behaviour, including preparing food and feeding habits, signs of illness, preparation of traditional medicines for the ailments of elephant, reproductive cycles, and temperament. He should communicate, cooperate and collaborate with the elephant without any ego, envy and arrogant. They should be brave with reflexes and presence of mind. They are also well-versed in the use of various chains such as the slip chain, side chain, and locking chain, knowing how to apply them correctly without causing harm. Skill in handling tools like the traditional guiding hooks, sticks, and spiked goads is essential, but the emphasis remains on compassionate and non-violent control.

In traditional tribal practice, foot-based commands, known as **"Paadha Pranidhi"**, are used to guide elephants. These include light foot touch, leg swing over rope and knee pressure especially during rituals or processions. A person who mounts an elephant must be clean in body and mind, free from anger and ego, skilled in gentle control, and experienced in animal care. Tribal mahouts also follow traditional methods for mounting elephants, including ascending from various directions, using the elephant's trunk or ropes, or even mounting from another elephant. The good mahout repeats his command with necessary modulation with voice to make an elephant comfortable, understand and obey the commands. He also facilitates elephant learning process by offering encouragement and rewards.

THERE ARE THREE TYPES OF TRIBAL MAHOUTS BASED ON HANDLING TECHNIQUES:

1)Forceful handler: They handles elephants using strict control and firm discipline. They often rely on commands and forceful methods to keep the elephant in line, sometimes using harsh techniques. Their way of working is based more on fear and authority than on building trust. This style of mahout is usually chosen to manage aggressive or highly temperamental elephants, especially when gentler methods may not work. While effective in difficult situations, this approach may lack emotional connection.

2) Compassionate or Gentle Handler: They uses a balanced approach, combining care and control. They pay close attention to the elephant's mood, body language, and vocal cues, and respond accordingly. Instead of controlling through fear, they build a relationship based on trust, understanding, and affection. The handler often greets elephants warmly, share food, and treat them like companions. This is the most preferred type of mahout, especially in temples, where elephants are seen as sacred and require gentle care.

3) Empathy and assistant Handler: They are generally submissive and tend to follow the elephant's lead rather than guide it. They apply very little control and let the elephant decide where to go or what to do. While this approach may appear calm, it can be unsafe, as the elephant may start acting independently, ignoring commands. These mahouts often work as assistants to senior handlers and are good at calming and guiding elephants back gently if they stray or become uncooperative. Their strength lies in patience and empathy, not authority.

DUTIES OF TRIBAL MAHOUT OF ELEPHANT AND ITS WELFARE:

A tribe mahout of elephant is not merely a caretaker but a lifelong companion to the elephant, embodying a traditional lifestyle that emphasizes deep emotional bonding and committed responsibility. The daily duties are closely tied to the elephant's **physical health, emotional well-being, and behaviour management**. These responsibilities are rooted in generations of knowledge, combining observation, care, and discipline.

1. Early Morning: First Contact with the Elephant
The first interaction between a tribe and the elephant each morning is highly significant. It sets the tone for the day's relationship and work. Elephants often exhibit behavioural signs of recognition and affection at this time, such as urinating upon seeing the mahout, tapping their trunk on the ground, flapping their ears, or standing calmly with their trunk folded. These gestures indicate a sense of trust, familiarity, and comfort, essential for maintaining a healthy bond between handler and elephant.

2. Sleep Check: Did the Elephant Sleep on Both Sides
Assessing whether the elephant has slept on both its left and right sides is a traditional method of checking its health. Tribes observe specific indicators such as mud or soil on both sides of the body, tear stains near the eyes, and saliva or froth near the trunk. These signs generally suggest that the elephant enjoyed restful and uninterrupted sleep, which is vital for both its mental calmness and physical recovery.

3. Digestion and Dung: Are the Bodily Functions Normal Monitoring an elephant's dung is a simple yet powerful method of assessing its internal health. A healthy elephant typically passes dung three or more times a day, with each release containing 8 to 10 dung balls. If the elephant passes dung while standing, it is considered normal; however, if dung is released while lying down, it may signal fatigue, stress, or physical weakness, prompting further observation or care.

4. Ventilation and Body Cleaning: A major aspect of the mahout's routine is ensuring proper ventilation and body hygiene. The elephant should be trained to lie on both sides daily so that dust, grass, and soil can be thoroughly removed from its skin. This not only helps prevent infections and sores but also keeps the elephant's skin clean and healthy. Teaching the elephant to switch sides regularly while lying down is considered an essential practice in traditional care systems.

5. Water Intake: The Essence of Life Hydration is one of the most critical parts of elephant care. After untying the elephant in the morning, the first task is to offer clean water. For elephants used in temple activities, a full-body bath is mandatory, while for those engaged in timber work or forest activities, dusting and a short wash are generally sufficient. Providing water at the right time helps prevent dehydration, especially during hot and humid conditions.

6. Work Schedule and Breaks: The ideal work schedule for elephants begins at 6:00 AM and continues until 11:30 AM, followed by a break for rest, water, and food. The evening session can resume at 3:00 PM and end by 8:00 PM. During these breaks, elephants must be fed at least 120 kilograms of green fodder, ensuring they regain energy and stay nourished. Work-rest balance is crucial to maintain their physical fitness and psychological balance.

7. Water Measurement: Traditional Practice
Traditionally, water intake was measured using the handful method, with elephants typically consuming 200 liters of water daily, divided across three sessions. Each session involves about 10 handfuls of water. Consuming 8 handfuls indicates average intake, while more than 12 may suggest prior dehydration. If the elephant takes about 30 handfuls of water in total, it is considered well-hydrated and physically stable, an important sign of health in traditional welfare assessment.

8. Feeding Schedule: Based on Duty and Rest
Feeding schedules vary depending on the elephant's assigned duty. If the elephant works early in the morning, it should receive its main meal after 6:00 PM. If it begins work later, say after 6:00 AM, it should be fed adequately in the afternoon. Allocating the right amount of time for feeding, watering, and rest is not only a physical requirement but also a mental relaxation routine for the animal.

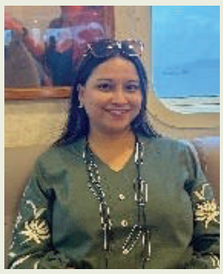
9. Bathing and Maintenance: Bathing is both a cleansing and calming activity for elephants, carried out in one of three ways: Self-bathing, where the elephant enters water bodies and splashes water over itself. Manual scrubbing, where the mahout uses natural tools like coconut husk to remove dust, dead skin, and parasites. Deep bathing, the most intensive method, where the elephant is laid down on both sides and scrubbed thoroughly, often using stone surfaces. This session lasts about two hours and functions like a therapeutic massage, promoting relaxation and muscular relief. A good mahout uses bathing of elephant as an opportunity to clean wounds, treat sores and swelling on the body. Proper

scrubbing and cleaning of elephant body will prevent skin and foot diseases which are detrimental to their health. It is an exhausting exercise for the mahout, but they do it with passion. If they have been beaten up or hurt the wounded are swollen area is given special attention. There should be at least two persons while bathing an elephant.

In conclusion, tribal mahouts of India have traditional knowledge and ancient wisdom, blending with practical training, and ethical handling practices which is their way of life. Their understanding of elephants goes beyond technique, it reflects a lifelong relationship built on observation, respect, and coexistence. These traditions, when preserved and integrated into modern wildlife management, contribute immensely to elephant welfare and human-elephant harmony across India.

Photo credit: Sanket Bhale

4 REIMAGINING HUMAN-ELEPHANT RELATIONS IN NORTHEAST INDIA THROUGH INDIGENOUS PERSPECTIVES



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Many folklores in circulation among various tribes and ethnic communities across the biodiversity-rich Northeast India are centered around elephants, reflecting the age-old relationships between the gentle giant and the sons of the soil in the region.

Notwithstanding the raging human elephant conflict (HEC) situation prevailing in the region especially in parts of Assam, Meghalaya and foothills of Arunachal Himalayas, these tribes have not forgotten their generations-old relation with the elephant which is still being revered many ways by them and treated with empathy.

A recent Assamese song *"Holo Lolo lai .... Holo lolo holo lolo bogori ag khai."* sung by Shankuraj Konwar & Shalmali Kholgade has turned out to be a chartbuster (Coke Studio India) as the immensely melodious song depicts the intricate endearing relationship between elephants and the ethnic Moran community of eastern Assam. The song is composed and tuned based on the prevalent folklore of the community related to olden days' practice of training elephants that have been captured from hilly forests for domestication. Though the practice is no longer in vogue, the related folklore is still cherished by the indigenous people.

GRIEF, GRACE, AND THE GARO WAY OF REMEMBERING THE GIANTS

In Meghalaya, deep in the heart of the Garo Hills, countless tales exist where the boundaries between the human and the wild blur into spiritual beliefs and cultural resilience. Here, the relationship between people and nature is a deeply woven tapestry of spiritual beliefs, lived experiences, and ancestral reverence. Among the many creatures that traverse these forests, elephants— "Mongma" in Garo— are referred to with a curious mixture of reverence and fear and hold a unique place in the lives of the Garo people. These stories often remain unheard by the outside world unless witnessed first-hand.

On a dusky winter evening in February 2023, in Maidukutum village, nestled in the South Garo hills, a quiet yet striking encounter with Goze M. Sangma, a 70-year-old villager, unveiled this delicate relationship. As we sat in the front yard of her house, she expertly rolled a traditional tobacco cigarette, her weathered fingers steady despite the years. The conversation, much like the slow rolling of the cigarette, led us to a harrowing memory etched in both her body and mind—a brutal encounter with a wild elephant in the paddy fields.

"Mama attacked me while working on the paddy field three years back," she said, using the local term "Mama" for elephants—a name delivered with a peculiar tenderness. The scar on her leg, still marked with faint sutures, bore testimony to the violence of that day. Yet, there was no resentment, only resigned empathy in her voice. "We are helpless, so are they," she remarked gently, acknowledging the shrinking forest habitats and the consequent rise in human-elephant conflict. As Goze rose from her chair, clutching my hand for support, her parting words echoed in the twilight: "What will these giants otherwise feed on? There are no forests, only betel nut, broom and paddy."

Goze's story reveals the spiritual reverence many Garo communities still hold toward elephants. Despite the pain and loss caused by such encounters, there is a deep-seated belief that elephants are not just wild animals—they are sentient beings, powerful and wise. Amid the conversation with Goze, her daughter suddenly interjected:

"Mama hears everything we talk in the house. We have never claimed ex gratia from the Forest Department. If

we had complained, they would have returned to damage our crops and houses."

It was not superstition, but a lived belief rooted in generational knowledge—one where elephants are accorded a near-mystical intelligence. This spiritual understanding is not unique to Goze's family. Across many Garo villages, elephants are seen as ancestral spirits or messengers of the forest, capable of understanding human emotions and even seeking retribution. We often hear stories such as how elephants do not like drunken people, or how they kill people who do retaliatory harm to the giants. It is this belief that often prevents villagers from harming the elephants, or victims seeking compensation and lodging formal complaints with authorities. To name the elephant, to accuse it, is to invite its wrath. Silence, therefore, becomes a shield of protection—an act of respect and fear.

