



ANNUAL REPORT

2024-2025



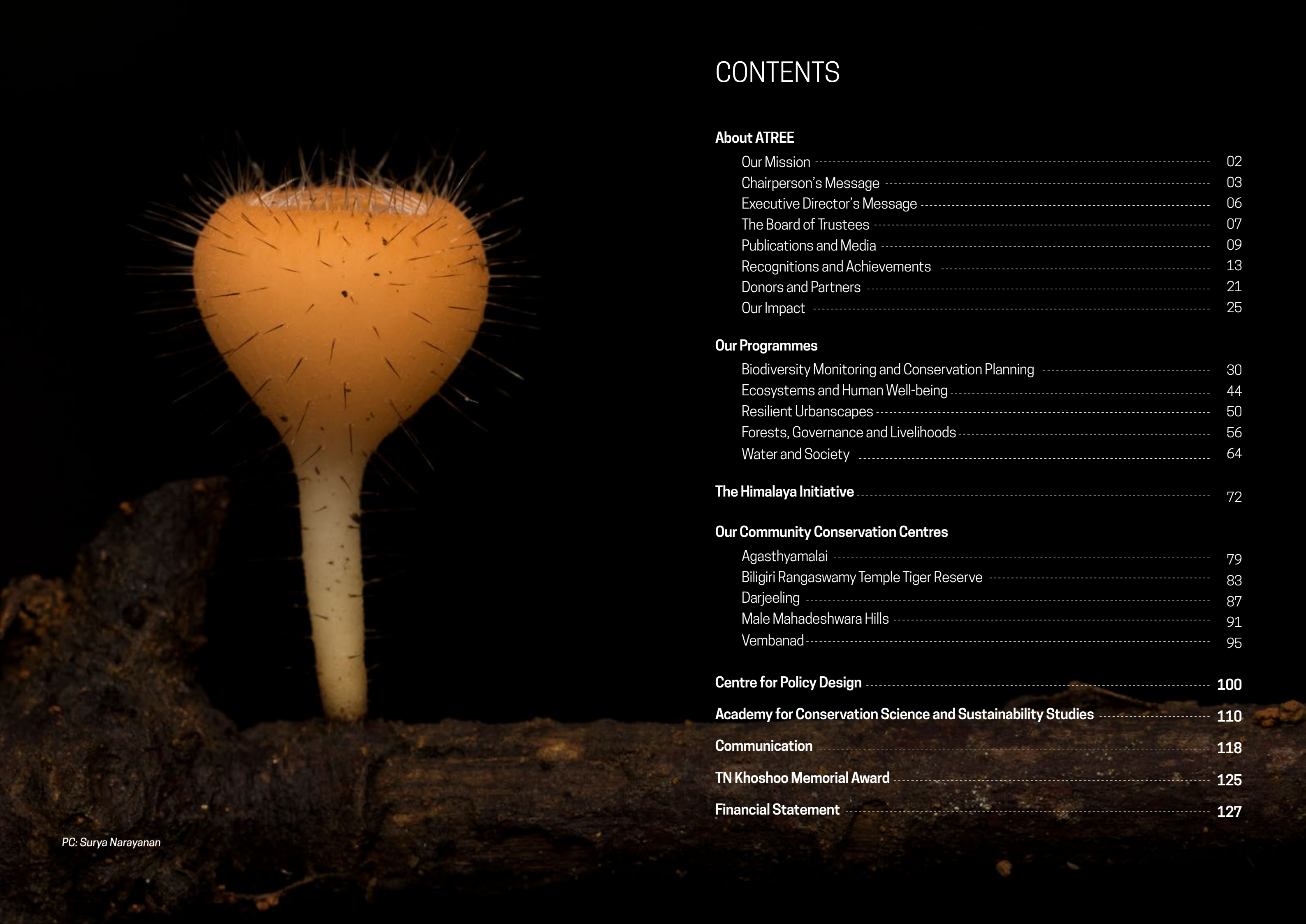
An aerial photograph of a mountainous region. In the foreground, there are green, terraced fields and a small village with several buildings, some with blue roofs. A river or stream flows through the valley. In the background, there are large, rugged mountains with significant snow cover under a blue sky with scattered white clouds.

Ashoka Trust for Research in Ecology and the Environment (ATREE) is a globally recognised non-profit organisation focused on environmental conservation and sustainable, socially just development. ATREE engages in the generation and dissemination of rigorous interdisciplinary knowledge that informs and is informed by the needs of grassroots communities, policymakers and the wider public. It prioritises capacity-building for producing the next generation of environmental scholars and leaders.

ATREE works across landscapes on issues pertaining to biodiversity conservation and restoration, water security, sustainable resource use, livelihoods and human well-being, and climate change adaptation and mitigation.

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Photo Credits: ATREE Staff

PC: Saloni Bhatia



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OUR MISSION

ATREE's mission is to generate rigorous interdisciplinary knowledge for achieving environmental conservation and sustainable development in a socially just manner, to enable the use of this knowledge by policymakers and society and to train the next generation of scholars and leaders.



PC: Saloni Bhatia

CHAIRPERSON's MESSAGE

It is with deep pride that I share the news of ATREE's recognition at the Stanford Sustainability Summit as one of the world's 40 most innovative change makers focused on environmental sustainability.

Over the last one year, ATREE's commitment to environmental sustainability continued through its programmes, covering a spectrum of challenges from water security and forest rights to species conservation, habitat restoration and human-animal interactions.

Restoration of degraded ecosystems has been a key focus in the last year. ATREE's work spanned the restoration of Gomalas in Karnataka, Orans in Rajasthan, Savannah grasslands in Maharashtra, Myristica swamps in Karnataka and urban lakes in Bengaluru city.

ATREE's community conservation centres have focused restoration efforts on the integration of abandoned tea estates within protected areas and the management of invasive species by transforming weeds to wealth. A noteworthy example is the journey of Sivani and Manjula, two Soliga women, whose work in lantana artistry has made history in the dense forests of MM Hills. They were selected to participate in the national-level Bharat Grameen Mahotsva in January 2025.

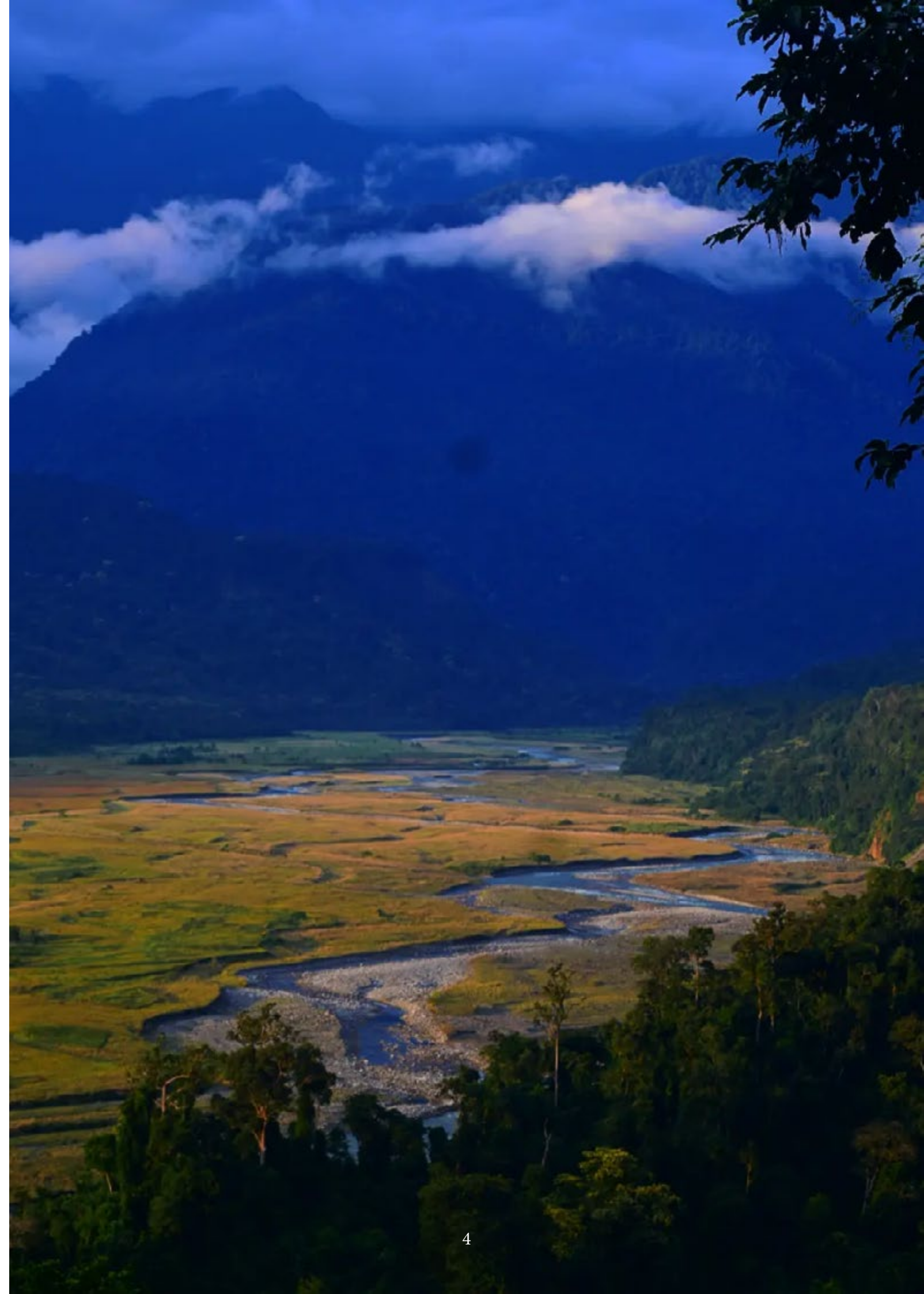
Recognising the criticality of reviving India's ecosystems, the theme for the TN Khoshoo Memorial Lecture and Award, 2024 was on restoration and the award went to the Dhivar fishing community of Maharashtra for their efforts in reviving lake ecosystems.

The ATREE team made remarkable strides in research, effectively using web-based technology where relevant, to leverage the reach of their work. New challenges demand greater creativity and our staff at ATREE has consistently demonstrated their commitment to excellence.

Our Academy's emphasis on interdisciplinary education is reflected not only in the coursework but also in the diverse composition of students, who are our asset and a source of pride. Many of our students travelled to international destinations, thanks to travel grants. We are excited to introduce a concerted focus on the Indian Himalayan Region through dissertation fellowships for MSc students as part of The Himalaya Initiative.

Tackling the impacts of climate change, stemming the loss of biodiversity, building resilient communities – challenges like these are not independent issues. Your support has played a crucial part in our progress on these intertwined challenges. We look forward to your continued engagement in all our endeavours.

