Telangana Biodiversity

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Editorial

Climate change is increasingly reshaping ecosystems across the planet, altering rainfall patterns, intensifying extreme weather events, and shifting temperature trends. These changes are influencing the ecosystem dynamics and the survival of species. Coral reefs experience bleaching under warming seas, alpine species are pushed higher up mountains in search of cooler climates, and seasonal events such as flowering, migration, and breeding are becoming misaligned with the environmental cues that once guided them. As ecosystems are disturbed, the balance between species, habitats, and ecological processes face challenging constrains. However, nature is not entirely fragile. Ecosystems and species possess remarkable capacities for resilience, the ability to adapt and reorganize in the face of disturbances. Some species shift their ranges or adapt physiologically to new conditions. Forests and grasslands regenerate after fires and wetlands buffer floods. These responses show the dynamic and adaptive nature of life on Earth. However, resilience has limits. When environmental changes occur too rapidly, as in the case of anthropogenic pressures such as habitat loss, pollution, and overexploitation, ecosystems can reach tipping points beyond which recovery becomes difficult or even impossible. The pressing question, therefore, is not whether nature can adapt, because it often can. But will human activities allow ecosystems the time and space needed to remain resilient in a world highly impacted by us? Human communities depend on this resilience more than we accept or imagine.

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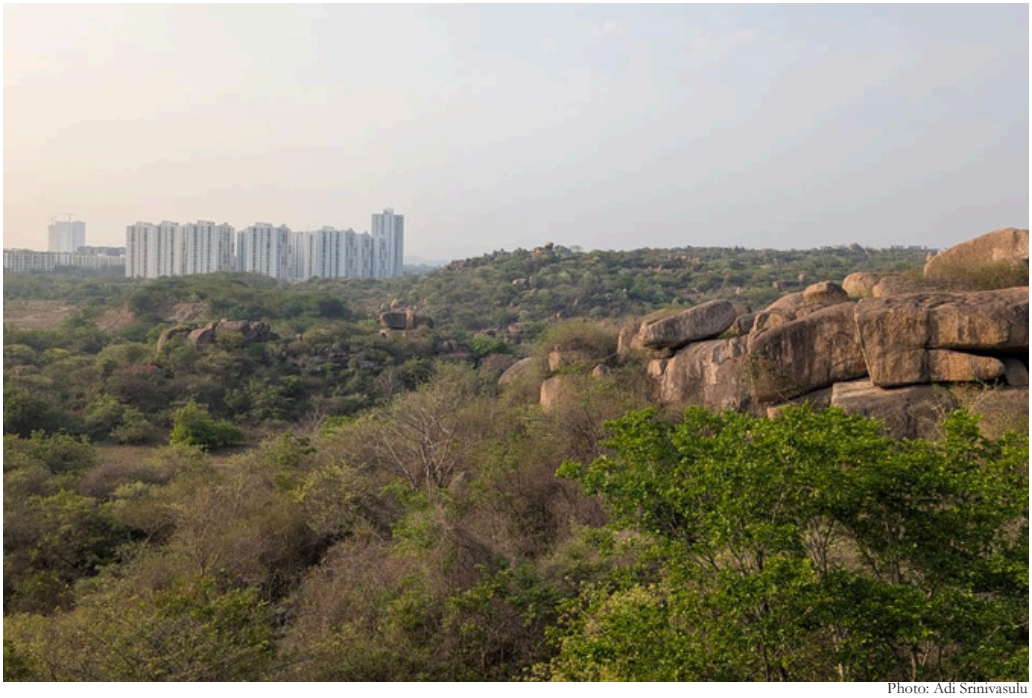


Photo: Adi Srinivasulu

Briefly

Smooth-coated Otters spotted in Adilabad, Telangana

For the first time, Smooth-coated Otters have been spotted in the Boath Range, in Adilabad district, Telangana. A pack of six individuals were spotted in an irrigation tank in Gollapur village, bringing the attention of locals and forest officials alike. Such rare sightings are much-needed reminders of the biodiversity that remains to be explored and studied in the state of Telangana. Boath Forest Range Officer Thodishetty Pranay Kumar emphasised that increased recharge of the waterbody due to abundant rains, along with strict monitoring and prevention of poaching activities in the region have most probably contributed to the sighting. Smooth-coated Otters (*Lutrogale perspicillata*) are freshwater mammals, assessed as Vulnerable on the IUCN Red List. Particularly in Telangana these mammals have not been extensively studied or monitored, marking their ecology, spatial distribution patterns and population trends as significant and vast areas for conservation attention and research