Yet another moving encounter occurred during our survey of villages prone to human-elephant conflict in the West Garo hills, in June 2025. We arrived in Molmegre, a village settled between a community-managed forest and farmlands. It was here that we met Lorenjo Marak, who shared with us the sorrowful account of a recent tragedy. On the night of 14th March 2024, a villager lost his life while walking home along the narrow, dark trail that cuts through the fields and forests. A wild elephant, likely moving across its habitual route, encountered the man—and the outcome was fatal. Standing at the site, it was not difficult to understand how such an incident could occur. The path was flanked by dense forest on one side and cultivated land on the other—an ecological edge where both humans and elephants navigate their own versions of survival. But what struck us wasn't just the vulnerability of the terrain—it was the village's response to loss. When asked about whether the bereaved family had approached the Forest Department for ex gratia, Lorenjo calmly told us that a meeting was held shortly after the incident. The entire village, along with the victim's family, decided not to file a claim.

His words echo in my memory, undiluted by time:
"Nature wants it this way, what can we do."

This quiet submission is not passivity. It is the voice of a community that sees itself as part of a larger order—one where humans are not above nature, but co-inhabitants of a struggling landscape.

Goze's family and the villagers of Molmegre recognized a shared plight of multiple species in a landscape that is gradually being transformed by human activity. As forests recede and monoculture plantations like broom and betel nut replace native flora, elephants are forced into villages in search of food. The Garo people, mostly subsistence farmers, understand this not as aggression but as desperation; hence, they find an undercurrent of reverence, even in mourning. These are stirring examples of moral ecology: an ethic that doesn't center only on human interest, but one that listens to the forest, the animals, and the seasons. For them, these giants are not merely wild animals—they are beings with memory, emotion, and agency. Mongma, Mama—names they dare not utter aloud—are respected, feared, and—above all—understood to be part of a cosmic balance.

GOALPARA'S GUARDIANS: THE RABHA BELIEFS IN BALANCE

Further west of the Garo Hills, in the lowland forests and floodplains, among bamboo groves and sal forests of Assam's Goalpara district, live the Rabha people—an indigenous community whose identity, like their Garo neighbours, is deeply entwined with the forest and its creatures. According to Rabha villagers, elephants began descending from the adjoining Garo Hills of Meghalaya into the Goalpara plains around 1993—a time remembered fondly as an era when elephants roamed freely through dense forests and fertile landscapes, with little resistance. But with rising pressures of development, shifting agriculture, and fragmented habitats, human-elephant conflict has increased in both frequency and intensity, and today Goalpara ranks among the most severely affected districts in Assam.

In Rabha cosmology, elephants are seen as forest deities, often described as the "Ban Debota" (Forest God) by the older folks. Folktales portray these elephant spirits as enforcers of moral balance: punishing the selfish, protecting the kind, and maintaining harmony with those who respect the forest. This belief system has motivated Rabha communities to protect patches of forest, especially near old elephant trails, which became informal community reserves—not fenced, not enforced, but preserved through trust and collective memory. In response to the growing conflict, many Rabha families have also adopted smart agricultural strategy: growing pepper vines alongside areca nuts and stretches of lemon trees—which elephants avoid—as a living buffer. These natural deterrents reduce conflict while boosting family income by 30–40%.

From this ecologically vulnerable landscape of Goalpara, much like the hills of Meghalaya, emerges a profound example of relational ecology where coexistence is not a goal—it is an ongoing practice, shaped by patience, rituals, resilience, adaptations and ancestral knowledge.

BEYOND CONFLICT: SACRED BONDS AND COEXISTENCE OF BODO AND TEA TRIBES WITH ELEPHANTS

In the forest-fringe landscapes of Assam, particularly in the districts of Baksa, Udalguri, and Tamulpur, tribal communities, such as the Bodos and Tea Tribes, have long shared space with elephants, whose lives have been intertwined with these majestic beings for a long time. While human-elephant conflict is now a dominant narrative, it is not the whole story. Underneath the tension and fear, a deep current of reverence, kinship, and spiritual association runs, along with a connectedness that reflects how these communities perceive elephants not as outsiders, but as beings that have always belonged.

Elephants in the eyes of tradition and faith

Among both Bodo and Tea Tribe communities, elephants are often not referred to as animals in the ordinary sense. Elephants are spoken of with familiarity and respect as "Baba", or "Gedema" (elephant deity) "Mahapurush," "Ganesh" indicating divinity, wisdom, strength, and protection. Across multiple conflict-affected areas, community members recall how their ancestor's believed elephants were messengers of nature and sentient beings who understood human behaviour and responded accordingly.

For instance, the Bodos, whose traditions blend animism with Hindu influences, often perceive elephants as the manifestation of forest spirits. Oral narratives suggest that elephants are "sentinels of the forest," and disturbing them invites misfortune. Elephants entering a village are sometimes interpreted not solely as a threat, but as a message or warning from nature or the gods. Many believe that if the elephants invade and destroy the properties of an individual, then it was due to their karma.

Similarly, among Tea Tribe communities, who carry a rich blend of tribal and Hindu traditions, this connectedness often manifests through the figure of Lord Ganesh, the elephant-headed god. For them elephants are not just sacred in image; they are sacred in presence. Referred to as "Ganesh Baba", elephants are greeted with folded hands, whispered prayers, and sometimes tears; not as threats, but as divine visitors hoping for safety, safeguarding of crops, and protection.

Villagers in Budlapara, spoke of a time when elephants would pass through fields without causing damage, and people would leave a portion of their harvest in the open as an offering, not out of fear, but out of understanding and hope. In many such stories, elephants are not enemies, but they are fellow inhabitants of the land with whom one shares space, food, and silence.

Rituals reflecting a living bond

One of the most vivid expressions of this spiritual connection is seen in the celebration of Ganesh Puja among both Bodo and Tea Tribe settlements in conflict areas. People install idols of Lord Ganesh made of clay, offer him the foods as they know elephants love bananas, sugarcane, rice, bamboo, and pray for protection and harmony.

The act of praying to Ganesh is not symbolic but it is deeply personal. As one Tea Tribe elder from Bongurum said, "When we pray to Ganesh, we are not just asking the god to bless us. We are asking the elephants not to hurt us and to understand us."

Many villagers believe that if Ganesh is properly worshipped, elephants will pass peacefully. This belief has been passed down through generations, keeping alive a cultural contact that binds human and elephant together.

Addressing with reverence: A cultural code of coexistence

That elephants are called "Gedema" (elephant deity) "Mahapurush," "Baba," "Dev," or "Ganesh" is not incidental; it is a reflection and a blend of familiarity, respect, and spiritual association. Children are taught to lower their voices when elephants are nearby. Women pray silently, hoping the herd will move on without destruction. These are not simply superstitions, but they are expressions of a cultural ethic of non-confrontation.




Even today, in places like Bholatar or Nunaipara of Udalguri district, these names are still spoken during encounters: “Ganesh Baba, please don’t harm us.” This is not fear speaking but it is the respect that people carry for the majestic creatures.

Elephants regarded as protectors of forests and villages

Beyond their spiritual and cultural importance, elephants are often regarded by communities as unseen protectors, not only of forests but also of human settlements. In several conflict-affected villages, residents have observed that the regular presence of elephants helps deter illegal logging, poaching, and forest encroachment. The fear of encountering elephants in some forest patches has made many of these areas less accessible to outsiders.

Remarkably, this sense of deterrence extends beyond forest areas. Villagers recount that thieves often avoid entering conflict-prone villages, wary of the risk of confronting elephants. This has led to a perception that elephants, despite the fear they sometimes evoke, also offer a layer of unintentional protection to the very communities that live closest to them.

As one elder shared, “Because of elephants, people think twice before going into the forest for the wrong reasons. Even thieves avoid our village at night.”

Such views reveal a complex relationship of fear, respect, and appreciation where elephants are seen not just as potential threats, but as beings that help preserve forest integrity and safeguard vulnerable communities.

Perhaps what defines the relationship between the Bodo and Tea Tribes and elephants most powerfully is the concept of reciprocity. “If you give, you receive” is a belief that applies to elephants too. Many communities believe that offering space, food, and respect to elephants will earn protection in return. This belief shapes how people make decisions about planting crops, building fences, or even moving homes.

Such views are intensely site-specific, and they come from generations of observation, interaction, and adaptation.

The evolving role of cultural belief in conservation

In today's context, where elephants are increasingly seen as a threat, these traditional belief systems serve as a critical bridge between conservation practice and community perception. In field-based awareness sessions, referring to elephant herds as "Ganesh Parivaar" or invoking local stories of respectful coexistence immediately creates resonance, especially with older participants. These narratives can temper fear, rebuild empathy, and most importantly, restore a sense of shared responsibility.

Rather than dismissing these beliefs as outdated, conservation efforts must embrace them as entry points for dialogue and collaboration.

MISING AND DEURI COMMUNITIES' EVENTFUL COEXISTENCE WITH ELEPHANTS IN EASTERN ASSAM LANDSCAPES

About 30 years ago, wild elephants were nowhere to be seen in Mising tribe-inhabited Jhanjimukh area of eastern Assam's Jorhat district. Elephants used to roam around in nearby chaporis (river isles) or faraway forests. However, about 15 to 20 years later, wild elephants started visiting Jhanjimukh area. Initially, the community loved the sight of those giants. They called them (with reverence) Ganesh Baba, Dangoria, and used to offer food as a gesture of worship, devotion and love. There was not any situation of hostility or conflict between them at that time.

But gradually the number of visiting elephants and their frequency of visits increased, leading to conflicts like crop damage, property damage, which have had a negative impact on their lives and livelihood. Now for the community, elephants' visit means destruction. The age-old perspective of denoting elephants as God has now changed. The community has eventually constructed elephants as a symbol of threat, and this has compelled them to adopt some precautionary measures for mitigation of the conflict.

Elephants are missed at Jabor Chuk Kathoni in Ujani Majuli area

Mising community and elephants had a very close relationship in this area in Majuli River Island district of Assam over five decades ago. They refer to elephants as Gonesh Baba, Dangoria. As they consider the giant animal a kind, loveable creature. Some of the community households used to have domesticated elephants which were used for different activities like carrying and hauling logs. As a tradition, they used elephants in the marriage ceremonies. As on date the number of elephants has decreased drastically in the area to such an extent that community members are now delighted at the rare sight of elephants in the area.

Love-hate relations at Gezera in Ujani Majuli

Elephants were non-existent in old Majuli, a vast river island region. However, in the recent past, they started visiting the river island of Majuli from Dehing Patkai forest

areas located upstream of the Brahmaputra. Elephants' visits result in crop damages on some occasions, and the local Mising community resorts to the tradition of performing Yumrang dangoria Puja, a ritual to worship elephants as God.

Earlier, people could effortlessly chase away the elephants from the paddy fields during the harvesting season. But now the giants won't go away so easily, rather they would try to attack the villagers.

The community members used to have only love and affection towards elephants like their grandchildren, now sometimes they get overcome by anger towards the elephants as they tend to damage the crop affecting the community's livelihood. Elephants in a herd don't cause many problems but single individual isolated from a herd poses greater threat to the life and livelihood of the villagers.