Balaram
Chairperson, ATREE





EXECUTIVE DIRECTOR'S MESSAGE

The past year has been one of reflection and renewal for ATREE. We deepened our work at the intersection of research, policy engagement and community action, across diverse geographies. And remained focused on translating our scientific efforts into meaningful landscape-level change.

Through our Community Conservation Centres and long-term field sites, we strengthened partnerships with communities, enabling access to rights and resources while fostering sustainable livelihoods and enhancing resilience to climate change impacts.

In central India, we pioneered the use of technology to enable the claim-making of Community Forest Resource (CFR) rights and supported the development of a state-level CFR Potential Atlas. The year saw many milestones, including national recognition for village-level community forest management initiatives.

Under The Himalaya Initiative, we expanded the scope of our work in the Eastern and Western Himalaya, supported by long-term grants. We focused on strengthening conservation planning, enabling community-led restoration, enhancing nature-based livelihoods and building local capacity.

Recognising the criticality of urban landscapes amid rapid urbanisation, our research examined the impairment of ecosystem services, climate vulnerability and environmental inequity in cities. In Bengaluru, we worked to integrate nature-based solutions and blue-green infrastructure into urban planning. In Mumbai, we argued for science-based water demand estimation and management.

ATREE's Centre for Policy Design highlighted the underrepresented status of India's grasslands in global and national discourse, releasing a White Paper on Open Natural Ecosystems in India at the United Nations Convention to Combat Desertification (UNCCD).

Our investment in nurturing the next generation of environmental leaders now covers a wide gamut from higher education programmes to place-based environmental education. Over 100 doctoral and postgraduate students from the ATREE Academy are engaged in academia, environmental think tanks and conservation action organisations.

As we approach our 30th year, we are acutely aware of the urgent challenges of climate change and biodiversity loss before us. Building resilient futures for people and nature requires the unwavering dedication of our staff, the trust and generosity of our donors and the guidance of our trustees. We are deeply grateful for this support and look forward to walking this journey together with the communities we serve, the partners we collaborate with, the governments we engage with and all our friends and well-wishers.

Anita Arjundas
Executive Director

THE BOARD OF TRUSTEES

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Chairperson, ATREE and fmr. Director, Indian Institute of Science, Bangalore

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THE ADVISORY COUNCIL

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Executive Director and CEO of Kirloskar Systems Limited

Mr Manoj Kumar

(Stepped down in Jan 2025)

Chief Executive Officer, Foundation for Innovation and Social Entrepreneurship

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Founder, Cymroza Art Gallery, Mumbai

Mr Raj Khoshoo

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Mr Ranjit Barthakur

Founder and President of the Balipara Foundation

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Vice Chairman, Karnataka State Higher Education Council, Bengaluru & Former Principal Secretary to Chief Minister of Karnataka

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Dr Sudhir Chella Rajan

Professor, IIT Madras

Dr Tamara Ticktin

Professor, University of Hawaii, Manoa

PUBLICATIONS



55
Journal Articles



3
Book Chapters



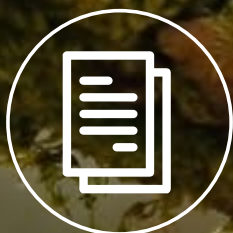
180
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67
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197
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MEDIA COVERAGE



PC: Sailendra Dewan

RECOGNITIONS & ACHIEVEMENTS

ATREE selected as one of the world's **40 most innovative changemakers** focused on environmental sustainability at the Stanford Sustainability Summit.

Sharadchchandra Lele elected to the **Governing Council of Future Earth, a global network of more than 30,000 scientists, researchers and innovators** collaborating for a more sustainable planet.

Eklabya Sharma **awarded the prestigious INSA Distinguished Lecture-2** Fellowship for 2024 under General Biology.

Seshadri K.S. was among the advocates for the protection of the Hesaraghatta grassland region, which was finally **declared Greater Hesaraghatta Grassland Conservation Reserve**.

Soubadra Devy selected as an **Executive Committee member of Indian Society for Ecological Economics (INSEE)**.

Siddhartha Krishnan appointed to the **Board of Trustees at Keystone – A Group for Eco-development Initiatives**.

The Snail Network, an **Environment Education digital repository with over thousand resources**.

COLLABORATIONS

MoUs signed with the state government of Tamil Nadu for the development of integrated management **plans for three Ramsar wetlands in the state**.

MoUs signed with the state government of Chhattisgarh to **strengthen the implementation of community forest resource (CFR) rights**.

Seshadri K.S. co-authored a chapter on climate change in the 3rd Amphibian Conservation Action Plan (ACAP), IUCN, which outlines a **roadmap for global amphibian conservation**.

Asmita Sengupta contributed to the **Transformative Change Assessment** conducted by the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services; the summary of the assessment for policymakers was accepted at the IPBES Plenary in December 2024.



OUR PRESENCE



source: www.surveyofindia.gov.in/pages/outline-maps-of-india

KEY RESEARCH PAPERS

The Shifting Paradigms of Biodiversity Conservation in South Asia

Asmita Sengupta, G. Ravikanth, Seshadri K. S., Milind Bunyan, T. Ganesh, Priyadarsanan Dharma Rajan, M Soubadra Devy, Aravind N.A.

bioTROPICA
24 February 2025

South Asia, renowned for its rich biological heritage, is home to a quarter of the global human population and has been experiencing unprecedented biodiversity loss. Anthropogenic pressures are expected to rise in the coming decades, and how governance structures respond to them will be instrumental in preserving this biodiversity. In this paper, we provide an overview of the different conservation paradigms across South Asia and discuss how these can be strengthened.

Exploring Foraging Niche Dynamics of Woodpeckers in the Non-protected Forests of Eastern Himalaya

Aditya Pradhan, Sarala Khaling

Ornithology Research
19 February 2025

The non-protected forests of the eastern Himalaya are crucial for biodiversity conservation. With pronounced elevation gradients over short distances and a high woodpecker diversity, this region is ideal for investigating sympatric woodpeckers. With this outlook, the current study was carried out in Darjeeling, eastern Himalaya, across an approximate elevation range of 250–2300 m, to explore the foraging niche dynamics among woodpeckers inhabiting non-protected tropical, subtropical, and temperate forests.

Open Letter: There Are More Than Just Trees and Forests to Be Conserved and Restored

T. Ganesh, Ankila Hiremath, Arjun Kannan, Sarala Khaling, Iravatee Majgaonkar, Seshadri K. S.

Plants, People, Planet
15 January 2025

Tropical and subtropical grasslands and savannas have historically been neglected in global and local conservation policies. As a result, nearly half of their coverage has been lost. In 2023, the world's most biodiverse savanna (Brazilian Cerrado) lost 1.110.326 ha, increasing the rate of land conversion by 67.7% (MapBiomas, 2024). The resulting biodiversity and ecosystem service losses, including the ability to mitigate climate change, are profound and irreversible.

Democratising Forest Governance: Challenges Old and New

Sharachchandra Lele

Economic and Political Weekly
13 January 2025

Sixteen years after the Forest Rights Act, 2006, only three states have recognised a significant number of community forest resource rights, and only one of them (Maharashtra) has enabled their operationalisation. While the outcomes in Maharashtra have been impressive, violations abound elsewhere. Even where recognised, state agencies refuse to let go of their monopolies. Despite the recent upsurge of interest at the central level, democratising forest governance in India remains an uphill task.

What Standards Do and Whom They Serve: Fixing, Practising and Delivering Per Capita Water Supply Standards in Cities in India

Sachin Tiwale

Environment and Planning E: Nature and Space
6 January 2025

This paper examines how the per capita standards of water supply are fixed, practised and delivered in cities in India. The per capita standard of water supply is a key figure in deciding the quantum of water cities can extract from adjacent regions and the amount of water individual citizens are entitled to consume. It is one of the critical parameters determining the sizing of the urban water infrastructure from the source to the tap.

Community Forest Management

Sharachchandra Lele, Shruti Mokashi, Anuja Anil Date, Atul Joshi

Oxford Bibliographies in Environmental Science
22 November 2024

Historically, some form of local management of forests existed in many parts of the world in the precolonial era. Enclosures, invasions, colonization, or policies of postcolonial states led to the takeover of most of these forests and a breakdown in local or community management.

Stopover by Migrant Montagu's Harriers in the Thar Desert is Determined by Vegetation Greenness and Grasshopper Abundance but Not Locust Outbreaks

T Ganesh , Arjun Kannan ,
Prashanth M.B. , Abhishek Samrat

Journal Of Arid Environments
20 September 2024

A new study in Tirunelveli reveals how shrub encroachment impacts rodent communities. Given how essential rodents are to grassland ecosystems, it is important to understand how they respond to emerging threats. Change in vegetation structure, namely, an increase in the density of shrubs has been identified as a potential ecological crisis to grasslands worldwide. Shrub encroachment alters the behaviour of rodents and is known to have species-specific effects on abundance, with some species responding negatively to increasing woody cover and others responding positively. The study found rodents to be equally abundant in different grassland types, with captures positively associated with shrub presence.

Living With Jungle Giants: Human-elephant Dynamics and Coexistence Alternatives in the Transboundary Landscape of Kangchenjunga

Kesang Wangchuk, Janita Gurung, Sanjeeb Pradhan, Namgay Wangchuk, Kencho Rigzin & Sarala Khaling

Biodiversity and Conservation
2 August 2024

Studies on human-elephant interactions are typically confined to a single country. Since elephants traverse international boundaries, it is critical to comprehend human-elephant interactions along their migration routes and recognize the significance of conserving these animals. A rapid appraisal was conducted to primarily understand the human-elephant dynamics in the transboundary lowlands of the Kangchenjunga landscape, encompassing regions of Bhutan, India, and Nepal, and highlight community-identified options for coexistence between humans and elephants in the shared landscape. Elephant populations in the transboundary landscape faced significant threats due to habitat loss and fragmentation as a result of increasing human settlements, agriculture, and infrastructure development.

New Distribution Records of Three Terrestrial Snails of the Genus Bouchetcamaena Thach, 2018 (Gastropoda, Camaenidae) from Northeast India

Nipu Kumar Das, Aravind N.A.