Photo: The Hindu

Special Feature

Bandipur Tiger Reserve

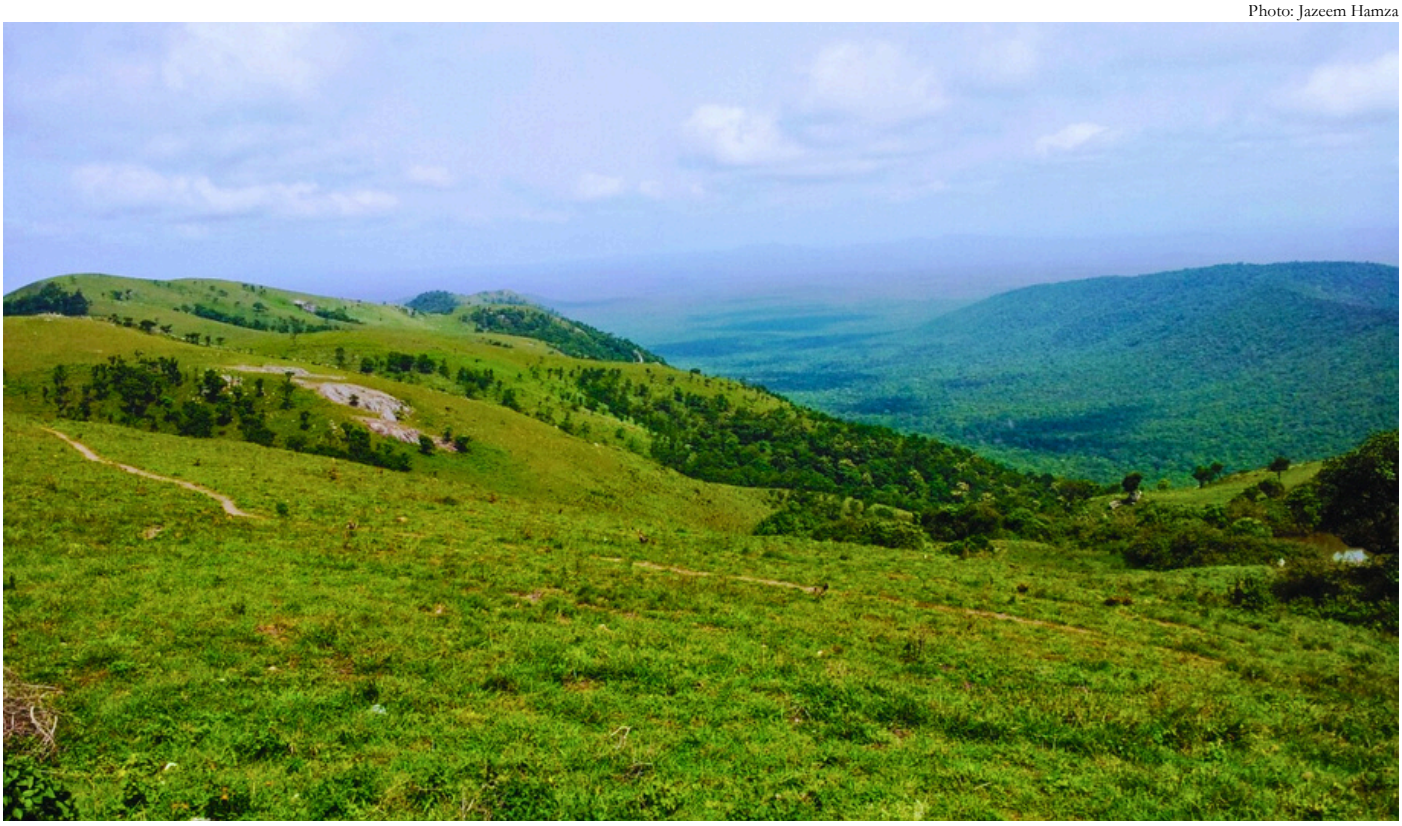
The Bandipur Tiger Reserve is one of India's well-known protected areas and forms an important part of the larger Nilgiri Biosphere Reserve, one of the most biodiverse landscapes in the country. Located in Karnataka, Bandipur lies along the foothills of the Western Ghats and is a part of a vast and continuous forest landscape that supports some of the highest wildlife densities in India. The reserve covers approximately 874 square kilometres and was originally established as a wildlife sanctuary in 1931 by the Maharaja of Mysore before being designated as one of the first reserves under Project Tiger in 1973.