Deori community at Panidehing area in Sivasagar used to tame elephants

Some members of the ethnic Deori community in Assam used to have domesticated elephants, and they were known in the society as Hatigiria, (Elephant owners). At that time, people from the community used to bring home harvested paddy from the fields in elephant-drawn carts. There was a festive atmosphere in the neighborhoods on such a day, everyone came out in harmony and tied the paddy and loaded onto the elephant cart. Over the time many people of the Deori community migrated to the mountainous areas of Arunachal Pradesh on elephants back due to natural disasters and flood in the plains. Since then, the number of elephant breeders (Hati puh-pal kora lok) among the Deori community has gradually declined. Elephants are considered as God among the Deori community. Even today, they worship elephant in a secluded place in the jungle on a special day in the Assamese month of

Photo credit: Dr N Lakshminarayanan

Shaon (Ha-un mah). Now there has been an increase in elephant raids in the fields and the human habitats due to the shrinking elephant habitats, which is increasing the problem of human elephant conflict in these areas.

Communities in Sadiya worship elephants

Mising and Deuri communities at Sadiya in Tinsukia district of Assam, used to have a cordial relationship of coexistence with wild elephants, considered a kind and lovable creature by them. Earlier, they raised elephants and used in various commercial and domestic works like carrying logs, woods, ploughing in the paddy field etc. These two communities, who have been living in Sadiya region with other communities, comparatively don't have a conflict situation with elephants unlike some other parts of the area. They worship elephants as God and perform *Dangoria Puja* in harvesting season.

The Mising community performs *Dangoria* (elephant) puja in the harvesting season through five elderly priests with some offerings like sprouts, banana, sugarcane, etc., that are relished by elephants. They conduct the puja in daytime under a tree or in the paddy field. The ritual is marked by lighting of incense sticks and earthen lamps in the name of the *Dangoria* under the trees.

LISTENING TO THE FOREST

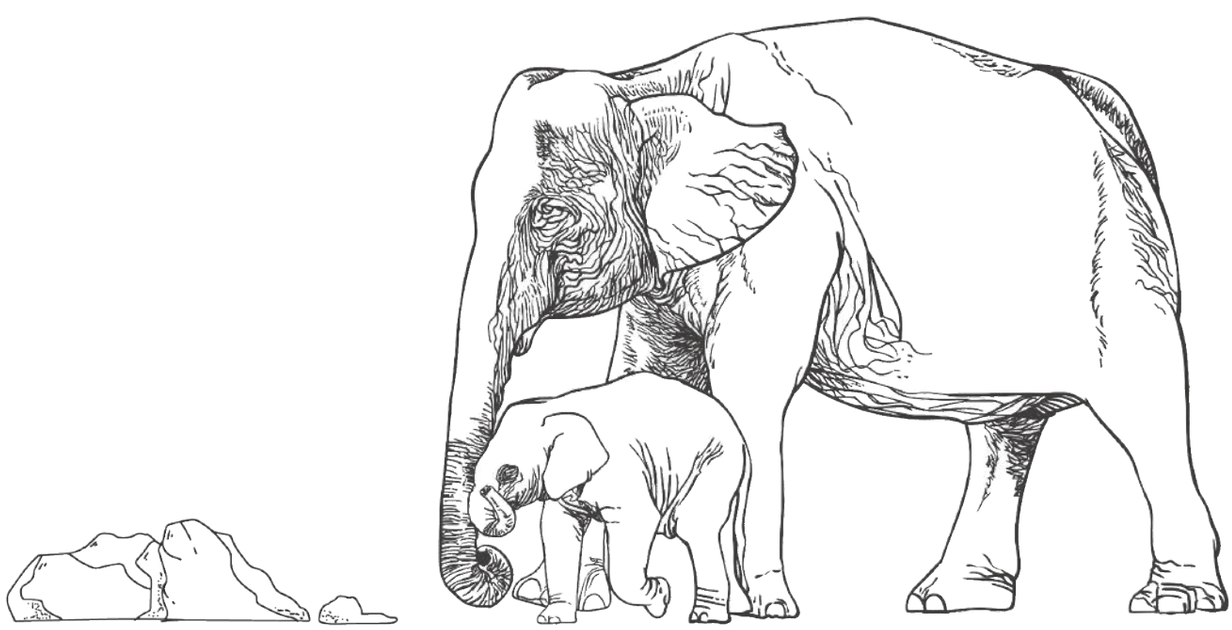
Stories of both the Garo tribe of Meghalaya and the Rabha of the Assam floodplains challenges the dominant narratives of conservation and conflict management, offering instead a way of being that is rooted in coexistence—often painful, but rarely resentful. In this worldview, to suffer loss at the hands of a wild elephant is perceived not solely as a tragedy, but also as something ordained—an act beyond blame, and perhaps, beyond repair.

For the Bodo and Tea Tribe communities, elephants are not just ecological neighbours but also spiritual kin, cultural icons, and part of their heritage. The names they are called, the prayers offered during Ganesh Puja, the stories remembered at night; these are all ways in which people stay connected to elephants, even in times of conflict.

This connectedness is not sentimental. It is strategic, ethical, and enduring. In the forests and fields of Assam, where coexistence is both a necessity and a legacy, this bond offers not only hope but also a roadmap for designing future coexistence and conservation efforts.

These voices of the tribes in the far east of the country remind us of something essential: that not all relationships with wildlife are built on control, mitigation, or transaction. Some are built on memory, myth, and the quiet grace of acceptance. In the words of Lorenjo Marak: *"Nature wants it this way."*

It is not defeatism — it is a sentence, a surrender, and a truth that hangs heavy in the sylvan air of these fragile spaces.



5 LANTANA ELEPHANTS – HIGHLIGHTING THE IMPACT OF LANTANA INVASION ON ELEPHANT HABITAT

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Introduction

The most widespread invasive species in the world is Lantana camara. Originally introduced as an ornamental shrub, it has invaded vast swaths of forest across Asia, Africa and Australia, displacing native plants and disrupting entire ecosystems.

Its invasion

In India, Lantana was first introduced around 1809. It has since spread rapidly. It was first recorded in southern India in 1829 near Stone House in Ooty. Since then, it has invaded 300,000 square kilometres of Indian forest, four times the combined area of all the country's tiger reserves. It is highly adaptable and can inhabit a wide variety of ecosystems. Once it is introduced into a habitat, it spreads rapidly, occupying entire ecosystems and outcompeting native plants.

Elephants in the changing environment

Impact of Invasion

Its environmental impact is devastating. Lantana is an allelopathic plant, meaning it releases chemicals into the soil that suppress the growth of other plant species. Its dense, impenetrable thickets suffocate native plants, reduce biodiversity, and alter natural fire regimes. Worse, it is toxic and inedible to native herbivores. No wild or domestic animals eat it. This makes the vast forests where it grows virtually useless to wildlife. The landscapes where it grows become ecological dead zones.

Eradication Efforts & Result

Recognizing this threat early on, British foresters launched the world's first recorded lantana eradication campaign in the forests of Penne (now Mudumalai) and Coorg in 1916. However, despite more than a century of eradication efforts, lantana continues to thrive. When cut, it responds by growing a shot that grows six times faster than the parent plant. When uprooted, the disturbed soil often activates a vast underground seed bank, which gives rise to a large number of new seedlings. The plant is remarkably resilient and resistant to control. Effective control requires complete root removal and minimal soil disturbance to prevent regrowth.

Fire appears to play a key role in managing the spread of lantana, allowing the grasses to quickly re-establish after lantana has been removed. But our colonial forest management system dislikes fire, believing that fire degrades and destroys forests. Fire is a vital part of our wildlife habitats, and research reveals that it has been that way for thousands of years. The indigenous people living in the forests are also aware of this. And they are using controlled burning to manage their forests.

Lantana invasion in elephant habitats significantly reduces the food availability for elephants. Because they do not consume it, and it displaces their preferred fodder plants. This invasive weed, Lantana camara, poses a threat to elephants by reducing their forage base, affecting their mobility, and leading to human-elephant conflict. Therefore, governments across India are taking aggressive measures to control the spread of this plant. But, with the cost of removing dense lantana reaching up to ₹1,00,000 per hectare, large-scale eradication is often economically unfeasible. Therefore, the total cost of removing lantana from our forests is skyrocketing.

Conservation Initiative

Addressing the Lantana crisis demands a unified approach, as the widespread impact of this invasive species requires coordinated efforts for effective management. One of the ways is collaboration with grassroots ensures and fostering local ownership. Working together, Lantana's complex challenges can be tackled more effectively and restore our ecosystems for future generations.

Lantana that has spread into the forest area also has some economic value. Hence if work closely with all stakeholders

the effective and sustainable methods can be found for Lantana removal. The approach must be focused on developing practical guidelines and sharing best practices to help restore ecosystems and improve livelihoods without disrupting existing frameworks. That is, if work with community-led enterprises, the Lantana may be turned into valuable products such as art merchandise, furniture, and biomass. These initiatives may create sustainable livelihoods while respecting traditional practices. So, the focus must be on building a network of community-owned enterprises that support local economies and promote ecological balance.

Lantana elephants are created by indigenous people of Nilgiri Biosphere Reserve

Lantana Elephants

One such conservation initiative is the "Lantana Elephant" project. This initiative uses art to raise awareness about the impact of lantana on elephant habitats. Sculptures of elephants are crafted from lantana vines by local artisans, drawing attention to the issue and promoting the need for human-wildlife coexistence. By highlighting the issue through art and

engaging local communities, it aims to foster a greater understanding of the problem and inspire action towards sustainable solutions.

Lantana Elephants displayed at London Streets

The Shola Trust and local indigenous communities of Nilgiri Biosphere Reserve have joined hands to create beautiful lantana elephants for spreading awareness on Lantana invasion. The Shola Trust, with the Mudumalai Tiger Foundation, started a furniture and crafts programme in 2009. Through training provided by the Sola Trust, local tribal artisans uproot the lantana plants spread across the forests of Mudhumalai and Bandipur, properly treat their veins and create 'lantana elephants

Lantana Elephant

weighing around 300 kg and standing eight feet tall. At the workshop in Thorappally, near Mudhumalai Tiger Reserve, around 70 members from the indigenous Paniya and Betta Kurumba communities are involved in creating these Lantana elephants.

The Lantana elephants are more than just art; they represent a creative solution to a problem. Lantana camara is a weed that negatively impacts indigenous vegetation and wildlife habitats. By using this invasive species to create art, the project highlights the issue while also providing a livelihood for the indigenous communities who create them.

Lantana Elephants set for world tour to spread messages of conservation

During the year 2021, a herd of 125 beautifully sculpted life-sized lantana elephants made their way to the UK from Nilgiris in Tamil Nadu, Male Mahadeswara Hills in Karnataka and Wayanad in Kerala and were displayed from June 1 to July 23 in London's Green Park, St. James's Park & Berkeley Square. The exhibition was held to promote the idea of coexistence and change the way we think about conservation — from locking up nature in distant places to dwelling with nature around us.

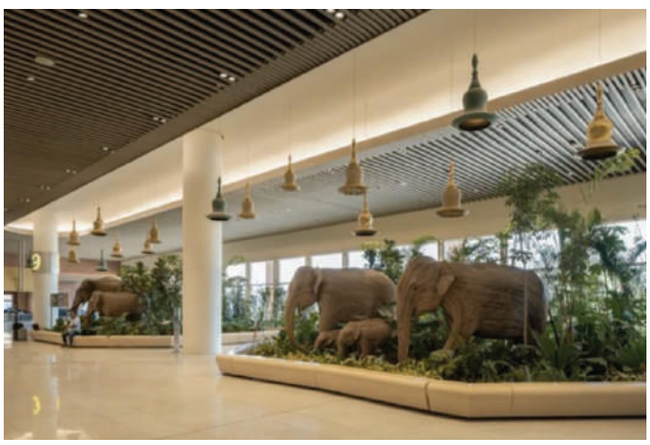
Lantana Elephants at Bengaluru Airport

At Bangalore airport's Terminal 2 (main entrance & baggage claim area), one can find life-size elephant sculptures made from Lantana camara. These sculptures are part of an art installation called **"Coexistence: The Great Elephant Migration"** and are meant to raise awareness about human-wildlife conflict.