Records of Zoological Survey of India Journal
6 July 2024

The camaenid genus *Bouchetcamaena* comprises fifteen species distributed across South Asia (India, Bangladesh) and Southeast Asia (Myanmar, Thailand). Among these, six species are found in India: *B. delibrata* (Manipur; Sibsagar, Assam; Khasi hills, Meghalaya; Chhimtuipui, Mizoram), *B. Ju.sea* (Manipur; Khasi hills, Meghalaya; Gaziphima, Nagaland), *B. foveata* (Khasi Hills, Meghalaya), *B. proeumbens* (Khasi hills, Meghalaya), *B. raripila* (Kopamedza), and *B. subdelibrata* (Habiang, Garo Hills, Meghalaya). The present study reveals new distributional records of *B. delibrata*, and *B. Ju.sea* from Lushai hills of Mizoram, and *B. subdelibrata* from East Khasi hills, Meghalaya, Northeast India. The species were studied based on conchological characters, and their species identity was confirmed using existing literature. These species were collected from the soil-leaf litter samples. The Lushai hills of Mizoram including Blue Mountain range falls within the Indo-Burma Biodiversity hotspot, and is also classified as fire-prone forest areas. Hence, forest fires and anthropogenic factors such as deforestation, habitat fragmentation, and others may pose threats to these small soil invertebrates. Further research on ecology and population status will aid in assessing the conservation status of these species.

A Remarkable New Species of Paraparatrechina Donisthorpe (1947) (Hymenoptera, Formicidae, Formicinae) From the Eastern Himalayas, India

Sahanashree R, Aswaj Punnath, Priyadarsanan Dharma Rajan

Zookeys
31 May 2024

A new ant species, *Paraparatrechina neela* sp. nov., with a captivating metallic-blue color is described based on the worker caste from the East Siang district of Arunachal Pradesh, northeastern India. This discovery signifies the first new species of *Paraparatrechina* in 121 years, since the description of the sole previously known species, *P. aseta* (Forel, 1902), in the Indian subcontinent.

PARTNERS

Partnerships and collaborations lie at the core of translating our vision into reality and fulfilling our mission at ATREE. We firmly believe that addressing complex environmental and developmental challenges requires a collective effort that transcends boundaries and disciplines. Through partnerships with diverse stakeholders, research institutions, educational bodies, government agencies, outreach platforms and philanthropic organisations, we amplify our impact and extend the reach of our initiatives.

The synergy achieved through collaboration not only broadens the scope of our work but also enriches it with a variety of perspectives, expertise and resources. By working hand in hand, we harness the power of collective wisdom to devise innovative solutions, shape informed policies and inspire transformative actions.



OUR KEY DONORS OVER THE YEARS

We are immensely grateful to our generous donors from the public and private sectors, including government bodies, corporates, foundations and bilateral agencies. Their unwavering support has enabled us to make meaningful contributions towards environmental conservation and socially just development through innovative research, community-led action, policy engagement and capacity building.

Foundations/Institutions

- | | |
|---|--|
| ▪ AJWS | Medicine (LSHTM) |
| ▪ Alliance Bioversity & CIAT (CGIAR) | ▪ Narayanan Family Foundation |
| ▪ American Friends of Edelgive Foundation (AFEF) | ▪ National Geographic Society |
| ▪ Arghyam | ▪ Oak Foundation |
| ▪ BARR Foundation | ▪ Patrick J McGovern Foundation |
| ▪ British Asian Trust | ▪ Rainforest Trust |
| ▪ Conservation International Foundation (CI) | ▪ Rainmatter Foundation |
| ▪ Dhanam Foundation | ▪ Rohini Nilekani Philanthropies |
| ▪ Eicher Group Foundation | ▪ Royal National Lifeboat Institution (RNLI) |
| ▪ Ford Foundation | ▪ Rural India Supporting Trust |
| ▪ Global Conservation | ▪ S M Sehgal Foundation |
| ▪ IHE Delft Institute for Water Education | ▪ Shibulal Family Philanthropic Initiatives |
| ▪ Indian Micro Enterprises Development Foundation (IMEDF) | ▪ Surgo Foundation |
| ▪ International Centre for Integrated Mountain Development (ICIMOD) | ▪ Tata Trusts |
| ▪ Keystone Foundation (KF) | ▪ The Rufford Foundation |
| ▪ London School of Hygiene and Tropical | ▪ United Kingdom Research and Innovation, Centre for Ecology and Hydrology (CEH) |
| | ▪ University of Kassel |
| | ▪ World Wide Fund for Nature (WWF) UK |

Bilateral Agencies

- DBT/Wellcome Trust India Alliance
- Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH

Companies

- | | |
|--|---|
| ▪ Antrix Corporation Limited (Antrix) | ▪ Norton Lifelock Software Services India Private Limited |
| ▪ Brakes India Private Limited | ▪ Oracle India Private Limited |
| ▪ Development Credit Bank Limited (DCB Bank) | ▪ Rubrik India Private Limited |
| ▪ HSBC India | ▪ Sundaram Finance Limited |
| ▪ LIC Housing Finance Limited | ▪ Sundaram Home Finance Limited |
| ▪ Mastercard India | ▪ Tata Elxsi Limited |
| ▪ NatWest Digital Services India Private Limited | ▪ Westbridge Advisors LLP |

Government

- Department of Biotechnology (DBT)
- Department of Science and Technology (DST)
- Indian Council of Forestry Research and Education (ICFRE)
- National Bank for Agriculture and Rural Development (NABARD)
- National Mission on Himalayan Studies (NMHS)
- Office of the Principal Scientific Adviser to the Government of India
- Science and Engineering Research Board (SERB)

Individuals

- | | |
|-------------------------------------|-------------------------|
| ▪ Andy Kalambi | ▪ Kamaljit Bawa |
| ▪ Anita Arjundas | ▪ Killough Household |
| ▪ Chitra and Vasudev Rao | ▪ Kumari Shibulal |
| ▪ Chris and Sharon Davidson | ▪ Raj Khoshoo |
| ▪ Devdutt Yellurkar | ▪ Ranidalbair Chaudhary |
| ▪ Dilip Wagle and Darshana Shanbhag | ▪ Trevor Price |
| ▪ Ganesan Balachander | ▪ Umesh Maheshwari |

OUR IMPACT OVER THE YEARS

125+ New species discovered	11 New genera	158 Species considered for IUCN Assessment	600+ Species go through DNA Barcoding	35000+ Students experience place-based nature education	2500+ Supported in Individual Forest Rights claim making process	190,000+ ha Community Forest Resource Rights enabled	8,000+ Collectors see 20% income boost from clam relaying in Vembanad
437 Species included for long-term monitoring	04 Species rediscovered	800+ Scientific papers published	3000+ Farmers trained in climate resilient agriculture	40% reduction in <i>Lantana</i> invasion across 2800 acres in the MM Hills	60% BR Hills' NTFP dependent residents practice sustainable harvesting	40,000+ Livelihoods impacted through sustainable use initiatives	



PG: Hassan Shahnawaz Islam

OUR PROGRAMMES

ATREE's Programmes are housed within the S M Sehgal Foundation Centre for Biodiversity and Conservation and the Rohini Nilekani Philanthropies Centre for Environment and Development. Adopting research, implementation, policy outreach and capacity-building pathways to their work, ATREE's five programmes cover a spectrum of environmental challenges, from water security and forest rights to species conservation, habitat restoration and human-animal interactions.





Programme

BIODIVERSITY MONITORING AND CONSERVATION PLANNING

This programme aims to build a deeper understanding of biodiversity and the effect of threats such as climate change and large-scale development. It includes key areas such as documenting and monitoring species over time, studying human-wildlife interactions and planning conservation strategies.

Assessment and monitoring of biodiversity

Elucidating the biodiversity of anthropogenically impacted caves of Meghalaya in the Meghalayan age through metabarcoding and metagenomics approach

Caves are among the most unique and least studied ecosystems on Earth. Despite their biological and ecological significance, caves are highly susceptible to anthropogenic activities, including quarrying, mining, groundwater extraction, tourism, pollution, and climate change.

Our project aims to explore hidden and less-documented plants and animals in and around the caves of Meghalaya and develop a comprehensive action plan for the conservation of these unique habitats. It specifically seeks to address the following objectives.

Objectives:

1. To enumerate the caves for their richness and abundance of subterranean species of flowering plants and non-marine molluscs
2. To assess the ecological determinants of plants and mollusc distribution in Meghalaya
3. To map the location and biodiversity and assess if human disturbance has any impact on

of the cave habitats in the state of Meghalaya for prioritisation and conservation

4. To develop a comprehensive database of flowering plants and non-marine molluscs of cave ecosystems of NE India with special reference to Meghalaya

Project highlights:

- We conducted biodiversity surveys in 12 caves across the East Khasi, South Garo and West Khasi Hills in Meghalaya.
- Sampling involved quadrats on cave walls to record invertebrates and vegetation plots outside caves for plant diversity.
- The mollusc surveys yielded 48 micromollusc species from families such as Diplommatinidae, Hydrocenidae and Assimineidae.
- To understand overall subterranean biodiversity, we also documented other cave invertebrates and vertebrates, recording a total of 54 invertebrate and four vertebrate species.
- Environmental sampling yielded 21 soil samples and 39 substrate scrape samples from East Khasi Hills, West Khasi Hills and South Garo Hills. Species richness varied markedly between sites.



Long-term monitoring of butterflies in the Eastern Himalaya: a citizen-science approach



Butterflies are ideal indicators of environmental change due to their well-documented taxonomy, ease of identification, ecological sensitivity and role as surrogates for broader biodiversity. Their charismatic appeal also makes them effective flagships for conservation awareness.

To assess their status and inform effective conservation strategies, it is necessary to undertake long-term biodiversity monitoring. However, such efforts remain limited in biodiversity-rich yet vulnerable regions like the Eastern Himalaya.

This project focuses on filling the gap through a long-term butterfly monitoring programme in Sikkim by engaging student citizens, particularly in areas experiencing significant human activity. By involving students in monitoring efforts, the project also aims to enhance ecological literacy among youth.

Some of the activities conducted under the project:

- Four citizen science-based butterfly workshops have already been conducted across academic institutions in Sikkim, contributing to initial baseline data.
- Additionally, over 200 new users have joined the citizen science app database and contributed real-time observations, enriching the overall data pool.
- In Gangtok, 80 butterfly species were documented, while in Namchi, 40 species were recorded. These records represent around 5% of Sikkim's known butterfly diversity.

The initiative promotes citizen science as a means to build sustained biodiversity datasets while empowering local communities to participate actively in conservation.

Exploration, documentation and assessment of species diversity, phenology and pollinator diversity of Rhododendron in Arunachal Pradesh (India), Eastern Himalaya

This project focuses on advancing the understanding of Rhododendron diversity in the Eastern Himalaya, particularly within Arunachal Pradesh, India. We aim to explore and document species richness across elevational gradients, alongside assessing the diversity of pollinators associated with the genus in the surveyed localities.

Project highlights:

- A key component of the study involves measuring an array of floral traits, including flower size, stamen and pistil length, petal thickness and biomass of reproductive organs, to build a comprehensive, trait-based repository, accompanied by detailed illustrations.
- Beyond its scientific outcomes, the project greatly enhances our ecological insight into Rhododendron adaptations and informs conservation strategies.
- Ultimately, it seeks to foster capacity building by empowering regional students of plant sciences, particularly those linked with ATREE, to engage deeply with this ecologically significant and visually striking genus.