Bandipur's landscape is characterized by gently undulating terrain, dry deciduous forests, scrublands, and open grassy patches interspersed with seasonal streams. The reserve receives moderate rainfall and represents a transition zone between the moist forests of the Western Ghats and the drier Deccan Plateau ecosystems.

This habitat diversity supports a rich floral composition, with dominant tree species including teak (*Tectona grandis*), Indian rosewood (*Dalbergia latifolia*), sandalwood (*Santalum album*), axlewood (*Anogeissus latifolia)*, and flame-of-the-forest (B*utea monosperma*). Bamboo species such as *Dendrocalamus strictus* are also common in several parts of the reserve, providing critical forage and shelter for wildlife.

The faunal diversity of Bandipur is rich and includes 35 species of mammals, 289 species of birds, 34 species of reptiles, 21 species of amphibians and 25 species of fish. The reserve sis home to the Bengal Tiger, along with other large carnivores such as the Leopard and the Dhole. Bandipur is also well known for its large herds of the Asian Elephant, which move across the wider Nilgiri landscape through established wildlife corridors. Other important mammals include the Gaur, Sloth Bear, Sambar Deer, Chital, and

Photo: Jazeem Hamza



Four-horned Antelope. The reserve also harbours over 200 species of birds, including the Indian Peafowl, Grey Junglefowl, Malabar Pied Hornbill, and several raptors and woodland birds.

The Karnataka Forest Department has implemented various conservation initiatives in Bandipur, including anti-poaching camps, solar-powered waterholes, habitat improvement programs, invasive species removal, and community-based eco-development schemes. Wildlife monitoring is done using technologies like M-STrIPES and camera traps that ensure effective patrolling and data-based decision-making. The reserve has also pioneered education programs like "Bandipur Yuva Mitra" to engage local children and youth is stewarding the beautiful landscape. The programme now has involved students from 136 villages located around the reserve and consists of both educational classroom sessions and field visits. The youth are given environment volunteer IDs pushing them to get involved in conservation, population-monitoring and stewarding the goals of the reserve. Due to its success and extensive outreach, the initiative was recognized by the Indian Book of Records. The reserve stands as a testament to the power of community-stewardship in wildlife conservation and protection.

Photo: NimitB

Threatened Taxa

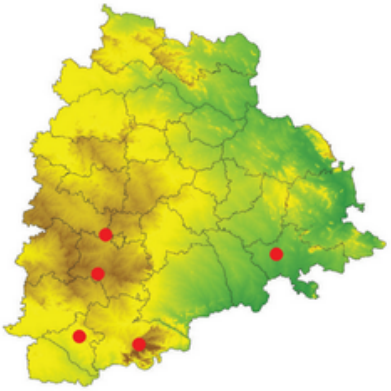
Plant - *Ceropegia spiralis* Wight

Photo: Chiranjeevi P

Taxonomy Order Gentianales; Family Apocyanaceae.
Geographic Range Endemic to India; distributed in Andhra Pradesh, Telangana State, Karnataka, Kerala, and Tamil Nadu.
Distribution Rare; found in Khammam, Nagarkurnool, Rangareddy, and Wanaparthy districts.
Population Nothing is known about its population status or trends.
Habitat & Ecology Slender erect herb, found growing in dry hilly areas in scrub jungles, and dry deciduous and thorny forest patches.
Major Threats Threatened due to habitat loss and destruction, encroachment, overfeeding by wild pig, and harvesting for local medicinal use.
Use & Trade This species is not in trade, but is collected for local medicinal use.
Conservation Measures No species-specific conservation measures are in place.

Remarks
This species is found in dry deciduous and scrub forests. It does not occur in any protected areas. It is threatened by habitat destruction, predation by wildl pig, and harvesting for local medicinal use. The estimated number of localities is 5; the estimated extent of occurrence (EOO) in Telangana State is <20,000 km2, and the area of occupancy (AOO) is <100 km2. There is an inferred continuing decline in the area, extent, and quality of suitable habitat. At the global level, this species has not been assessed. In Telangana State, this species is assessed as Vulnerable, with the criteria A2d+B1ab(iii,iv)+2ab(iii,iv).