The installation of lantana elephant at Terminal 2 is designed to be both visually striking and thought-provoking, encouraging travelers to consider the delicate balance between human development and the preservation of natural ecosystems. Elephants are a reminder of the importance of sustainable practices and responsible coexistence with wildlife.

Lantana Elephants – A Unique exhibition at Bengaluru City

During the year 2024 (February – March), the exhibition was aimed to raise awareness among city dwellers about human-animal conflict and promote coexistence. 100 life-size "Lantana elephants" were displayed in various locations across the city, including Lalbagh Botanical Garden, government buildings, colleges, tech parks, and other green spaces.



Lantana elephant displayed at Bengaluru Airport

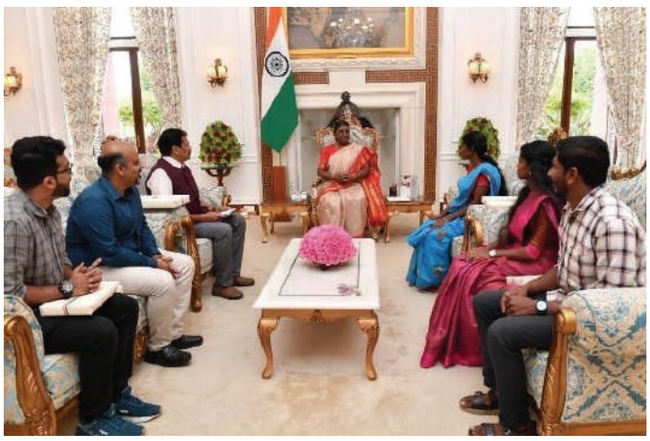
Lantana elephant displayed at Bengaluru City

Lantana Elephants at Rashtrapati Bhavan, New Delhi

On May 5, 2023, Hon'ble President of India visited the Theppakadu Elephant Camp of Mudhumalai Tiger Reserve. At that time, Lantana elephants were displayed there. Hon'ble President praised the indigenous people who made those lantana elephants. Then, Hon'ble President asked them to make lantana elephants for Rashtrapati Bhavan and invited them to come there. On September 18, 2023, four Lantana elephants were displayed at Rashtrapati Bhavan. Then Hon'ble President of India honoured the indigenous people who made those Lantana elephants.

Lantana elephant has brought global recognition to South India

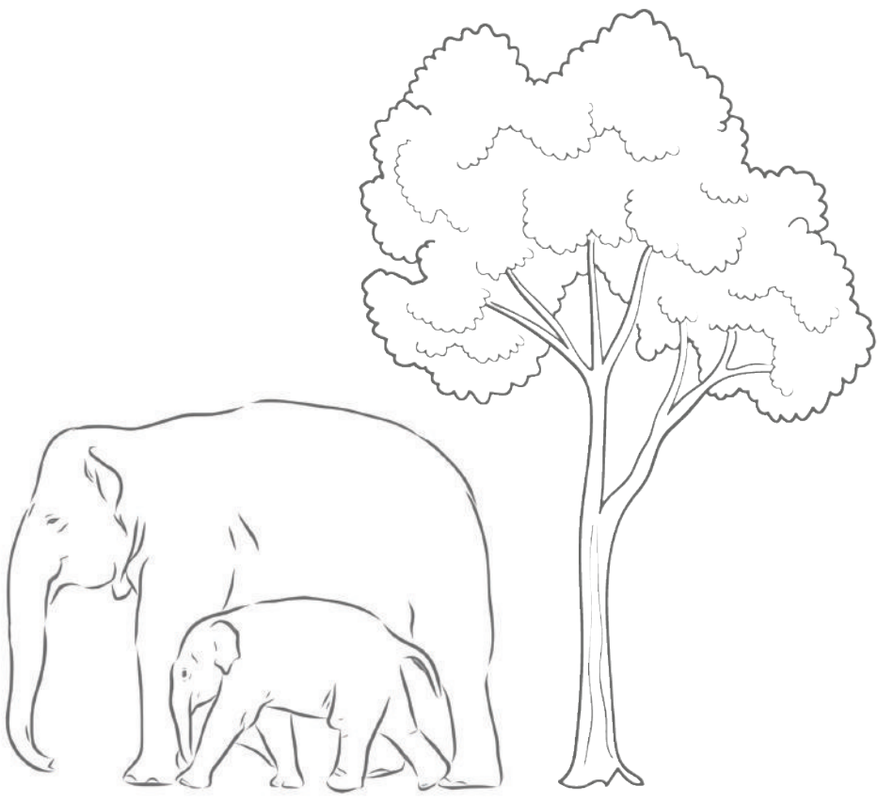
The indigenous artisans of Nilgiri Biosphere Reserve, who have been fighting the threat posed by Lantana by carving out these elephants out of the weeds, have now won global recognition. Two indigenous youths engaged in sculpting Lantana elephants have won the United Kingdom's prestigious Mark Roland Shand Conservation Award. Two youths from the Betta Kurumba tribe, Ramesh Maran (32) and Vishnu Varadhan (29), received the award from the King and Queen Consort of England.



Lantana elephant displayed at Rashtrapati Bhavan

Indigenous artisans received the award from the King and Queen Consort of England Now, close to 120 indigenous people in Tamil Nadu, Kerala and Karnataka are engaged in making Lantana elephants and other sculptures. They have earned over ₹3.5 crore in income over the past five years working on this project.

While much of the global discourse on wildlife in India focuses on conflict, these elephants tell a different story. India remains the only large country where people still live alongside dangerous wild animals—elephants, tigers, leopards—largely without fences or barriers. This relationship is not always easy, but it is real. It reflects centuries of shared space, cultural tolerance, and an ethic of coexistence that is rare in today's world.



6 BENEATH THE FOOTSTEPS OF ELEPHANTS: CONFLICT AND COEXISTENCE IN BENGAL'S FORESTS

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"Where the elephant walks, the forest follows."

INTRODUCTION

The rolling red soils and sal forests of Southwest Bengal—covering Bankura, Paschim Medinipur, Jhargram, Purulia, and Birbhum—form the southern edge of the Chhotanagpur Plateau. This is not just elephant territory; it is the soulscape of ancient tribal heartlands. Here, communities like the Santhals, Mundas, Hansda, Soren, Hembram Murmus, Marandis, Kisku, Tudu, Oraons, and others have lived in harmony with the forests for generations. Their lives are interwoven with the rhythms of nature—gathering, protecting, and nurturing the very biodiversity that sustains them. These peace-loving people, rooted in simplicity and wisdom, are more than residents—they are stewards of the land. As core members of Joint Forest Management Committees, their role in conserving forests and wildlife is irreplaceable. Their very presence has ensured the survival of one of India's richest ecosystems. Other than tribal communities, there is a large population of other communities such as Scheduled Castes, Other Backward Classes, and the General category. This is also one of the most densely human populated regions.

This region is one of the most intense human-elephant conflict zones. But the clash isn't born of hostility—it's the result of increasing human activity. Expanding farmlands, mining, construction, transport corridors, and tourism have fragmented forest corridors into mosaic-like patches surrounded by agricultural lands and of course the study rise of Elephant population itself yet, the land breathes life. Beyond majestic Asian elephants, it shelters tigers, leopards, sloth bears, primates, ungulates, reptiles, fish, and hundreds of bird species. Wild orchids bloom beside medicinal plants, bamboo groves sway beside ancient trees—together forming a living library of biodiversity. Protecting this region means honouring both its wildlife and the tribal voices that have preserved it. In their story lies the blueprint for coexistence—and the future of conservation.

"In the presence of elephants, the forest does not sleep—it breathes"

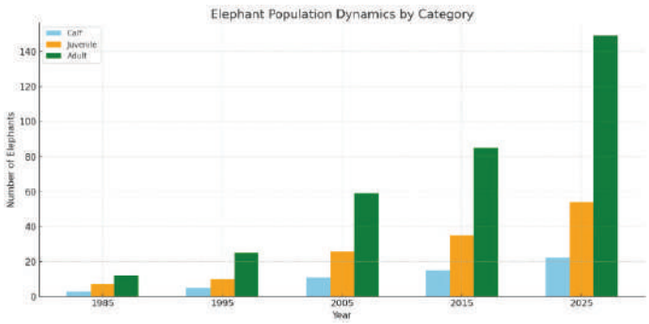
The recent four decades of movement of elephants in southwestern Bengal began in the mid 1985s, when around 22 elephants arrived at the Mayurjharna Elephant Reserve, located at the Tri-junction of the districts of Jhargram, Bankura, and Purulia. These elephants came from what was then the Dolma area of Bihar state, now Jharkhand. Over the years, the forests and their ecosystems have been gradually improving (thanks to the Joint Forest Management committees). The same landscape now supports an elephant population of more than 220. The Soil health, fertility, and organic carbon increased, in the forest areas and surrounding village lands. At

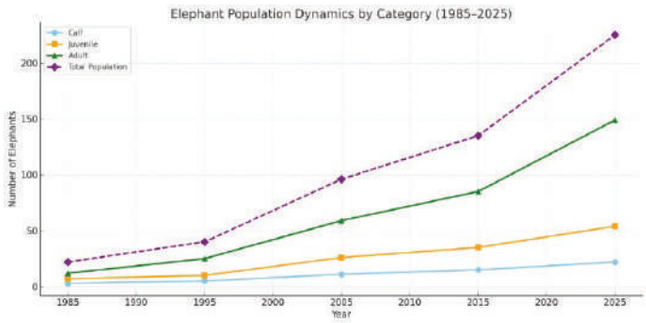
the same time, agricultural practices in this region have intensified with increased availability of irrigation water, and cultivation of high-yield crop varieties such as rice, wheat, pulses, potatoes, oilseeds, and vegetables in large numbers and areas. The modern agricultural inputs have transformed the area from being reliant on subsistence farming to having an intensive, market-oriented farming approach with multiple crops.

Initially, called it Dolma elephant *(S. Kulandaivel ,2010)* people showed little resistance to the elephant depredation. This could be because the damage inflicted on crops was minimal, and many people were excited to see elephants near their villages. Additionally, there was a lack of awareness about the seriousness of the problem due to the small size of the elephant population compared to the large area involved in the depredation.

Elephant population and its dynamics in Southwest Bengal over four decades (1985-2025)

Year	No. of Calf	No. of Juvenile	No. of Adult	Total popula-tion
1985	3	7	12	22
1995	5	10	25	40
2005	11	26	59	96
2015	15	35	85	135
2025	22	54	149	225





Acting as a guardian, the tusker inspectsthe terrain before allowing the family to move forward

Elephants foraging in cultivated farmland

NATURE AND FEATURES OF THE FORESTS

The forest type of southwest Bengal are primarily tropical dry deciduous and moist mixed deciduous. This region, including parts of the Chhota Nagpur Plateau, has a rugged terrain and an undulating landscape. The forests are made up of small to medium-sized fragmented patches, making it difficult to distinguish forest land from agricultural fields. These patches are insufficient and unsustainable to hold back about 220 add elephants in this region. These forests are a home to a variety of flora and fauna, with Sal (*Shorea robusta*) being the mighty and dominant tree species with *Mahua, Bahera* and several others native species. These forests also support various shrubs, herbs, climbers, and medicinal plants, creating a rich and diverse ecosystem. During the dry months (February-May), most of the trees shed their leaves. This, combined with the hot winds, makes the region prone to forest fires, often caused by human activity which renders ground cover almost empty.