Ectoparasite infestation in small mammals and other risk factors in the context of scrub typhus: an emerging zoonotic threat in the Himalayan region

Zoonotic diseases, transmitted between animals and humans, account for nearly 60% of all human infectious diseases. India faces a growing burden of such diseases, including the re-emergence of scrub typhus – a significant zoonotic threat caused by *Orientia tsutsugamushi*. Transmitted via infected trombiculid mite larvae hosted by small mammals, scrub typhus has seen major outbreaks in the Darjeeling-Sikkim Himalayan region in 2004 and 2014.

To address the issue of scrub typhus in Darjeeling-Sikkim, our project aligns with the One Health approach, which integrates human, animal and environmental health.

This three-year project (2024–2027) focuses on key objectives:

- Investigating the distribution of small mammals serving as reservoir hosts.
- Studying trombiculid mite larval infestation in small mammals to gauge disease prevalence.
- Identifying behavioural, ecological and environmental risk factors associated with scrub typhus.
- Engaging and educating local communities to support disease surveillance and promote preventive practices.
- By integrating wildlife studies with public health initiatives, the project seeks to develop sustainable, community-based solutions to manage and reduce the transmission of scrub typhus in the region.





Understanding the human-macaque interface in urban India

The Bonnet macaque (*Macaca radiata*), endemic to peninsular India, is known for its ability to thrive across diverse habitats, including human-modified environments.

The human-macaque interface encompasses human practices, such as intentional food provisioning for religious or recreational purposes, and macaque behavioural adaptations, such as opportunistic foraging, incursions into properties and, in some instances, aggression. These interactions are also associated with threats for both the parties involved.

This project aims to understand the patterns of interaction between bonnet macaques and human communities across different contexts within the Indian city of Mumbai.

Objectives of the project:

- Examine human-bonnet macaque interactions in different urban contexts.
- Understand how macaques respond in terms of diet, movement and social behaviour.
- Comprehend people's attitudes towards and perceptions of macaques.

- Develop awareness initiatives for local communities and stakeholders to promote behavioural changes that uphold the well-being of both macaques and humans.
- Conduct capacity-building workshops for authorities to support ecologically sound and informed management decisions.
- Ideate and implement community-driven strategies towards coexistence, emphasising participatory decision-making and shared responsibility.

Some of the project outputs include:

- Data on human-macaque interactions inside Sanjay Gandhi National Park, a Protected Area, and surrounding residential areas (manuscript in preparation).
- A short film on human-macaque interactions in Mumbai (Monkeys in a Metro).
- Workshops in residential areas on the deleterious impacts of feeding macaques.
- Dissemination of results to the Forest Department of Maharashtra.

This project offers inclusive, site-specific and participatory decision-making approaches to urban wildlife management, supporting long-term strategies for safe shared spaces that consider the well-being of both macaques and people.



Pangolin conservation in the Khangchendzonga transboundary landscape, India

India holds two species of Pangolins – the Chinese Pangolin (*Manis pentadactyla*) and the Indian Pangolin (*Manis crassicaudata*). Both species are protected by the Indian Wildlife Protection Act (1972). The Chinese Pangolin is listed as Critically Endangered by the IUCN. However, pangolins in India are understudied and of low priority despite massive hunting and illegal trade pressure.

While the Indian Pangolin is widely distributed across the country, the Chinese Pangolin is mostly restricted to the eastern sub-Himalaya and northeastern parts of the country. Since 2014, ATREE has focused on pangolin conservation in the Darjeeling tea plantations in North Bengal, a component of Khangchendzonga Landscape (KL), India.

Project highlights:

- Our work in West Bengal, focusing on tea plantations, has generated information on the occurrence, distribution and status of pangolins from 87 plantations.
- Our research found that the pangolin's burrow and the vicinity are used by as many as 33 other faunal species due to the microhabitat created by the pangolins. A manuscript on the findings is ready for publication.
- ATREE has built a regional network to understand the current status of Pangolin research on occurrence, distribution and status of pangolin species and other ecological aspects from the Himalaya (Nepal and India).
- We identified sites linked to trade and probable extirpation of the species in Darjeeling. Seventeen sites that reported extirpation need further ecological surveys and monitoring.
- Sustainable livelihood training was imparted to selected community members on climate-smart agriculture and rural tourism as a roadmap to protect this critically endangered species from local extinction.
- A regional workshop on Pangolin Research in the Himalaya brought together researchers working on the species in the region. Research areas were identified for India and Nepal.
 - More than 5000 people have been reached out through awareness-building events, transboundary consultation meetings, regional workshops, transboundary FM radio broadcasts, livelihood training and publications like a comic on Pangolin conservation for children.



Feasibility study on expanding wildlife corridors in the Western Ghats

This project assessed the status and viability of vital wildlife corridors in the biodiverse Western Ghats, especially targeting two corridors embedded in areas with plantations, agriculture and urban development. Corridor I is located at Shenkottai Gap and Corridor II is located between BRT Tiger Reserve and MM Hills Wildlife Sanctuary. The study aimed to identify threatened species, document biodiversity threats and map land tenure for potential reserves with community involvement.

The study found evidence that both corridors remain functional, supporting animal movement between protected areas.

However, it also revealed significant challenges:

- Corridor I experienced a 31% reduction in forest cover over the last decade, with a corresponding increase in cropland and built-up areas.
- Corridor II showed stable forest cover but an increase in cultivated areas due to the conversion of fallow land.
- Human-wildlife conflict emerged as a recurring and escalating issue in both corridors.
- Threats in Corridor I include linear infrastructure like highways and railway lines causing roadkill and hindering movement. In Corridor II, fragmented agricultural land-use patterns make way for unsuitable habitats.
- Tourism expansion was also identified as a threat in the Thenkasi area of Corridor I.
- Surveys confirmed the presence of several Endangered or Vulnerable species using these corridors.
- Community engagement revealed that people were resistant to traditional land annexation for corridor expansion and instead, expressed interest in innovative solutions for conflict management and coexistence.



Based on these findings, the study proposes alternative models for conservation. It underscores the critical need for modernising conflict mitigation and compensation mechanisms and embracing solutions that enable equitable coexistence in these human-dominated landscapes.

Letting frogs hop closer to our lives through activity-based learning

We launched this project to address a significant challenge in conservation: the limited public awareness and knowledge regarding amphibians in India.

Amphibians, encompassing frogs, toads, caecilians and salamanders, are among the most threatened vertebrate groups globally, with nearly 450 species in India. They play vital ecological roles and carry cultural and bioprospecting value. Traditional educational methods, such as lectures and basic experiential learning, often fail to deeply engage diverse audiences or effectively convey the complex ecological roles and conservation needs of these animals. Therefore, we aimed to develop fun and interactive activity-based learning tools to educate various stakeholders about amphibian conservation.



Activities under the project included:

- Targeting children and young adults aged 10 to 40, we successfully developed the “Hoppy Frog Board Game”, to make learning about amphibian life cycles, habitats and threats accessible and enjoyable.
- We created complementary jigsaw puzzles to enhance learning about taxonomy, ecological roles, observation and identification skills.
- Additional resources like game cards, stickers and an online version of the board game were also developed to support the educational goals.
- We conducted nine workshops utilising the tools and resources to reach 666 participants.

The workshops took place at various venues, including the Science Gallery and Indian Institute of Science in Bengaluru, The Swissnex and several Conservation Connect events in Tamil Nadu and Karnataka. Participants included school children, teachers, college students and the general public. The project effectively demonstrated the potential of activity-based tools to enhance the visibility of amphibians and make learning about their conservation both accessible and engaging.

Saving the White-bellied Heron in Arunachal Pradesh, India

The White-bellied Heron (*Ardea insignis*), classified as a Critically Endangered species, is the second largest heron in the world. It occurs in Bhutan, India, Myanmar and possibly China. One of the biggest challenges for the White-bellied Heron (WBH) is its low population density, which is insufficient for long-term survival. India may possess the largest population of the WBH, but there have been limited population surveys. Our project aligns with the objectives of the IUCN SSC White-bellied Heron Working Group, focusing on three goals:

1. Extensively survey a prioritised potential site.
2. Monitor two known sites.
3. Engage the public in conservation efforts.

The results achieved so far include:

- We conducted surveys in three potential river valleys in three districts of eastern Arunachal Pradesh that could harbour WBH.
- Over two years, we monitored 10 transects at the Namdapha National Park and Tiger Reserve (NNPTR), a known site of WBH occurrence, resulting in 21 sightings limited to four transects along the Noa-dihing River Valley.
- During the 2024 monitoring season, we observed one nest, marking the first documented breeding record of the WBH in NNPTR and, significantly, the first confirmed breeding record of the species in India.

As part of our outreach activities:

- We conducted 12 outreach events in educational institutions to sensitise students and teachers about WBH and other biodiversity.
- We also held two focused group discussions with participants from the local communities to explore the feasibility of WBH-based ecotourism.

ATREE will propose a WBH conservation plan to the state of Arunachal Pradesh, led by the Forest Department, with contributions from experts and researchers.





Programme

ECOSYSTEMS AND HUMAN WELL-BEING

This programme seeks to explore, understand and explain how ecosystems benefit us and relate to our well-being, focusing on environmental justice and sustainable ecosystems. A key emphasis is on a participatory approach involving stakeholders who rely on these ecosystems for their livelihood and well-being.

Managing rangelands for multiple benefits in India

The high-altitude rangelands of the Hindu Kush Himalaya, located between 3,000 and 5,500 m, constitute about 60% of the region. These rangelands are vital yet fragile ecosystems shaped by harsh climates and sparse vegetation. They support yak-based pastoralism, with yaks (*Bos grunniens*) providing essential resources such as meat, milk, fibre, manure and transport, integral to the livelihoods of high-mountain communities.

Sustainable management of these rangelands offers powerful nature-based solutions to pressing challenges, including climate change, biodiversity loss, water scarcity and food insecurity. ATREE, in collaboration with the International Centre for Integrated Mountain Development (ICIMOD), is implementing a Rangeland Management Programme in the rangelands of India.

The project aims to:

- Assess the status, vulnerabilities and resilience of rangeland socio-ecological systems in the context of climate and socio-demographic change, focusing on vegetation diversity, yak dietary habits and milk productivity to inform improved management models in the Sikkim Himalaya.
- Establish a network of yak herders across the Indian Himalayan states to develop collaboration, knowledge exchange and community-led stewardship through this initiative.



Resilient Himalayas: A participatory evidence-based approach to landscape restoration (Re-HIM) Project

This project, under the Mountains to Mangroves initiative, works to conserve an area encompassing 17,000 hectares of land and establish restoration exemplars in over 200+ hectares of degraded land in Sikkim and the districts of Kalimpong and Darjeeling in West Bengal, India.