Distribution in Telangana State



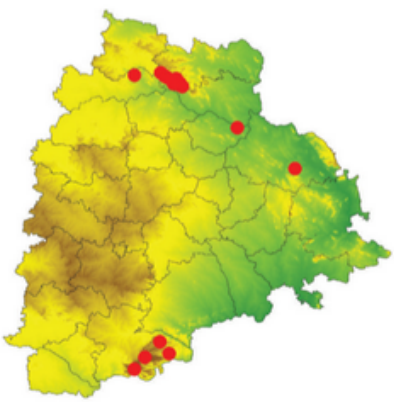
Animal - *Mellivora capensis* (Schreber, 1776)

Photo: Sumeet Moghe

Taxonomy Class Mammalia; Order Carnivora; Family Mustelidae.
Geographic Range Widely distributed species being found from Africa through Arabia to Middle Asia & south Asia. In India, it is widely, but patchily distributed.
Distribution Occasional; found in Nirmal, Mancherial, Komaram Bheem Asifabad, Jayashankar Bhupalapalli and Nagarkurnool districts.
Population Nothing is known about its population status or trends. It is known from only from a few localities, mostly in protected areas.
Habitat & Ecology Found in scrub jungles, dry thorn forests, dry and moist deciduous forests, and rocky and hilly areas. It is crepuscular being very active during nights. It hunts young of medium to smaller than its size animals. It also scavenges from the kills of larger carnivores. Females give birth to a single cub.
Major Threats Threatened by human-animal conflict, persecution, depletion of prey base, habitat loss, habitat degradation, and fragmentation caused by encroachment, and conversion of forests for agriculture.
Use & Trade This species is not in trade.
Conservation Measures No known species specific conservation practices are in place for this species.

Remarks
This taxon is found in scrub jungles, dry thorn forests, dry and moist deciduous forests, and rocky and hilly areas. It is known from 6 localities in Kawal TR, Amrabad TR, Siwaram WLS and Eturnagaram WLS. It is threatened by human-animal conflict, persecution, depletion of prey base, habitat loss, degradation and fragmentation; the estimated extent of occurrence (EOO) in Telangana State is <20000 km2, and the area of occupancy (AOO) is <5000 km2. There is an inferred continuing decline in the area, extent and quality of suitable habitat. At the global level, this taxon has been assessed as Least Concern. In Telangana State, this species is assessed as Vulnerable, with the criteria B1ab(iii)+2ab(iii).

Distribution in Telangana State



Pioneers in Conservation

Padma Shri Chaitram Deochand Pawar

Chaitram Devchand Pawar is a noted social worker from Maharashtra whose work over the past three decades has focused on tribal welfare, environmental protection, and sustainable rural development. Pawar has dedicated much of his life to working with forest-dwelling communities across Maharashtra and parts of Gujarat, helping strengthen their livelihoods while promoting conservation of natural resources.

Photo: GODL - India

Beginning his work in his native village through the Vanavasi Kalyan Ashram, Pawar gradually expanded community-based initiatives to nearly 100 villages. His work strongly emphasizes the traditional tribal philosophy of dependence on and connection with "*Jal, Jungle aur Jameen*" Recognizing the importance of forests for ecological stability and tribal livelihoods, he mobilized local communities to prevent deforestation and actively participate in forest restoration. Through collective efforts, more than 445 hectares of degraded land were regenerated into dense forest. Water conservation has been another cornerstone of his environmental work. Pawar led community-driven watershed development programs that included construction of loose boulder bunds, contour trenches and other soil- and water-conservation structures. Recognizing his dedicated efforts, he was awarded the Padma Shri in 2025. Through his lifelong commitment to community-led conservation, Chaitram Devchand Pawar stands as an inspiring example of how grassroots leadership can protect ecosystems while empowering people who depend on them.

Environment Education

World Wetland Day

Observed every year on February 2, World Wetlands Day highlights the importance of wetlands and the need to conserve these vital ecosystems. The day commemorates the signing of the Ramsar Convention on Wetlands in 1971 at Ramsar in Iran, an international agreement dedicated to the protection and sustainable use of wetlands around the world. Wetlands include a variety of habitats such as marshes, swamps, mangroves, floodplains, lakes, and estuaries, all of which play a crucial role in maintaining ecological balance. These ecosystems provide essential ecosystem services, like flood regulation, groundwater recharge, and carbon storage. Wetlands also support a remarkable diversity of life, from specialized wetland plants, the plethora of invertebrates to fishes, amphibians, wetland reptiles and birds. Prominent wetlands in India include the Chilika Lake, Keoladeo National Park, Deepor Beel, Point Calimere and the Gulf of Mannar. Despite their value, wetlands are among the most threatened ecosystems due to pollution, urban expansion, drainage, and climate change. Although a single day is never enough, the World Wetlands Day brings attention to these important ecosystems and their conservation, which are essential not only for the dependent human communities and their well-being, but more so for the inhabiting biodiversity that have evolved and adapted for millenia with the wetland ecosystems.