FODDER AND WATER AVAILABILITY

Southwest Bengal receives about 1,200 mm of rainfall annually, mainly from the monsoon season (July-October), with some rainfall during winter and summer due to cyclonic activity. During the hot summer months (April-May), temperatures can rise to 45°C. The region's soil is mostly red-lateritic, with some patches of alluvial loam.

The forest of this terrain has sufficient water sources and fodder to support around 220 elephants. However, due to their varied feeding habits and the need for a variety of fodder for daily sustenance, they often plunge into nearby agricultural crops for foraging. Rivers like the Damodar, Kangsabathi, Dwarakeshwar, and Subarnarekha, along with an extensive network of canals, ensure that water is readily available.

However, because the forests and agricultural lands are intertwined, elephant incursions into crop fields are common, leading to Human-Elephant Conflict (HEC). Elephants often stay in agricultural fields to satisfy their dietary needs, as crops are a rich and easily accessible form of food. This amounts to considerable damage to farmers' crops, leading to frustration and conflict. In some cases, elephants also enter residential areas in search of food or are attracted to homemade liquor, which increases the risk of human fatalities and property damage.

EFFORTS OF THE FOREST DEPARTMENT

Ever since the onset of elephant depredation, the West Bengal Forest Department has been actively working to mitigate the conflict. The department has established large water bodies at strategic locations within the forests to attract and hold back the elephants inside the forests. Thousands of hectares of forest land have been planted with elephant-friendly fodder species, ensuring a sustainable food source for these animals. The forest management plan (Working Plan) for plantations has been revised to include large number of local fodder species along with Sal, replacing the previous timber-based monoculture plantations.

Regular meetings with stakeholders have been held to address concerns and to find amicable solutions. Despite challenges such as a shortage of staff, the forest department continues to work under challenging conditions to restore peace in the conflict zones (*Pradeep Vyas, 2018*). The department also uses awareness campaigns, early warning, public announcements and community engagement, to educate villagers on how to stay safe during elephant visits. On the safety of elephant movement, the department calls coordination meeting with electricity department and Railway establishment at regular intervals.

MICRO HABITAT MANAGEMENT

One innovative approach to reducing elephant depredation and human hostility is the creation of microhabitats. These are hotspots of rich forested regions that are designed to provide food, water, and shelter for elephants. Microhabitats are chosen based on their ability to support elephants for at least one season. Forests such as Barjora, Katabesia, Tetul Bandh, D.M. Bandh, Suknakhali, Golgolchoti, and Kamarangi present in various ranges of this region are some examples of such microhabitats. These areas are closely monitored, and efforts are made to improve them by planting more fodder species and developing water resources.

DAMAGE AND COMPENSATION

In Southwest Bengal, human-elephant conflict has amounted to the deaths of about 30-40 people annually and damage of around 2,500 hectares of crops and few hundred huts. Over the past few decades, the region has also lost about 90 elephants far last 10 years due to electrocution, train accidents (un-natural death), and natural death.

In response to damage to human life and property, the Forest Department offers compensation as a form of support for the affected families. For human fatalities caused by elephants, the department provides a payment of five lakh rupees to the victim's family along with job to the family member. Compensation for permanent disability, crop damage, and damage to huts is also available and is revised periodically based on prevailing conditions.

The elephant herd is entering agricultural crop fields for foraging

Elephant herd is crossing the metal road at Bishnupur in Bankura

ROLE OF JOINT FOREST MANAGEMENT COMMITTEES (JFMC) IN HEC MANAGEMENT

Thanks to the JFMC movement, and the broader people-and-forest movement in West Bengal—particularly in South Bengal—the once degraded forest cover has transformed into a biodiverse-rich ecosystem. This ecosystem now supports a wide variety of floral species capable of sustaining the diverse fauna of the region *(Subhamay Chanda, 2012; Nilanjana Chatterjee, 2016)*.

However, although a large number of Joint Forest Management Committees (JFMCs) exist in these regions, they have been largely ineffective in addressing the issue of human-elephant conflicts. In the elephant terrain of Southwest Bengal, it is consistently advised that community-based elephant management strategies should be adopted *(S.S. Bist, 1992)*. During times of conflict, villagers often pressure the forest department to relocate elephants. However, moving elephants from one area to another frequently creates new challenges. The forest department maintains that strengthening JFMCs is essential to developing a sustainable and long-term solution to this conflict.

Current Management Challenges

1. Mismatch of Resources and Population: The primary challenge faced by the department is the mismatch between available forest resources and the growing elephant population in the region.

2. Exploitation of Forests: Large-scale exploitation of forest resources by local communities has led to significant forest degradation, in the form extraction of fodder and other forests resources.

3. Unsustainable Practices: Practices such as setting forest fires and overgrazing by domestic cattle have caused widespread damage, rendering habitats unsuitable for elephants.

4. Underlying Socio-economic Drivers: Many of these harmful activities are driven by ulterior motives for personal gain. Ultimately, it is the local villagers who suffer the consequences.

5. Obstruction of Corridors and Migration Routes: Human interventions and closer of its traditional elephant corridors, especially those connecting bordering states like Odisha and Jharkhand, disrupt migratory paths.

6. Community Resistance: Persistent resistance from local villagers at the grassroots level fragments large elephant herds into smaller groups, scattering them across unfamiliar terrain.

7. Mining areas: In recent times, a lot of mining activities, ranging from small to medium-sized units, have made life more difficult for the elephants.

8. Rise in Human-Elephant Conflict (HEC): frequent human-elephant interception creates more disruption of elephant movement, which leads into increased HEC and intensifies conflict zones.

9. Infrastructure Development: The construction of new roads through migratory corridors poses serious threats as elephants struggle to cross traffic-prone areas.

10. Behavioral Shifts in Elephants: While humans have developed new techniques to manage elephants, elephants too have adapted their behaviors for survival, making it increasingly complex to understand and manage their actions.

11. Huge Budgetary contains: Our field requirements always face a shortfall in the minimum basic financial budget. This includes funds for fodder source creation, water resource development, ex-gratia payments, and compensation for damage and protection-patrolling expenses.

The Way Forward

1. Collaborative Approach: Achieving sustainable coexistence between humans and elephants requires coordinated efforts among all stakeholders to promote harmony.

2. Micro-Habitat Development: Creating more micro-habitats and reducing human exploitation of forest resources meant for wildlife is crucial in preventing Human-Elephant Conflict (HEC).

3. Water and Fodder Resources: Although numerous water sources have been developed for elephants, they remain insufficient in the conflict zones. Adequate fodder sources must also be created to support the growing elephant population and reduce their movement into human settlements (*S. Kulandaivel,2025*).

4. Tribal Community Involvement: Involving tribal people is essential, as their traditional attitudes toward forests and wildlife are inherently sustainable and conservation friendly.

5. Empowering Field Staff: Field managers and foresters lack even the basic minimum resources. Strengthening their capabilities must be treated as a priority.

6. Lockdown Lessons: During the COVID-19 lockdown, the complete halt in human activity resulted in zero human-wildlife conflict. This offers a valuable model for future coexistence strategies.

7. Technology-Based Solutions: Implement early warning systems and AI-based forecasting of elephant movement.

8. Enhance coordination between villages, railways, and electricity departments using mobile networks.

9. Deploy thermal drones: for night-time elephant tracking.

10. Zero Driving Policy: Strictly following the "Zero Driving Policy" has proven effective in minimizing HEC. Which should be followed rigorously (*S. Kulandaivel,2025).*

11. Regular Monitoring & Guiding Back: Constant monitoring and guiding elephants back to forests, when necessary, can save lives on both sides.

12. Daily Movement Reporting: Informing villagers of elephant movements (through bulk messages) three times a day (6–7 AM, 6–7 PM, and 12–1 AM) increases community preparedness and awareness.

13. Infrastructure Planning: All upcoming expressways or fast lanes should incorporate underpasses and overpasses for the safe movement of elephants and other wildlife.

14. Awareness through Signage: Hoardings, boards, and signage must be extensively displayed in transit areas to raise public awareness in elephant-prone zones.

15. Scientific Study: A focused scientific study on elephants in this region is needed to understand population trends and vulnerabilities affecting both elephants and human communities.

16. Local Support and Coexistence: The exceptional tolerance and coexisting nature of local inhabitants have played a vital role in the successful growth of the elephant population in this difficult terrain. This should be taken to the next level.

17. Recognition of Losses as Natural Calamities: Declaring elephant depredation as a natural calamity and introducing app-based compensation systems will help reduce tension and ensure timely relief.

18. Tribal Contribution to Conservation: The invaluable role of tribal communities in conserving elephants, other fauna, and the overall ecosystem must be recognized and celebrated.

CONCLUSION

Southwest Bengal stands at a crossroads where tradition meets conservation, and conflict seeks resolution. The resilience of its forests and the wisdom of its tribal communities offer hope for a future where humans and elephants can coexist in harmony. The rising elephant population is both a triumph of ecological restoration and a call for urgent, innovative management. By empowering local communities, investing in habitat development, leveraging technology, and ensuring timely compensation, we can transform this conflict-prone region into a model of coexistence. The land has already shown its capacity to nurture life—now it is up to us to nurture balance. For in protecting the elephant, we also protect the spirit of the forest and the soul of its people.

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Meeting with Santali Tribal JFMC at Bankura South Division forests area on Elephant depredation.

Meeting the Santali tribals in their traditional hamlet in Bankura district.

Santali tribal women during their traditional dance performance

Tribal folk in their tradional attire

7 GIANTS OF THE WILD: ELEPHANTS AND THE TRIBES OF INDIA

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INTRODUCTION

Elephants in India (*Elephas maximus indicus*) are more than a symbol of grandeur and strength. For ethnic and tribal communities across India, elephants are regarded as a spiritual being, an ancestral neighbour, and guardian of the forest. For centuries, elephants in India have shared space and resources with indigenous communities, shaping not only landscapes but also their traditions, culture, beliefs and lives. Today, that ancient relationship stands at a crossroads, pressured by modernisation, deforestation, and climate change.

INDIA'S TRIBAL COMMUNITIES

According to the international treaty of the International Labour Organisation, "Indigenous and tribal peoples" are found in more than 70 countries and represent approximately 5% of the world population and account for 15% of the world's poor (Feiring, 2023). India is home to over 705 ethnic groups, officially designated as Scheduled Tribes, accounting for approximately 8.6% of the national population (Balkrishna *et al.*, 2025). These communities, often located in remote forests and hilly regions, live in close proximity with forests that are a source of identity to these indigenous communities. Tribes like the Santhal, Gond, Irula, Kattunayakan, Koya, Khasi, and Dongria Kondh have maintained a sustainable relationship with nature, forest and the animals that inhabit it (Meena and Meena, 2014). Among these animals, elephants occupy a place of great reverence and importance. Many tribal societies do not see elephants as "wildlife" but regard the animal that deserve respect and dignity.