- ATREE signed an agreement with the landowners of the three sites to establish the terms and conditions for implementing forest restoration activities on degraded patches of land. These lands come under two strata: 1. Agroforestry System and 2. Forest Ecosystem.
- We also had Focused Group Discussions with land owners and stakeholders to co-design restoration and co-identify tree species for planting.

As a post-restoration activity, we focused on monitoring the restored sites regularly to ensure the growth and survival of the planted saplings:

- The local community members helped to clean up the restoration sites to ensure the newly planted saplings thrive.
- We did a sapling count in each site to estimate the survival of the planted saplings, and the survival rate in all three sites together was 86.9 %.
- We established reference plots (n=8) as benchmarks for restoration success and informing restoration activities.
- We conducted baseline vegetation surveys to establish benchmarks for future comparisons and monitoring.
- We also established permanent control plots (n=2) within restoration sites to facilitate comparisons between restored and undisturbed areas.



Diversity for Restoration (D4R)

Restoring degraded land is a major global challenge and concern. The United Nations Decade on Ecosystem Restoration has drawn political and scientific attention to the importance of land and ecosystem restoration. This has led to an upsurge in mass tree-planting programmes that lack socio-ecological perspectives.

Despite the rising numbers of restoration-focused initiatives, many have failed or had a low impact. These failures stem from poor inter- and intra-specific diversity, species-site mismatches and uncertainties surrounding land tenure.

The selection of species and seed sourcing are commonly driven by the availability of plant material, often resulting in the selection of a few well-known species that are often exotic to the region. Choosing trees that are not the 'right' fit for the site can lead to increased mortality, ecological imbalance or a rise in monocultures.

To address this issue, the Diversity for Restoration (D4R) tool was developed by 'The Alliance of Bioversity and CIAT' as an online decision support tool:

- D4R helps landowners and managers make tailored decisions on choosing the most appropriate species to plant, keeping account of site-specific conditions, location and restoration goals at the forefront.
- The tool predicts suitable habitats of specific species under present and future climatic conditions by using data on plant traits and habitat suitability modelling.

In India, ATREE, one of the project partners, is collaborating with other organisations to gather data and currently the tool contains information on 250 species from across the Western Ghats, including details on over 100 functional and physiological traits.





Programme **RESILIENT URBANSCAPES**

The programme focuses on identifying adaptive strategies and exploring pathways for promoting climate resilience and green infrastructure in planning. Community engagement forms the fulcrum of the programme, whether in restoring urban ecosystems or promoting sustainable urban agriculture.



Greening urban food systems: Building sustainable urban agriculture practices in Bengaluru through nature-based solutions

ATREE's Pollinator-Linked Urban Multifunctional Ecosystems (PLUME) project focuses on holistic integration of pollinators and other forms of urban biodiversity in garden spaces.

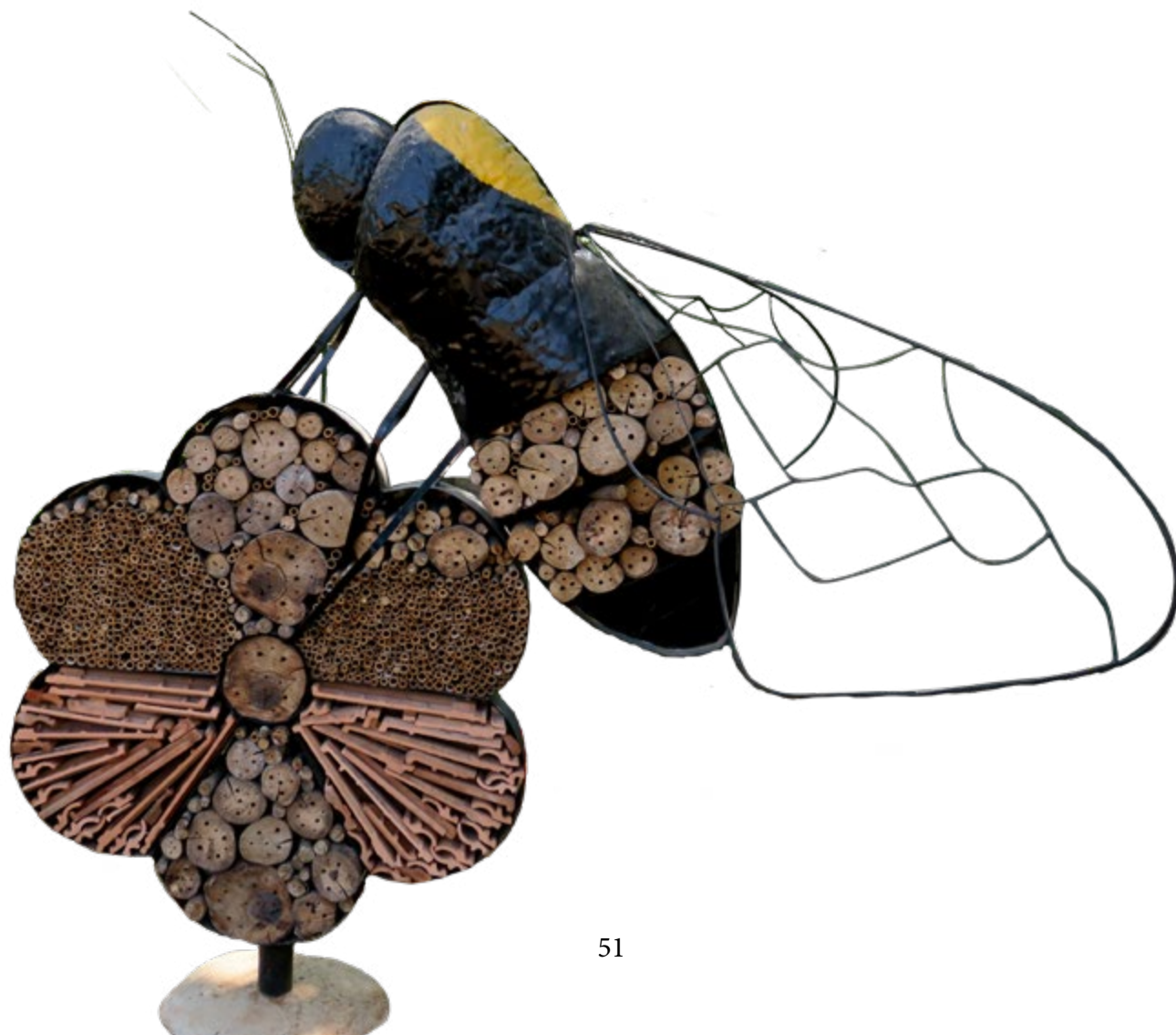
We chose six sites in Jakkur ward, Bengaluru, for the intervention activities:

Home gardens (4 sites):

A kit designed for promoting sustainable gardening was provided to each homeowner, containing open-pollinated seeds, a seed box, trellis and pergolas (crafted out of *Lantana camara*), compost bins, bird feeder, bee hotel, stingless bee box and a multipurpose harvest bag.

PKS Public School (1 site):

Our plan focused on using the available space creatively to create walkways with pergola structure, which can support multiple edible gourd vegetables. We engaged school children in planting and monitoring activities.



Venkateshpura Lake (1 site):

We created raised mounds of earth planted with pollinator-attracting plants. A large 'bee resort' serves to provide nesting space for cavity-nesting bees. We have installed large multipurpose structures that provide shade while supporting climbing plants.

Monitoring

This activity encompasses monitoring stingless bee colonies in boxes set up in the ward, assessing bees through pan trap sampling, assessing background vegetation and monitoring bee hotel occupation.

We carried out surveys of insects found at our pilot sites.

There was a lack of knowledge of common insects found in most urban edible gardens. We therefore created a resource on identifying these insects and understanding their benefits or disservices. The resource is available on our website.

Some of the resources generated include:

- Online resource on pollinator-linked urban multifunctional ecosystems
- Short video on pollinator integration in urban agriculture; manuscript (in preparation)
- Two policy briefs developed in collaboration with the Indian Institute of Human Settlements, Bengaluru



Biodiversity and ecosystem services restoration of Venkateshpura Lake, Bengaluru

Venkateshpura Lake, also known as Sampigehalli Lake, is a small but ecologically significant urban lake in northern Bengaluru, spanning less than 10 acres. Years of neglect, untreated wastewater inflows, invasive plant encroachment and rapid urbanisation had led to the degradation of the lake, impacting its ability to offer vital ecosystem services, such as groundwater recharge, flood regulation, biodiversity support and recreational value.

Our project, in collaboration with the Water & Society programme, initiated in October 2022, aimed to restore the ecological integrity of the lake using nature-based solutions (NbS) and promoting long-term community stewardship.

- The project employed a phased interdisciplinary restoration plan, combining scientific research, hydrological interventions, biodiversity enhancement and participatory approaches to transform the lake into a resilient urban wetland.
- We included educational and recreational components that fostered a connection between the lake's ecology and the local community.

Key outcomes:

- Visible improvements in water clarity and quality, with average dissolved oxygen levels rising from 1.74 mg/L to over 5 mg/L after deploying submersible aerators.
- Species such as the Pied kingfisher, Oriental darter and multiple butterfly and amphibian species returned to the lake. A bee resort and butterfly trail have become key habitats along the lake bund.
- Floating islands, native vegetation patches and shoreline aeration systems deployed reduced nutrient loads and supported aquatic life.
- The project engaged over 400 community members, including 200+ students from the neighbourhood schools who participated in field-based learning using the Wetland Journal.



Kannamangala Lake restoration project

The kannamangala Lake Restoration Project, a collaborative effort with the Water & Society programme, is successfully restoring the lake's ecological health and functional value, which had been compromised by rapid urbanisation and pollution. The project is developing a sustainable model that integrates scientific restoration with robust community engagement.

Project highlights:

- Water quality monitoring is showing initial improvements, with the newly constructed Wetland 1 effectively treating sewage inflow and reducing key pollutants.
- The preliminary survey has provided critical baseline data, informing a stakeholder-driven restoration plan and identifying community needs such as better waste management and accessibility.
- Over 250 people have participated in ten different engagement activities, including educational walks and two large clean-ups that removed over 120 kilograms of plastic waste from the lake. The active involvement of residents and stakeholders is a testament to the project's success in building a strong community connection to the lake's health.
- Improvements to the park infrastructure, such as the ongoing development of the play area and pathways, are directly addressing stakeholder feedback, leading to a more functional and user-friendly public space.
- The project has also successfully navigated challenges, adapting its design for the constructed wetlands and formalizing decision-making processes to ensure the long-term sustainability of the restoration efforts.