Photo: Government of Odisha

Nature for Kids

The Big Cats of India

Photo: Suheel Quader

India is home to some of the most magnificent wild cats in the world. These powerful predators, often called the "big cats," roam forests, mountains, grasslands, and even deserts across the country. The most famous among them is the Bengal Tiger, India's national animal. With its striking orange coat and black stripes, the tiger is a stealthy hunter that lives in a wide range of habitats and plays an important role as a keystone species: a species which when absent can cause the entire ecosystem to collapse. India today supports the largest population of wild tigers in the world, thanks to conservation efforts through Project Tiger in the country.

Another well-known big cat is the Indian Leopard. Leopards are extremely adaptable animals and are excellent climbers. They can live in thick forests, dry hills, farmland areas, and sometimes even close to towns and villages. Their golden coat covered with dark rosette-shaped spots helps them blend perfectly into their surroundings while hunting at night.

High in the snowy mountains of the Himalayas lives the mysterious Snow Leopard. With thick fur, a long fluffy tail, and excellent climbing skills, it is perfectly adapted to life in cold, rugged landscapes. In the dry grasslands of western India, the swift and graceful Asiatic Lion survives today mainly in and around the famous Gir Forest National Park. Recently, the African Cheetah was also reintroduced in the the Kuno National Park to bring back a cheetah population in the country, which was previously the Asiatic Cheetah.

These big cats are known as apex predators, meaning they are at the top of the food chain. By hunting deers, wild pigs, and other animals, they help keep nature in balance and ensure that forests and grasslands stay healthy. Protecting these majestic animals also helps protect entire ecosystems and the many plants and animals that live alongside them. They are wonderful is every way possible!

Photo:Snow Leopard Trust

Our Biodiversity

Hemidactyls of Telangana State

Photo: Kobita Daass

Photo: Aparna Lajmi

Geckos of the genus *Hemidactylus* represent one of the most diverse and widespread groups of reptiles in India, and the state of Telangana supports a good diversity of these small yet ecologically important lizards. Current records indicate that around 16 species of *Hemidactylus* occur in the state, in varied habitats ranging from rocky outcrops and dry deciduous forests to urban settlements and agricultural landscapes. *Hemidactylus aemulus, H. flavicaudus* and *H. xericolus* are three species endemic to the state. Along with other species endemic to Peninsular India that occur in Telangana as well, this diversity highlights the ecological importance of Telangana's granite hillocks and rock outcrops, that are inhabited by these species.

The evolutionary history of *Hemidactylus* geckos is fascinating. This genus represents an ancient radiation of lizards that diversified across Africa, the Middle East, and South Asia millions of years ago. In the Indian subcontinent, especially within the rocky terrains of the Deccan Plateau, multiple lineages evolved and adapted to specific microhabitats such as cliffs, boulders, caves, and human structures. Telangana's characteristic granite formations provide ideal refuges, offering crevices and thermal niches that support many rock-dwelling species. Over time, isolation among these rocky habitats likely promoted speciation, resulting in the taxonomic diversity observed today.

Ecologically, *Hemidactylus* geckos are primarily nocturnal insectivores, feeding on moths, mosquitoes, beetles, ants, and other small invertebrates. In turn, these geckos also serve as prey for birds, snakes, and small mammals, making them an integral part of the local food web. *Hemidactylus* geckos remain overlooked in wildlife conservation and public awareness. Because a few species are commonly seen on house walls or rocky surfaces, they are often dismissed or perceived negatively. However, detailed taxonomic studies over the past two decades have revealed that this group holds a lot of cryptic diversity. Recognizing and documenting this diversity is essential, particularly in rapidly urbanizing regions like Telangana where rocky habitats are increasingly threatened.

Feature - Flora

Flame of the Forest - *Butea monosperma* (Lam.) Taub.