CULTURAL SYMBOLISM

In the rich cultural mosaic of India's indigenous and tribal communities, elephants are regarded as sacred, spiritual protectors, revered in Indian mythology as a manifestation of Lord Ganesha. This reverence emanates from generations of cohabitation and coexistence of human life with forest in the presence of elephants. For many tribal communities, elephants are intricate part of their lives and this bond has shaped over generations by deep observation, shared experiences, and spiritual meaning. Some of the ways in which elephants are manifested in lives of ethnic communities are as follows:

• ***Revered as Spirits***: In many tribal belief systems, elephants are considered as spirits that represent the will of nature or the Gods. Among the **Dongria Kondh** of Odisha, elephants are believed to be messengers of the Gods. Their arrival is interpreted through dreams and signs, and the appearance of a herd near a village is seen as both an omen and a blessing. In the **Kattunayakan** and Bettakurumba tribe of the Nilgiri Hills, elephants are revered as wise forest spirits (Thekaekara, 2021). Tribal elders often speak of elephants guarding sacred groves and water bodies that were believed to be inhabited by

ancestors. The arrival of an elephant near such a site is considered auspicious. In these communities, the elephant is seen not as a danger but as a forest elder who should be provided unhindered passage for movement (Sharma, 2024).

• ***Totemism and kinship with Elephants***: Totemic beliefs among several tribes establish kinship between humans and animals. In parts of Central India, some tribal communities, like the Gond and Baiga, believe they are descended from elephants and see them as clan protectors (Goswami, 2018). Because of this bond, they avoid harming elephants or using resources from places elephants have visited, out of respect. This belief helps protect elephants and keeps them closely tied to daily life and values.

• ***Elephant in rituals and festivals***: Elephants also occupy a central place in tribal ritual life (Menon and Sinha, 2023). During festivals like **Karam** and Madai (celebrated by several central Indian tribes), folk songs, dances often and stories refer elephants praising their strength, wisdom, and grace (Meena and Meena, 2014). These performances are not mere entertainment; they are acts of remembrance and connection, linking present-day communities to ancestral stories of coexistence and respect.

Among the Santal in Odisha, elephants are invoked in agricultural songs, as creatures deeply connected to their life (Archer, 1974). In areas of Jharkhand and Chhattisgarh, elephant images are painted during harvest festivals, often shown alongside trees, humans, and birds, signifying balance and abundance in nature. In Jharkhand, the Ho and Munda tribes incorporate elephant motifs into their folk art, known as *paitkar* or *sohrai* paintings (Banerji, 2016). The elephant symbolises fertility and is considered an auspicious symbol connected with the harvest.

When elephants die, especially when killed due to human conflict, some tribes hold mourning rituals similar to those for humans. These include song recitations, storytelling, and food offerings, emphasizing the emotional and spiritual bond shared with these creatures.

In Kerala, elephants are sacred participants in temple rituals, processions across Hindu, Muslim, and Christian contexts. Events such as Aanayoottu (Elephant Feeding Festival in Thrissur) involve devotees feeding elephants in honour of Lord Ganesha, believed to bless communities with prosperity (https://www.hindu-blog.com/2007/07/anayootu-mass-feeding-of-elephants-in.html).

• ***Elephants in Tribal Oral Traditions***: Storytelling is a powerful medium in tribal societies, and elephants feature prominently in folk tales passed down through generations. These stories portray elephants as intelligent, benevolent spirits, and also as warriors. In Naga and Mising folklore in Northeast India, elephants often help human characters navigate the dangers of the forest or lead them to hidden sources of water (Debbarma, 2024). Among the Irula tribe of Tamil Nadu, stories describe elephants as guardians of secret medicinal plants and custodians of forest wisdom and Santal folktales of Odisha have depicted elephants as protectors and also depicted elephants as looking for agricultural crops (Campbell, 2011)

• ***Artistic Representations and Sacred Spaces:*** Tribal art frequently features elephants—painted on walls, carved into wood, or shaped in terracotta. In Sohrai, Paitkar and patachitra paintings of Jharkhand, West Bengal and Odisha, elephants appear alongside scenes of forest life, depicted as spiritual, often painted after harvests or before monsoons as part of ritual traditions (Banerjee, 2016).

In some communities, elephant images are placed at the entrance of homes or granaries, believed to bring strength and prosperity. In Ganesh Chaturthi, a festival resembling Hindus customs and rooted in tribal cosmologies, earthen or wooden elephant idols of Ganesha are created, offered food, and then ritually immersed in water bodies.

• ***Gender and Elephant Symbolism***: In many tribal myths, elephants embody both masculine and feminine energies—seen as fierce protectors and nurturing mothers. Some matrilineal tribes, like those in Meghalaya, the Garo and Khasi tribes refer female elephants as "mama" meaning mother (Saikia and Boruah, 2023) reflecting deep rooted respect and love for elephants as nurturing guardians of the forest landscape. regard the female elephant as the forest's guardian, a mother figure who defends it from fire, drought, and harmful forces. In Assam and nearby areas, people often call elephants names like *baba, maharaj, or bhogobaan*, showing the deep respect, they have for them and the belief that elephants are sacred and wise (Banerjee *et al.*, 2024).

THE GROWING CRISIS: CONFLICT AND DISPLACEMENT

Rapid expansion of roads, railways, tea estates, mining, and infrastructure has significantly disrupted elephant corridors across Indian forests. Shrinking natural habitats force elephants into agricultural fields and villages in search of food, increasing the risk of conflict with local communities. For tribal communities who traditionally lived in close proximity to elephants but within shared landscapes, this environmental pressure undermines centuries-old coexistence models. Human-elephant conflicts now result in hundreds of deaths each year resulting in deaths of over 500 humans and around 100 elephants every year (Project Elephant, MoEFCC, GoI). Beyond the loss of life, repeated crop raiding and property destruction cause profound economic and emotional tolls undermining livelihoods and instilling fear across settlements. Tribal people living at forest edges are among those most affected. Their ecological knowledge indicates forest degradation, human encroachment, agricultural expansion and invasive species (like Lantana and Senna spectabilis) that reduce natural forage are pushing elephants toward human settlements and increasing human-elephant conflict.

Policy-driven evictions, often justified for conservation, leading to relocation of tribal people from ancestral lands at times amplify tensions between displaced tribal communities and conservation authorities. As tribal communities are pushed away from forests, their time-tested ecological knowledge—built on intuition, observation, ritual, and harmony—loses relevance and access. This breach exacerbates conflict, as modern mitigation systems seldom recognize or engage this indigenous custodianship.

CONSERVATION SOLUTIONS INVOLVING TRIBAL COMMUNITIES

Tribal communities have lived in close harmony with nature for centuries. However, with expanding development, shrinking forest corridors, and rising human–elephant conflict, the relationship between tribal communities and wildlife is under increasing pressure. Despite these challenges, tribal communities remain critical to the future of conservation and coexistence. Their traditional ecological knowledge such as tracking elephant movements, understanding animal behaviour, and managing forest resources sustainably, offers valuable

insights for modern conservation strategies. Many tribes already practice low-impact farming, seasonal migration, and sacred groves preservation. To move forward, conservation efforts must recognize tribal rights not as obstacles but as assets. Strengthening the implementation of the Forest Rights Act (2006), promoting community-led conservation models, and ensuring that development does not displace or alienate tribal populations are crucial. Initiatives like eco-tourism cooperatives, artisan-based livelihoods, and forest co-management provide meaningful pathways for coexistence. Moreover, respecting cultural identity and including tribal voices in policy decisions will lead to more inclusive and lasting solutions.

One notable example of tribal – elephant coexistence, is of the Nyishi tribe, the largest ethnic group in Arunachal Pradesh. In Nyishi folklore, elephants are often regarded with a mix of reverence and fear. These majestic animals are symbols of strength and wisdom, but sensed as a danger when they stray into human settlements and destroy crops. Historically, elephant tusks and meat were valued, and occasional hunting occurred. However, with community-based conservation efforts and increased awareness by the Wildlife Trust of India in collaboration with Arunachal Pradesh Forest Department and local community, the Nyishi have become key participants in conservation of elephants and are now contributing to protect elephant corridors, mitigate human-elephant conflict, and promote sustainable coexistence. The Nyishi tribes have now replaced hornbill beaks and elephant tusks once used in ceremonial attire with fiberglass replicas (Menon, V, 2016). Today, the Nyishi people stand as a vital bridge between ancient wisdom and contemporary conservation, proving that indigenous knowledge and environmental stewardship can walk hand in hand.

CONCLUSION

Elephants and tribal communities in India share a relationship that transcends mere coexistence. It is rooted in shared ecosystems, ancestral knowledge, cultural symbolism, and mutual respect. From capturing wild herds to crafting sacred art, from festival processions to oral proverbs, this enduring bond is central to many tribal worlds.

Yet in modern India's changing landscape—with conservation laws, habitat pressures, tourism, and welfare concerns—the balance is delicate. Tribal voices are critical to ensuring elephants' future in ways that protect both nature and cultural identity.

Going forward, it is essential to amplify tribal knowledge, include tribal leadership in conservation planning, support dignified livelihoods, and honour tribal-elephant ties—as living cultural heritage rather than relics. Only through inclusive, respectful collaboration can both elephants and the tribal communities who know them best endure and flourish in harmony.

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Photo credit: Karl Egloff / WWF-US

8 ELEPHANTS AND THEIR TRIBAL GUARDIANS - KNOWLEDGE, COURAGE, AND CONSERVATION IN THE NILGIRIS AND ANAMALAIS

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D. Boominathan,
Western Ghats Nilgiris Landscape,
WWF-India

A young adult elephant ran amok near Bospara and Thorappalli in Mudumalai and killed six cattle, causing panic among the people. The veterinarian on call was attending to an emergency case six hours away. Mahouts (elephant handlers) from the Theppakadu camp quickly rushed to the site with five kumki elephants. They encircled the wild elephant and kept it contained for more than six hours until the doctor reached to the spot. Holding a wild, agitated elephant in one place requires immense bravery, knowledge, and skill.

Mr. Manban, an elephant mahout with one of the orphaned calf

In another incident in Kovanur, near the fringe forests of Periyanaickenpalayam range in Coimbatore, a tusker fell into a 45-foot narrow open well in 2016. Forest officials had difficulty making a ramp for the animal to climb out and decided to lift it using crane. The veterinarian sedated the elephant with a dart, and a crane was arranged to lift it. Devaraj and Kumar, both mahouts from Malasar tribal community, descended into the well. One sat on the elephant while the other secured the harness. After securing the elephant, they lifted it out and released it back into the forest.

In a different case in Masinagudi of Mudumalai Tiger Reserve, an elephant remained stuck in a pit of 20 foot depth (used for storing grain) unnoticed for nearly three days. The rescue team arrived promptly and built a ramp. The dehydrated elephant lay down from exhaustion after drinking water. Maran, a mahout from Kattu Nayakka tribe, entered the well and gently tapped the elephant. The animal stood up, followed Maran up the ramp, and moved back into the jungle.

Devaraj, Kumar, and Maran belong to the tribal communities of Mudumalai and Anamalai, and are expert elephant handlers. The Malasars from the Anamalais and Betta Kurumbas and Kattu Nayakkas from Mudumalai possess deep knowledge, skill, and bravery in handling elephants. These tribes preserve traditional practices related to elephant behavior and medicine. Their understanding of elephant social structures, feeding habits, reproductive patterns, and physiology is immense. Many place names in these tribal landscapes are derived from elephants, such as Anamalai, Anamudi, Anakunthi Shola, Anakatti, Anakayam, Anakadu, and Anairrangal.