Moving forward, the project will focus on the completion of the Eco-Trail and Community Zone, including the amphitheatre and play area. We will continue to enhance biodiversity through the planting of native species and strengthen community capacity through ongoing engagement activities to ensure the project's legacy.





Programme **FORESTS, GOVERNANCE AND LIVELIHOODS**

The programme focuses on interdisciplinary research, action and policy outreach efforts to enhance community livelihoods and strengthen democratic, equitable forest governance. It aims to build capacities, restore pastoral lands and support grassroots groups in staking their rights and managing Community Forest Resource areas.

Securing forest rights and capacity building for community forest management planning in Baiga Chak (Madhya Pradesh) and Bastar (Chhattisgarh), India



Our Community Forest Rights central India initiative has been active in two sites – Bastar (Chhattisgarh) and Baiga Chak (Madhya Pradesh) – for the past three years.

Project highlights:

- Last year saw a quantum expansion in activities in Bastar, from claim-making to supporting community-based forest management and livelihood enhancement.
- Management plans were prepared in 14 villages and the villagers took up the implementation process at their own expense.
- Currently, three villages are engaged in ecotourism, with one of them, Dhudmaras, receiving a National Tourism Award.
- In Baiga Chak, our efforts remain focused on claim-making, which has extended into Mandla district, where a total of six claims were filed and many more are in progress.

At the same time, we expanded our policy-level outreach significantly:

- ATREE signed a non-financial Memorandum of Understanding (MoU) with the Tribal Development Department of Chhattisgarh to provide policy support for implementing Forest Rights Act (FRA) based on our action in Bastar and research in Maharashtra.
- In Madhya Pradesh, Sharachchandra Lele, Distinguished Fellow, ATREE, is a member of the Task Force on FRA and Panchayats Extension to Scheduled Areas Act (PESA), 1996. He is working on a new strategy for comprehensive rights recognition in Forest Villages based on our prior research in Dindori.

Supporting civil society organizations for community forest resource (CFR) rights recognition and management, and using geospatial technology for enabling CFR rights recognition in central India

One important aspect of promoting CFR rights is supporting grassroots groups that are engaged in staking their rights and managing CFR areas. Over the last one year, we conducted multiple workshops on CFR claim-making in Madhya Pradesh and post-claims management planning in Chhattisgarh and Maharashtra.

- The workshops focused on sharing our understanding of the law's intricacies, procedural requirements and government records and other essential information required for preparing claims.
- We also shared the simple problem-based management template that we have refined since we first originally developed it for the Government of Maharashtra.

Our key contribution to enabling accurate claim-making has been the development and dissemination of two publicly usable geospatial tools.

- The first is a dual-language webGIS that helps users to easily understand administrative boundaries in relation to the local terrain and customary boundaries.
- The second tool is a dual-language mobile app called 'Aamcho CFR Mapping' to enable mapping with the boundaries in the backdrop.

Last year, we released revamped versions of these tools, improving their functionality and broadening their reach. These have become enormously popular with local communities, grassroots workers as well as government officials.



Restoration as a tool to recover savanna ecosystem and community rights over threatened gomalas

ATREE initiated the Bagepalli Gomala Restoration and Conservation project in 2024, focusing on protecting the last remaining gomalas or grazing commons. In the semi-arid Bagepalli region in Chikkaballapur district, Karnataka, gomalas include savannas in the plains and dry thorn forests in the hilly outcrops.

The project aims at empowering local agro-pastoralists, reviving lost landscapes and securing the future of gomalas as resilient socio-ecological commons.

Project highlights:

- **Invasion to innovation** – Turning *Neltuma* (*Prosopis juliflora*) from threat to resource: The aggressive spread of *Prosopis* has degraded grazing lands by reducing fodder availability, displacing native vegetation and shrinking faunal biodiversity. We converted the uprooted *Neltuma* into biochar, an innovative soil enhancer that improves soil fertility and water retention, besides generating an alternative income stream for local communities.
- **India's First Deccan Thorn Forest Nursery** – We established the first Deccan Thorn Forest nursery in India, dedicated to propagating native grassland and dry forest species unique to this part of the Deccan Plateau. The initiative ensures that restoration is rooted in local ecology, helping revive the degraded gomala ecosystem and making it resilient to future threats.

- **Restoration as a Tool for Community Rights** – For agro-pastoral communities, gomalas are more than just grazing lands – they are central to their cultural identity, food security and traditional livelihoods. By restoring degraded gomalas, we reinforce traditional community stewardship, ensuring that these lands remain accessible and productive for local pastoralists.



- **Participatory Restoration and Impact Monitoring** – Restoration is most effective when communities are at its core. We involve local pastoralists and farmers in removing *Neltuma*, managing nurseries and restoring native species, creating ownership over the process. Long-term monitoring of vegetation recovery, biodiversity and livestock productivity ensures that restoration efforts benefit both people and ecosystems.



Greater Resilience in Arid Zones through Innovation, Exchange and Research (GRAZIER)

The GRAZIER initiative supports vulnerable pastoralist communities in Ladakh, focusing primarily on women and youth, to foster sustainable development guided by diverse local priorities.

- It uses an experimental and intersectional socio-ecological approach that moves away from dichotomies like nature-culture, science-society and research-praxis.
- By gathering and integrating diverse knowledge, fostering innovation and experimentation and supporting mechanisms to share learnings and unlearnings, the initiative aspires to encourage dynamic and adaptive perspectives on pastoralism and its intersection with rangeland health and biodiversity.
- The initiative is conceptualised by an interdisciplinary, cross-institutional team of partners and knowledge-producers from across the region, nation and globe.

It is a collaborative project between ATREE, Achi Association India, the French National Institute of Sustainable Development (IRD) and the University of Massachusetts Amherst.



Community-led conservation of forests in Siang Valley, Arunachal Pradesh

Siang Valley, located in Arunachal Pradesh, is one of the five major river valleys of the state and forms part of the upper Brahmaputra basin. With over 84% forest cover, it is one of the most biodiverse and carbon-rich landscapes in India.

In the period 2023–24, ATREE focused on building the foundation for long-term conservation in the Siang Valley. Over the last one year, we expanded on these efforts, leading to the completion of ecological baselines in Yosing, the first mammal survey in Mouling, extended bird monitoring and documentation of wild bioresource use across 17 villages. We completed mapping intact forests, while tenure studies, protected area monitoring and capacity building are ongoing.

Notable milestones:

- Completed a land tenure study across unclassified forests, revealing overlaps in governance and a shift towards private ownership.
- Installed 32 camera traps in Mouling and surrounding forests, capturing over 29,000 images of 32 species, including several IUCN-listed animals.
- Compared mammal abundance inside and outside the park, confirming higher wildlife presence within protected areas.
- Recorded 152 bird species through surveys in the proposed Community Conserved Area (CCA) and “control” forests, with greater richness in the CCA.
- Established ecological baselines for the CCA, including vegetation structure and microclimate data.
- Documented hunting practices in Yosing, highlighting species targeted, motivations and the need for conflict-sensitive conservation.
- Surveyed wild bioresource use in 17 villages and 5 markets, identifying over 800 consumed species and 100 market-sold items.
- Flagged participation gaps for women, informing plans for women-focused training sessions.
- Strengthened partnerships with local leaders and GreenHub to support visibility and trust.
- Organised four bird conservation events for 115 youth and 30 forest staff. Held three technical workshops to improve biodiversity monitoring and patrolling skills.





Programme **WATER AND SOCIETY**

The programme aims to understand the trends and factors influencing change in the water sector while developing practical policies to ensure everyone has fair access to sufficient and clean water. It focuses on issues pertaining to wastewater irrigation, water access in drought-prone areas, urban lake degradation and centralised canal irrigation systems.

New Age Hydro-Agricultural Regime (NAHAR): Understanding wastewater governance and the impact of wastewater irrigation on the environment and society

Wastewater irrigation is increasingly recognised as a promising solution to address both water scarcity and pollution. However, when framed using themes such as circular economy and sustainable reuse wastewater irrigation can often have varying impacts. This project examines the evolving policies and practices related to wastewater irrigation in Karnataka.

The project aims to promote sustainable and equitable water management.

- It looks at the social and environmental benefits of wastewater irrigation, with a focus on inclusive governance and long-term sustainability.
- It employs an interdisciplinary approach that incorporates water chemistry, freshwater ecology, socio-economic outcomes and governance mechanisms.
- Through this approach, it seeks to enhance understanding and guide the more effective and just implementation of wastewater reuse.

This research project is the first project under the Dinkar D Yellurkar Early Career Research Grant at ATREE that supports applied research projects of early career researchers at ATREE.



Enhancing water equity in Maharashtra's drought-prone areas: Development of a decision support tool integrating advanced technologies and community input

India is experiencing a severe water crisis, which has been further intensified by the impacts of climate change. This crisis poses significant threats to livelihoods, public health, ecosystems and the economy while escalating conflicts over water resources. A key issue contributing to this challenge is the inequitable distribution of water, where larger farmers often monopolise resources, leaving marginalised and landless individuals at a disadvantage.

Atpadi Tehsil in Maharashtra, located in a drought-prone region within a rain shadow area, exemplifies these challenges. With limited rainfall and frequent droughts, the region faces persistent water access issues. Despite these hardships, Atpadi serves as the site of an innovative experiment in equitable water sharing, led by Shramik Mukti Dal Pani Sangharsh Chalwal (SMDPSC) and Society for Promoting Participative Ecosystem Management (SOPPECOM) in collaboration with local Water User Associations (WUAs).

Project highlights:

- Their unique model integrates local water resources with imported water from the Tembhu Lift Irrigation Scheme to meet livelihood needs.
- Unlike traditional canal irrigation systems that allocate water based on cultivated land area, this model ensures equitable distribution on a per-person basis, guaranteeing that even landless individuals receive their fair share for a sustainable livelihood.





Achieving equity in water access and distribution requires detailed technical and scientific data that is often unavailable or difficult to access without advanced expertise. Recent advancements in hydrology, agriculture and technologies like remote sensing, GIS and artificial intelligence provide new opportunities to generate the necessary data. This proposed action-oriented research aims to address these gaps by supporting SMDPSC, SOPPECOM and local WUAs in establishing equitable water distribution in Atpadi Taluka.

The project's objective is to:

- Identify areas with inequitable water access.
- Analyse current water usage and land use practices.
- Assess local and imported water resource availability.
- Formulate an equitable water distribution plan.
- Develop a decision support tool for equitable water management.



Equity Perspectives for Irrigation Care or Control (EPIC)? Creating knowledge and capacity for socially inclusive and ecologically sustainable irrigation water management

Public-funded centralised canal irrigation systems face many challenges pertaining to operation and maintenance. These challenges include excessive physical and apparent water losses and inequitable water distribution, especially in the tail part of the canal, which is not adequately served. Additionally, authorities face challenges of land acquisition while constructing a canal network in the command area.