Classification

Kingdom: Plantae
Division: Magnoliophyta
Class: Magnoliopsida
Order: Fabales
Family: Fabaceae
Genus: *Butea*
Species: *monosperma*
Authority: (Lam.) Taub.

Butea monosperma is a flowering plant, native to the tropical regions of South Asia and South-east Asia, recognized distinctly for its bright-orange blooms, which have rightfully earned the name "Flame of the Forest" for this species. The leaves are pinnate, consisting of three leaflets. During the months of December and January, the tree shed its leaves, with the subsequent months up until March, witnessing the fiery blooming of this tree - orange and vermilion flowers covering the crown. Each flower consists of five petals - one standard, two wing and one curved keel. The flowers eventually mature into green-coloured seed pods by early April. This species is known as "*Palash*" in Hindi and "*Moduga chettu*" in Telugu. In Telangana, the flowers are commonly used for worship during the Shivaratri season.

Photo: Shyamal

Indian Spotted Eagle - *Clanga hastata* (Lesson, RP, 1831)

Classification

Kingdom: Animalia
Phylum: Chordata
Class: Aves
Order: Accipitriformes
Family: Accipitridae
Genus: *Clanga*
Species: *hastata*
Authority: (Lesson, RP, 1831)

Clanga hastata also known as the Indian Spotted Eagle is a species of raptors native to South Asia. It occurs across India, Bangladesh, Pakistan, Nepal and Cambodia. The adults are dark-brown in colour, with a wing-span of around 150cm. When viewed from below when in flight, its wings and tail appear to have fine bars, with brown on creamy-white feathers. It is inhabits open forests, forest edges, scrub and grasslands, and agricultural fields. While it is a widespread species, threat assessments point to a potential decrease in population size, mostly due to the non-availability of nesting sites largely caused by habitat loss of open, natural ecosystems which is the preferred habitat of this species. In view of such impact, the recent IUCN Red List assessment for *Clanga hastata* has listed the species as Near Threatened.

Photo: Tisha Mukherjee

Events

Nocturnal Walk with HYTICOS

Photo: CBCS, OU

On the 14th of February, 2026, CBCS in collaboration with the Hyderabad Tiger Conservation Society (HYTICOS) organized a nocturnal bat walk as part of the Last Urban Natural Green Spaces (LUNGS) initiative. The session was led by Dr. Aditya Srinivasulu, who led a group of curious participants ranging from adults to children, introducing them to the world of bat-behaviour, biology and ecology. The introductory session was followed by a demonstration of how bat-detector tools work, followed by a trail in the Landscape Garden of Osmania University. Participants enthusiatically looked for and noticed the various species of bats found in the campus, learning about their echolocation calls and how human-activities impact these creatures of the night, co-existing alongside us.

News

International Youth Biodiversity Conference 2026

Photo: CBCS, OU

The International Youth Biodiversity Conference 2026 was held at the Kanha Shanti Vanam, organized by the Telangana Biodiversity for four days from 20th to 23rd February, 2026. The conference brought together passionate post-graduate students and environmental experts and delegates, to enable holistic learning, knowledge-sharing and capacity building, all for the purpose of fostering a nature-positive attitude towards entrepreneurship and economy. The 4-day residential event, allowed the participants to gain insights into biodiversity governance and sustainable enterprises that enable harmonious growth among human communities, livelihoods and nature. It began with a welcome address by Kalicharan Khartade, IAS, Secretary, TBB. Prof. C. Srinivasulu, Director, CBCS and Dr. Bhargavi were present as invited mentors for the students at the conference.

Signing Off

The Great Nicobar Project

The recent approval of the proposed development project on the Great Nicobar Island by the National Green Tribunal has reignited an important conversation on where the line between essential-development and the need for control over resources should be drawn. Located in the ecologically sensitive Andaman and Nicobar Islands, Great Nicobar harbours precious unique rainforests, fragile coastal ecosystems, and several endemic species found nowhere else in the world. While the project promises strategic and economic benefits, it also raises serious concerns regarding biodiversity loss, habitat fragmentation, and impacts on indigenous communities - the impacts are too large and the loss incurred can never be recovered. With the negative effects plain in sight, the NGT approving this project raises questions over the real intent behind the push for such large-scale development at the expense of involved stakeholders, the power dynamics in the world's largest democracy and the direction in which a country like India that hosts such rich biodiversity is headed.

Photo: Rama Narayanan H

We hope you have enjoyed this issue... If you wish to share any information, please do not hesitate to contact us.

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