The Kurumba are a small tribal group from the lower Nilgiris, traditionally hunter gatherers and depend on forest produces. The Malasar in the Anamalais were forest dwellers who practiced shifting cultivation and hunter gatherers. The Kattu Nayakka communities are forest dwellers, relying on the collection and sale of forest produce like honey and wax.

Historically, kings employed these tribes to capture and train elephants for their armies. Their skills and knowledge of forests and elephants were also recognized by the British, who used their expertise in various operations. In recent years, these communities have played an integral role in

Photo credit: Richard Sangma

elephant conservation initiatives in India. Conservationists and forest officials engage these communities regularly for work that demands dedication, local knowledge, skill, integrity, bravery and compassion.

These communities often serve as trackers and field guides for researchers, whose work depends heavily on their support. Monitoring wild elephants to study activity patterns and behavior requires close observation. In the past, researchers tracked radio-collared elephants on foot by following VHF signals, relying on tribal trackers.

One pioneering radio-collaring project was conducted by the Bombay Natural History Society (BNHS) in Mudumalai in the 1990s, laying the foundation for current conservation efforts in the Nilgiris landscape. Many leading elephant scientists in India today credit their field knowledge to the mentorship of these tribal trackers.

Elephant calves are often abandoned by their herds. Manban and Padichi, a Betta Kurumba couple from Mudumalai, have successfully raised eight orphaned elephant calves over the past 25 years. They have done this selflessly, frequently spending long periods away from their own children and family.

Raising a young elephant calf requires the dedication and care of a parent towards one's child. The couple needs to feed each calf milk everyone and a half hour throughout the day, continuing for several months. Each feeding is prepared fresh, following strict hygienic standards to ensure the calf's health.

Their commitment is a remarkable example of supreme human sacrifice. When their only son passed away, one of them attended the funeral while the other stayed behind to care for an orphaned calf.

Elephant experts Dr. K.C. Panicker and Dr. Jacob V. Cheeran have recognized the efforts of these tribal communities as laying the foundation for human-assisted elephant rehabilitation in India.

Raju, a Malasar who worked as an Anti-poaching watcher (APW) in Navamalai, Anamalai Tiger Reserve, faced tragedy when his wife and seven-year-old daughter were attacked by an elephant after getting off a bus. His daughter died on the way to the hospital. This elephant had previously killed four people in Coimbatore before being released into Anamalai. Despite his loss, Raju participated in the elephant's recapture.

Elephant rescue operation from a pit in Mudumalai Tiger Reserve

Many tribal mahouts build unique relationships with elephants. Murthy, a makhna (tuskless male elephant), was a habitual crop raider in Gudalur and Wayanad forests and reportedly killed more than 13 people in Kerala in two years period and few cases in Tamil Nadu part. There was a huge agitation from the local due to frequent human attacks by the makhna. Murthy was captured in Gudalur near Puliyamparai, Tamil Nadu, and brought to Theppakadu elephant camp in Mudumalai in 1998. Chinnappan and Palanisamy, both Malasars from Anamalai, trained him. Murthy became very tame and cooperative, even during musth (a period of heightened aggression) and their companionship lasted over 10 years until both mahouts transferred to other elephant.

Chinnathambi, a gentle tusker, frequently raided crops in and around Coimbatore and Periyanaickenpalayam ranges of Coimbatore division. He was captured in Thadagam Valley and released into Varagaliyaru, Anamalai Tiger Reserve in 2019. He moved out of forest and marched through human use areas for crop raiding and reached near Udumalpet at Krishnapuram. He was recaptured and placed under the custody of Kaliappan, a Malasar mahout. Trained as a Kumki, he now helps drive wild elephants away from villages and assists in capturing high-risk elephants (elephants that are a threat to people) in Coimbatore.

The bond between a Kumki elephant and a mahout is unique and close. Each elephant drive or capture involves risk and requires strong trust and communication. Most mahouts and cavadis (assistants) in the Nilgiris and Anamalais are from the Betta Kurumba, Kattu Nayakka and Malasar tribes. Capturing, taming, and training a Kumki elephant is a skilled, risky and long-drawn process. The relationship grows to the point where mahouts can

guide elephants with just a stick and voice commands, while elephants respond with grunts and body language.

During capture operations for translocation, captivity or treatment, trackers play a critical role in choosing safe capture sites. After darting an elephant, trackers follow the animal closely to prevent injury to itself or others, despite dense vegetation and limited paths. Their tracking skills avert many possible accidents.

I have personally witnessed these tribal handlers' ethnobotanical knowledge in treating elephant ailments. Many herbs they use, as well as soil from termite mounds, work faster and more effectively than some modern medicines available for animals.

CONCLUSION

These stories of elephant rescue, rehabilitation and conservation illustrate not only the challenges faced by wildlife and communities but also the invaluable role played by tribal mahouts and forest dwellers. Their deep traditional knowledge, dedication, and unique bond with elephants have been crucial in managing conflict, rescuing injured animals, and advancing conservation efforts.

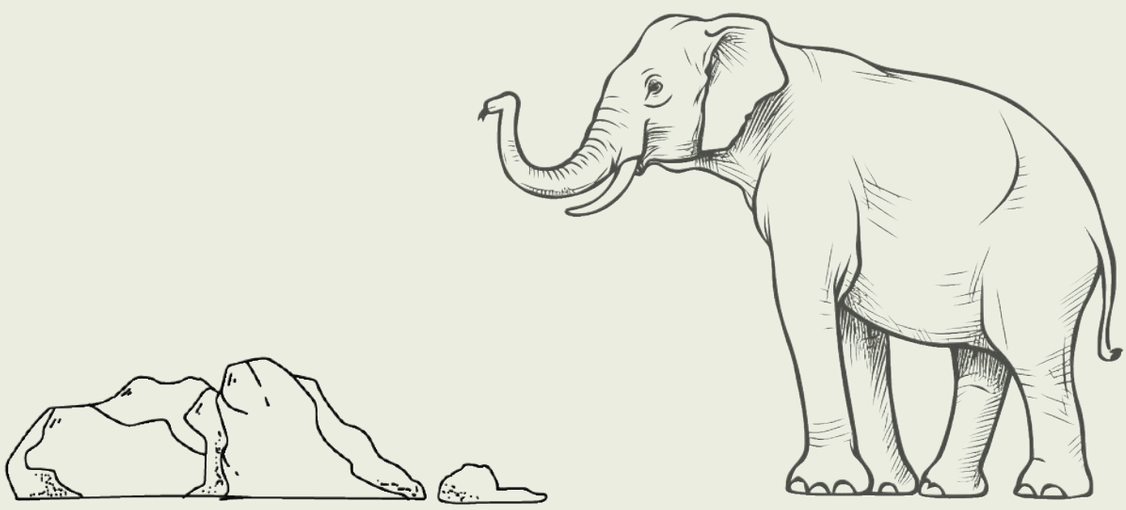
Through their skills in tracking, taming, and caring for elephants including orphaned calves, these communities continue to uphold a legacy that blends cultural heritage with modern wildlife management. Recognizing and supporting their contributions remain essential for the sustained well-being of both elephants and people sharing these landscapes.

Photo credit: Dr N Lakshminarayanan

9 CONSERVATION NEWS

REGIONAL COORDINATION MEETING AT GUWAHATI

A meeting to Granulate the Components of The Regional Action Plan for Comprehensive Understanding and Management of Human Elephant Conflict in Northeastern India held on 21st January 2025, Guwahati under the Chairmanship of Addl. Director General of Forest (PT&E) and Member Secretary (NTCA). The meeting was attended by senior officials from the MoEF&CC, Principal Chief Conservators of Forests and Chief Wildlife Wardens from Northeastern states, scientists from the Wildlife Institute of India, veterinary experts, conservationists, and members of key wildlife organizations and committees. The core team cum Drafting Committee for the Regional Action Plan (RAP) is to be constituted by the Project Elephant. The Drafting Committee would comprise officials from Project Elephant, State Forest Departments, WII and experts / consultants from the region.



CAPACITY BUILDING WORKSHOPS FOR ELEPHANT HANDLERS

Project Elephant and the Elephant Cell at the Wildlife Institute of India, in collaboration with the Assam Forest Department, jointly organized a residential workshop on 21st – 22nd January 2025 at Radisson Blu Hotel, Guwahati, Assam. workshop aimed to enable elephant custodians, mahouts, and field staff handling elephants in the north-eastern region (encompassing Assam, Arunachal Pradesh, Meghalaya, Tripura, Manipur, Nagaland, and Mizoram) to ensure the welfare and health of captive elephants maintained by government and private agencies. The workshop saw the participation of 33 individuals from all north-eastern states, including elephant custodians, mahouts, forest department officials, veterinarians, and conservationists. The resource personnel included experienced mahouts, senior veterinarians, biologists, and wildlife managers who shared their expertise on various aspects of elephant welfare and husbandry.

CEHWC MEETING

The fifth meeting of Captive Elephant Healthcare and Welfare Committee (CEHWC), Project Elephant held on 7th March 2025 under the Chairmanship of Inspector General of Forests (PT&E) & Director (PE), MoEF&CC through VC. The meeting highlighted several positive developments toward improving captive elephant management and welfare in India. Members emphasized the importance of regular training programs and workshops for elephant handlers and mahouts, recognizing them as key to enhancing safety and care standards. It was informed in the meeting that four subcommittees have been formed to draft documents on various aspects of healthcare of captive elephants, which are as follows:

- "Principles of Captive Elephant Management: A Field Manual"
- "Best Practices in Captive Elephant Management for Elephant Handlers"
- "Guidelines for foot-care of captive elephants"
- An advisory about the procedure for measurement and trimming of tusks from captive elephants

CPEMC MEETING

Eighth (8th) Meeting of the Central Project Elephant Monitoring Committee (CPEMC), Project Elephant held on 17th March under the Chairmanship of Addl. Director General of Forest (PT&E) and MS-NTCA, MoEF&CC. It was noted by the chair that the progress of on-going work is satisfactory, and many milestones have been achieved by the Project Elephant in last couple of years. Human-Elephant Conflict (HEC) is a challenging issue keeping in view the increasing human population and infrastructural needs in the country to meet the economic aspiration. There is a need to sensitise the revenue and police officials regarding HEC specially where role of revenue officials is important in disbursement of crop compensation. The Committee also endorsed the plan for Management Effectiveness Evaluation (MEE) for Elephant Reserves and strongly recommended for carrying out MEE of all the ERs.

21ST STEERING COMMITTEE MEETING

The 21st meeting of the Steering Committee of the Project Elephant was held on 26th June 2025 at Indira Gandhi National Forest Academy, Dehradun under the Chairmanship of Hon'ble Minister, Environment, Forests, and Climate Change, Government of India, Shri. Bhupender Yadav. In the meeting focused on the measures to reduce human elephant conflict and initiatives for the welfare and capacity building of the field staff and mahouts.