To overcome these challenges and as a part of the modernisation of irrigation systems, the technology of pipe distribution network (PDN) is promoted, where the open canals are replaced with closed pipelines to improve water use efficiency and control water flows.

- Our project studies one of the recently completed PDN projects – the Gurukunj Lift Irrigation Scheme, a part of the Upper Wardha Irrigation Project, located in the Amravati district of Maharashtra.
- The project aims at analysing how the PDN system functions and contributes towards the stated objectives of increasing water use efficiency and improving equity in water distribution.



Restoration and co-management of a peri-urban lake in Bengaluru

Baiyappanahalli Lake, a 23-acre waterbody located on the northeastern fringe of Bengaluru city, faces multiple pressures from urbanisation, untreated wastewater and inadequate management frameworks. Conventional restoration approaches often overlook important factors like hydrology, water quality, biodiversity and socio-economic issues. To address these challenges, we created LakeRevive, a digital decision support tool that combines scientific benchmarks, user-friendly technology and bilingual implementation guidance. The tool enables practitioners to plan, monitor and scale Nature-based Solutions (NbS) effectively.

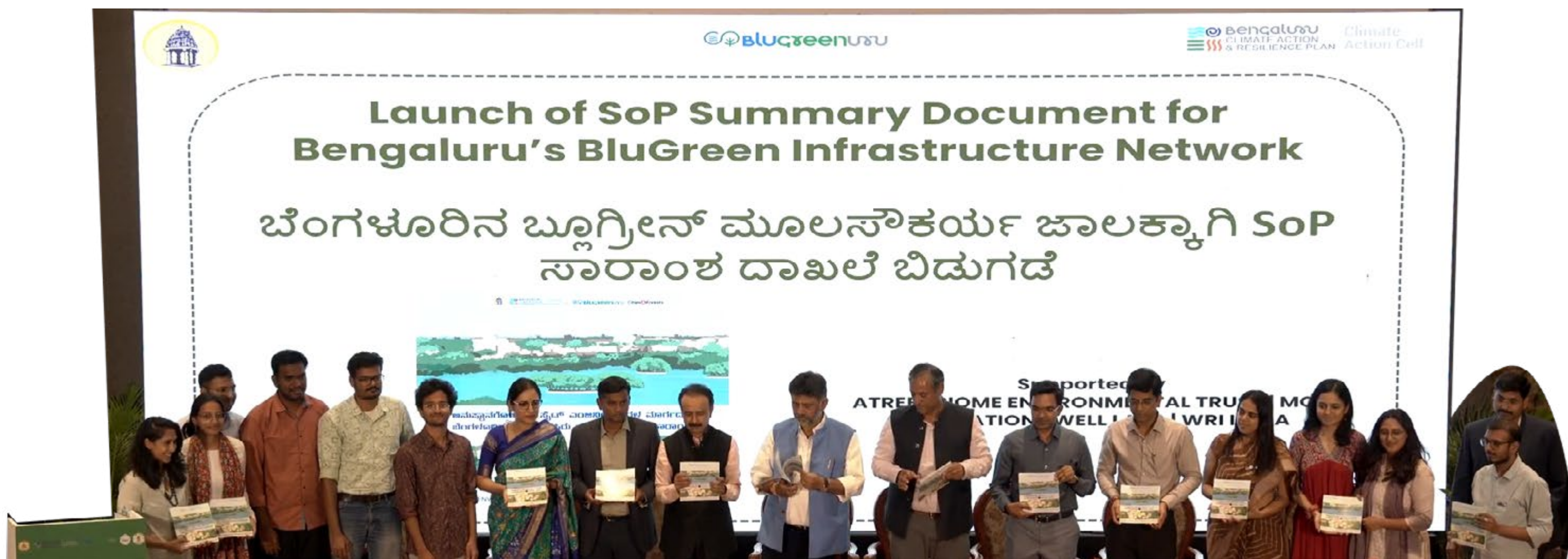
Activities:

- The LakeRevive tool was designed to guide a wide range of users, from contractors and engineers to community groups and citizen volunteers, through a clear, systematic approach for selecting effective NbS interventions. The Lake Health Index (LHI) was introduced to track intervention effectiveness.
- We developed a system that integrates hydrological data, water quality parameters, biodiversity and socio-economic considerations into a single planning tool.
- We conducted scientific studies to establish context-specific targets for total phosphorus (TP) and secchi depth, ensuring realistic goals suited to urban lakes.

- The tool includes a built-in decision logic that automatically recommends the type, scale and design of NbS interventions, such as constructed wetlands, floating islands, or bioswales.
- We embedded bilingual standard operating procedures (SOPs), in English and Kannada, directly within the tool to ensure accessibility for engineers, consultants and lake managers.

Key highlights:

- ATREE was Invited by the Bruhat Bengaluru Mahanagara Palike (BBMP) to implement the SOPs for NbS and the tool was officially launched on the occasion of World Environment Day 2025, in the presence of Mr D.K. Shivakumar, Deputy Chief Minister of Karnataka.
- ATREE is part of the committee formulated by the High Court of Karnataka on addressing the inflow quality to the urban lake.
- Our case study featuring the Bengaluru lake was included in the More4nature project led by IHE Delft.
- ATREE joined the India forum for NbS as a knowledge partner.
- We increased community and stakeholder interest and engagement in lake restoration activities.
- We improved decision-making capacity for lake restoration through a digital tool that integrates science with practice.
- We enhanced monitoring culture through adoption of the LHI, enabling ongoing evaluation of lake health rather than one-time interventions.





THE HIMALAYA INITIATIVE (THI)

The aspiration of The Himalaya Initiative (THI) is to build resilient socio-ecological systems for a sustainable Himalayan future. THI delivers on-the-ground impact through biodiversity conservation, ecosystem restoration and community resilience.

Over the past year, THI has made significant progress in building partnerships, securing funding and strengthening institutional capacity. These efforts are laying a strong foundation for achieving our long-term goals in conservation and climate resilience.

Our ten-year initiative is guided by a five-year implementation plan across three key landscapes – Khangchendzonga (Sikkim and Darjeeling Hills), Arunachal Pradesh, and the Trans-Himalaya (Ladakh). The focus is on addressing biodiversity loss, restoring multi-functional landscapes and reducing vulnerabilities of mountain communities in the Indian Himalayan Region.

Partnership building and stakeholder engagement

Through strategic partnerships with institutions from the region, we seek to strengthen transboundary and local connections ranging from academic and research institutions to policy think tanks, civil society organizations and grassroots NGOs.

In partnership with ICIMOD we focused on human-elephant coexistence in the Terai landscape, Other Effective Area-based Conservation Measures (OECMs) in the Eastern Himalaya and rangeland vegetation and Yak grazing studies in Lachung. A State-level Yak Herders' Association in Sikkim, along with a Yak Herders' Network for the IHR is under conceptualisation.

In the Trans-Himalaya, GRAZIER – a collaborative effort with Achi Association India, the French National Institute of Sustainable Development, and the University of Massachusetts Amherst supports vulnerable pastoralist communities in Ladakh. ATREE has also signed MoUs with the University of Ladakh and Eliezer Joldan Memorial College, Leh for joint research.

Developing proposals and engaging donors remains a priority for sustaining IHR initiatives. THI's strategy and supporting documents have been instrumental in identifying gaps and prioritising funding areas.

The Action for Mountains and Peoples (AMP) project, that cuts across landscapes, programmes and pathways at ATREE was initiated towards the end of the year.



Conservation, restoration and nature-based livelihoods in the Khangchendzonga landscape

Monitoring of 20 long-term biodiversity sites across ten locations connecting four protected areas between Darjeeling and Sikkim was undertaken.

Under the Resilient Himalaya (Re-HIM) project (part of the Mountains to Mangroves partnership), six community nurseries were established and four nursery management training sessions were held for 30 participants. 13.4 ha of degraded lands were restored during the year and a further 100 ha prepared for future restoration with multi-purpose native species.

Our focus on mountain livelihoods included training on climate-smart agriculture and restoration of fruit orchards with a focus on improved irrigation and soil conservation measures. With a special focus on women's self-help groups (SHGs), training sessions on value added products using invasive plant species and bioresources established capabilities around product design, access to market and entrepreneurship.



Community-led conservation in Arunachal Pradesh

ATREE's current focus in Arunachal Pradesh is on the establishment of Community Conserved Areas (CCAs) in Siang and Dibang Valleys and West Kameng. Partnerships for biodiversity and bioresource conservation and conservation-linked responsible tourism in these three critical regions are oriented towards establishing CCA management and monitoring protocols, eventually contributing to appropriate policies that recognise community stewardship and action.

- **Dibang Valley:** A 4,000 ha Community Conserved Area is being created with the Mekola Clan of the Idu Mishmi community.
- **West Kameng Valley:** Partnership with the Sherdukpen indigenous community to conserve community forests. A stakeholder meeting is planned to reach an agreement on feasibility and reconnaissance surveys for CCAs.
- **Siang Valley:** Site identification and community consultations have been initiated.

Socio-economic baselines are documenting livelihood patterns, income sources and ecosystem service utilisation. Ecological assessments include forest cover mapping, bird surveys and camera-trap-based mammal monitoring.

Resilience building of pastoral communities in the Trans-Himalaya

In Ladakh's high-altitude rangelands, pastoralist communities have long adapted to socio-ecological and climatic shifts. These landscapes are shaped by ecological processes and community knowledge systems. ATREE's work strengthens resilience and well-being by advancing epistemic justice and rights-based conservation, using an experimental socio-ecological approach that bridges conventional divides.

Nurturing the next generation of environmental leaders

The Himalaya Initiative, in collaboration with the ATREE Academy, supports a cohort of future environmental leaders through training, workshops, apprenticeships and higher education dissertations and immersions. Two PhD students were enrolled in the ATREE Academy with a focus on the Indian Himalaya while four Master's students participated in immersion courses across the project landscapes. In order to build local capabilities, ten MSc dissertations were supported in the landscape, a majority from local universities.

Details of ATREE's ongoing projects in the Indian Himalaya are covered under the various programmes at ATREE and the Darjeeling Community Conservation Centre.





OUR COMMUNITY CONSERVATION CENTRES

ATREE's action-oriented research on community-based conservation is anchored in its Community Conservation Centres (CCCs) located in different parts of India. The CCCs facilitate a mutual exchange of knowledge between local stakeholders and researchers, anchor the doctoral research of our PhD students and provide support for the long-term monitoring of socio-ecological systems. Our CCCs:

1. Agasthyamalai
2. Biligiri Rangaswamy Temple Tiger Reserve
3. Darjeeling
4. Male Mahadeshwara Hills
5. Vembanad

AGASTHYAMALAI

The Agasthyamalai Community Conservation Centre (ACCC) is dedicated to addressing biodiversity and conservation issues in the unique and culturally diverse Agasthyamalai landscape of southern Tamil Nadu. In addition to developing conservation and management strategies, the centre also focuses on community engagement by promoting awareness, empowering educators and fostering environmental stewardship.