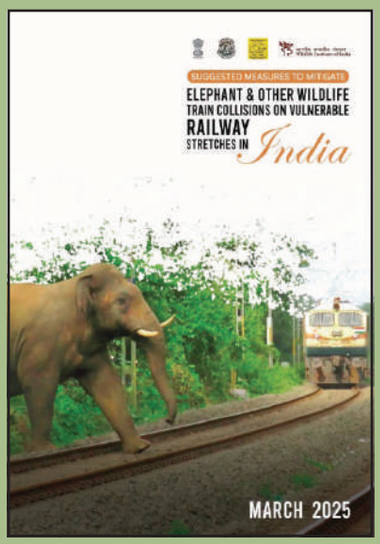
The following publications were released during steering committee meeting:

i. Report on Suggested Measures to Mitigate Elephant & Other Wildlife Train Collisions on Vulnerable Railway Stretches: a consolidated report for 14 States.

ii. State-wise report on understanding elephant conflict issues for suggesting conflict reduction measures for the States of Assam, Chhattisgarh and Jharkhand.

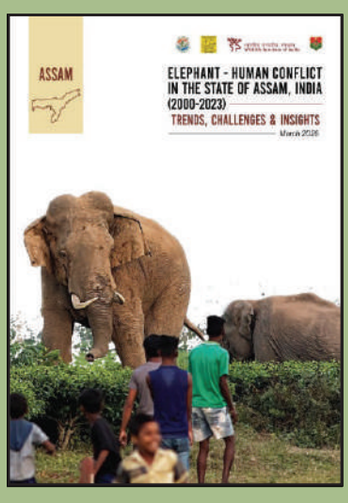
iii. Advisory on Tusk Trimming

iv. TRUMPET Quarterly Journal – January 2025



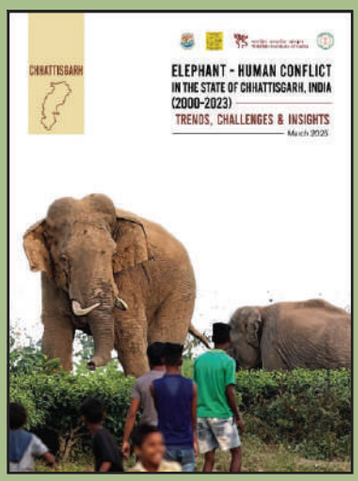
SUGGESTED MEASURES TO MITIGATE ELEPHANT & OTHER WILDLIFE TRAIN COLLISIONS ON VULNERABLE RAILWAY STRETCHES

The Indian Railways serves as a vital transportation lifeline for the country, facilitating the movement of people and goods nationwide. However, railway infrastructure can act as a barrier, restricting wildlife movement and leading to habitat fragmentation. To address the issue of wildlife fatalities resulting from train collisions, the Project Elephant in collaboration with the Wildlife Institute of India (WII) and the Ministry of Railways, had initially identified 110 sensitive railway stretches across the elephant distribution range in India, with 17 additional sensitive stretches identified in two Indian tiger range states. Across these identified stretches, a comprehensive joint survey was, focused on assessing critical railway stretches where elephant and wildlife-train collisions are prevalent. After an exhaustive survey of the 127 railway stretches (110 in elephant range and 17 in two tiger range states) spanning 3452.4 km, 77 railway stretches spanning 1965.2 km across 14 states were recommended for mitigation measures based on the intensity of use by elephants, tigers, and other wildlife in the region. The proposed mitigation measures for these 77 stretches include 503 ramps and level crossings, 72 bridge extensions and modifications, 39 fencing, barricading, or trenching structures, 4 exit ramps, 65 new underpasses, and 22 overpasses—totalling 705 structures.



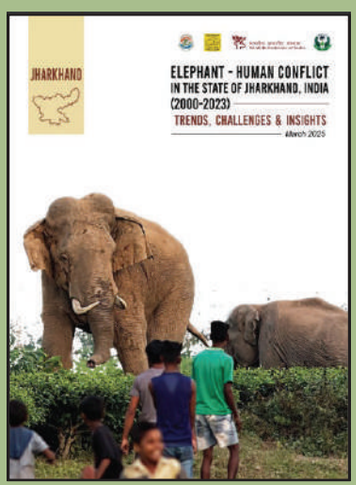
ELEPHANT-HUMAN CONFLICT IN THE STATE OF ASSAM, INDIA (2000-2023)- TRENDS, CHALLENGES & INSIGHTS

Human-elephant conflict (HEC) in Assam has been a persistent and growing challenge, resulting in significant losses for both humans and elephants. The pressure on elephant habitats has escalated as landscape has shown an increase in agriculture, settlements, and development projects, leading to more frequent interaction between human and elephant. This report examines the trends in Human-elephant conflict over the last 23 years (2000–2023), analysing the underlying factors driving conflicts and attempt has been given to formulate mitigation strategies to foster coexistence between local communities and elephants.



ELEPHANT-HUMAN CONFLICT IN THE STATE OF CHHATTISGARH, INDIA (2000-2023) – TRENDS, CHALLENGES & INSIGHTS

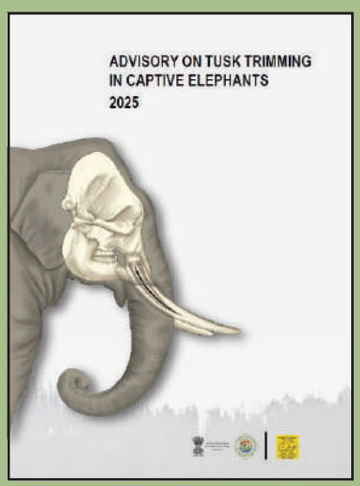
The elephant population in Chhattisgarh, which initially migrated from Jharkhand and Odisha during the 1980s and 1990s, has expanded over time, driven by habitat fragmentation in these neighbouring states. In recent years, deforestation, encroachment, industrialization, and mining have degraded forested areas, forcing elephants to venture in human-dominated landscapes. This shift has also intensified conflicts over the past two decades, driven by agricultural expansion and infrastructure development. The study examined 218 documented elephant mortalities and 828 HEC incidents between 2000 and 2023, identifying key ecological and anthropogenic factors shaping conflict patterns.



ELEPHANT-HUMAN CONFLICT IN THE STATE OF JHARKHAND, INDIA (2000-2023) – TRENDS, CHALLENGES & INSIGHTS

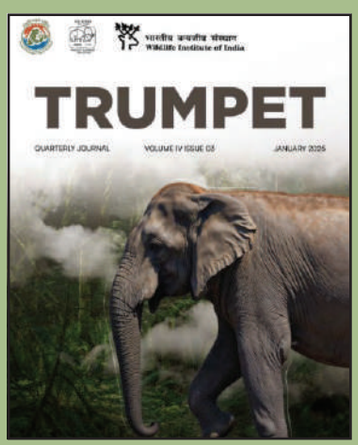
Human-elephant conflict (HEC) in Jharkhand has emerged as a critical conservation and socio-economic challenge, resulting in mortality of both humans and elephants. This report presents analysis of HEC from 2000 to 2023, covering data collected from 22 Forest Divisions. The study examines trends in land use and forest fragmentation, highlighting a 14.97% conver-

sion in forest cover and increased habitat fragmentation as key drivers of conflict. Conflict hotspots are concentrated in Ranchi, East Singhbhum, and Saraikela, where human expansion into traditional elephant corridors has intensified interactions. The findings highlight the urgent need for mitigation strategies, including habitat restoration, infrastructural modifica¬tions, and community-based conflict management to ensure coexistence between humans and elephants in the region.



ADVISORY ON TUSK TRIMMING IN CAPTIVE ELEPHANTS

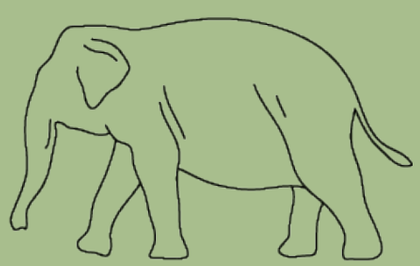
Elephant tusks are elongated incisor teeth that grow continuously throughout an elephant's life. Primarily composed of dentine (ivory), tusks serve multiple functions including foraging, defence, and mate selection. While strong, they are susceptible to fractures and other ailments, especially in captivity. Proper tusk care, including trimming is essential for an elephant's well-being. However, improper trimming can cause severe harm, even life-threatening complications. This advisory outline the key considerations, procedures, and precautions to be followed for safe and ethical tusk trimming in captive elephants.

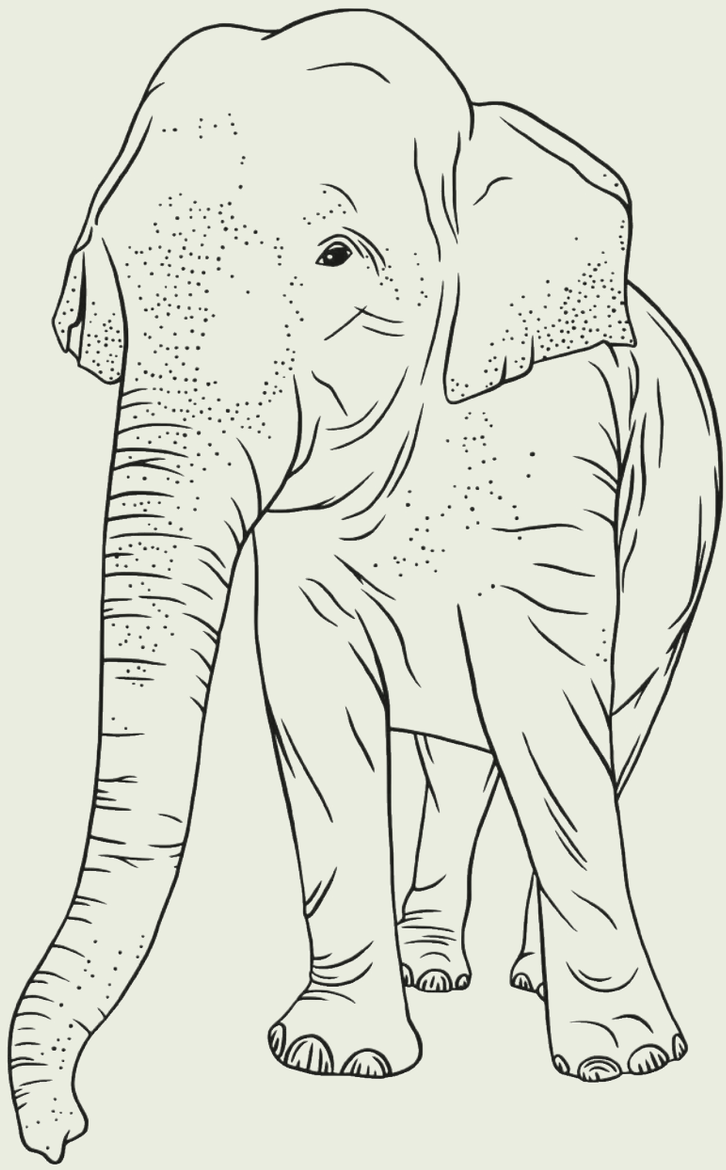


TRUMPET VOL. IV, ISSUE 3 (2025): NEWSLETTER BY PROJECT ELEPHANT

A quarterly newsletter covered activities from August–December 2024. It also highlights key conservation efforts, achievements, and recent developments by Project Elephant and the Elephant Cell, WII. This issue featured a total of 10 articles focusing on human-elephant conflict, welfare, transboundary conservation, capacity building, and innovative tools like AI.

Regional Action Plan field visit to Kerala and Andhra Pradesh





PROJECT ELEPHANT

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