Sustaining the Tamiraparani riparian ecosystem: A holistic approach

The Tamiraparani River, originating in the Agasthyamalai Hills in Tamil Nadu, has long been vital for agriculture, water security and biodiversity of the region. However, in recent years, it has faced increasing threats from urbanisation, pollution and invasive species. ATREE initiated a comprehensive effort to restore the Tamiraparani’s social-ecological system through a holistic, three-pronged approach.

At the river scale, we chose otters as flagship species and fish diversity as bio-indicators to assess riparian ecosystem health. The Tamiraparani River basin hosts all three otter species found in India: Smooth-coated, Asian Small-clawed and Eurasian Otters. In the IUCN Red List, the first two species are categorised as Vulnerable and the latter as Near Threatened and are protected under Schedule I of India’s Wildlife (Protection) Act and CITES Appendix I. As apex predators and sentinel species, otters reflect the ecological health of river systems, signalling clean aquatic habitats, which made them perfect flagship species for our monitoring and restoration activities that involved evaluating habitat suitability, water quality and fish populations. A survey of 60 km along the river in non-protected stretches from Papanasam to Maruthur identified key findings such as direct otter sightings at Papanasam Thalaiyanai and Nadhiyunni and spraints at four sites. Camera trapping revealed the presence of four Eurasian otters and other nocturnal species, emphasising the area’s rich biodiversity. There was no clear photographic evidence of Eurasian otters in the river before this.

The two other approaches involved targeted interventions designed using the Socio-Ecological Observatory (SEO) framework an evidence-based model. This helped in guiding site-specific conservation actions and long-term strategies for habitat recovery.

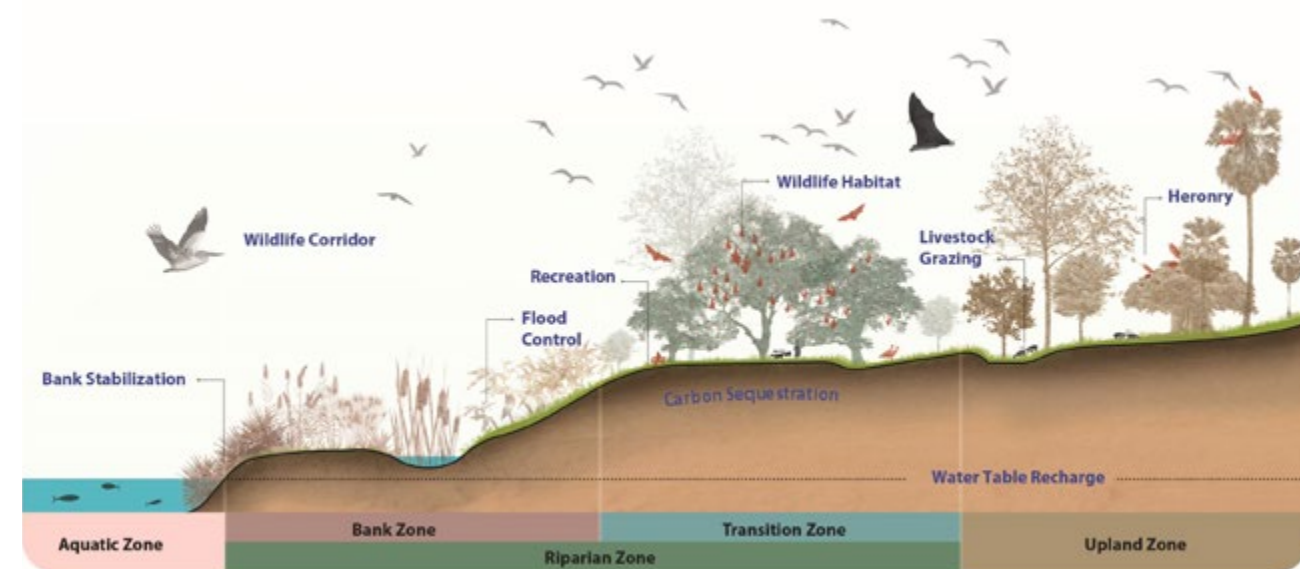
In Gopalamudram (SEO 1), degraded riparian zones were restored through scientific planting and sustained community engagement.

- A Riparian Arboretum featuring climate-resilient species was established to serve as a living repository and educational space.
- Future expansion of the arboretum was planned based on observed species performance and ecological recovery.

In Thirupudaimaruthur (SEO 2), conservation efforts were integrated with sustainable ecotourism, biodiversity protection, and enhancement of local livelihoods.

- A Detailed Project Report (DPR) was developed to address solid waste management, sanitation, menstrual hygiene, and wastewater treatment.
- These WASH (Water, Sanitation, and Hygiene) initiatives were designed to improve the tourist experience while ensuring ecological sustainability.

Community engagement played a central role throughout the project. Initiatives such as Bird Call Therapy Walks in Thirupudaimaruthur and the Ahimsa Walk in a Jain heritage site immersed participants in riparian soundscapes and cultural narratives, fostering deeper ecological awareness.



Conservation education

The ACCC offers 'Conservation Connect,' a short-term course designed to empower educators to connect children with nature, understand local biodiversity and climate change and explore associated issues and mitigation strategies.

The course includes three four-day residential training programmes, jointly organised with the District Administration, Virudhunagar District.

Thirty teachers participated in the first residential training and learnt to identify and appreciate the wildlife around them. In the second residential training, the participants undertook a nomadic camping experience, which introduced fundamental climate and weather concepts while exploring the social and ecological diversity of five distinct landscapes – referred to as *Ainthinai* in Tamil – associated with the Tamiraparani River, and provided first-hand exposure to real-world conservation challenges.

To facilitate continued engagement, we established an e-library, with around five hundred conservation education materials, including PowerPoint presentations, books, research papers, videos, games, photographs and worksheets. These resources are geared to help teachers organise activities based in hyper-local natural areas, which serve as living laboratories.

By combining newfound knowledge from outdoor experiences with games, hands-on activities, arts and crafts and scientific inquiry, participants gained a fresh perspective on the natural world. This course not only equipped educators with essential knowledge and enriched their routine classroom sessions with engaging reflections from their outdoor immersions, but it also inspired them to become advocates for environmental stewardship within their communities.



Grassland restoration

- Open Natural Ecosystems (ONEs), which include grasslands and savannas (henceforth grasslands), cover over 40% of the world's landmass. These ancient ecosystems are a hotspot for rare, endemic and threatened species of flora and fauna. Indian grasslands are highly degraded and are commonly misnamed wastelands, and hence are under developmental pressures such as urbanisation, afforestation, and mining. Tamil Nadu, one of the few states with patches of grasslands, is witnessing rapid habitat loss due to such unscientific land-use changes. These grasslands support local livelihoods for pastoralist and farming communities and are highly biodiverse, supporting rare and endemic plants and animals.

The ACCC collaborated with the Tirunelveli District Administration to initiate a pioneering socio-ecological restoration experiment on a 52-hectare grazing land.

- The activity involves documenting biodiversity and vegetation, conducting bird census and implementing experimental restoration through fenced and unfenced plots.
- In addition to restoring biodiversity, this activity also targets the role of soil organic carbon (SOC) in grasslands, including its ability to improve soil fertility, retain water and microorganisms, and act as a vital carbon pool that can be used for reducing global warming.



BILIGIRI RANGASWAMY TEMPLE TIGER RESERVE

The Community Conservation Centre at Biligiri Rangaswamy Temple (BRT) Tiger Reserve has engaged with the Soliga community for over 30 years, striving for the conservation of biodiversity, enhancement of livelihoods and protection of community rights.

Exchange programme between India and Australia

A delegation of Indigenous community leaders from Australia visited Biligiri Community Conservation Centre (BCCC). They were led through the last 30 years of ATREE's work on community conservation in the BRT Tiger Reserve landscape.

The visitors engaged in discussions focused on conservation efforts, non-timber forest product harvesting and managing invasive species such as *Lantana camara*. They visited the Kadavina Basappa Temple, gaining insight into the cultural and spiritual significance of the sacred sites of the Soliga people. They also visited Muthagada Gadde Podus, where they interacted with local community members.

At the Yarakanaagadde coffee cultivation lands, they explored changes in agricultural practices over the years due to increased wildlife activity. The group learnt about enterprise-based conservation, the implementation of the Forest Rights Act (FRA) in Chamarajanagar district and how the FRA was important for the Soligas. A notable exchange occurred between ADAVI Sangha members and the Australian indigenous community leaders, sharing community conservation strategies. The visit culminated at the Biligiri Rangaswamy Temple, concluding with a vibrant cultural evening at Yarakanaagadde colony, featuring traditional performances by the Indian and Australian teams, fostering a rich cultural exchange.

Agroforestry, food and nutritional security

ATREE, along with the Centre for Social Markets (CSM), initiated the CRREA (Climate Responsive and Resource Conservation Action) project in the Western Ghats. The project aims to promote environmental conservation while supporting the sustainable needs of the communities living in the Western Ghats.

The partnership focuses on conservation and afforestation efforts in the BRT region of the Western Ghats, involving collaboration with the indigenous Soliga community.

- The project strives to increase and improve green cover, specifically by supporting and establishing decentralised local nurseries.
- We are working with existing nurseries run by local community members, besides supporting decentralised nurseries.
- We are promoting the grafting of fruit trees to improve the yield, quality and sturdiness of the indigenous fruit trees. The plan includes purchasing fruit tree saplings from the decentralised nurseries and distributing them to local Soliga farmers based on their commitment and ability to cultivate these trees on their coffee agroforestry systems.
- We have established a grass nursery to replace the invasive lantana that is degrading the forest lands. The project is expected to benefit 1200 to 1600 community members directly. We have so far reached out to 300 farmers and are supporting five decentralised nurseries.
- We successfully distributed around 1000 grafted, high-quality seedlings of butter fruit and jamun from the agriculture university to the farmers.



Promoting resilient and sustainable education among the younger generation of Soligas

This project aims to improve rural education, reduce dependence on forest resources and promote sustainable development.

To counter high college dropout rates among the Soliga youth, ATREE assists in organising an annual event that seeks to understand their aspirations and challenges and devise interventions. The event focuses on raising awareness about educational opportunities, scholarship programmes and financial aid.

- In the event held for the term 2024–2025, more than 200 Adivasi youths studying in different colleges and universities gathered at J.H. Patel Auditorium at the district commissioner's office, Chamarajanagara, Karnataka.
- Ms Geetha Hudedda (Additional District Commissioner), Ms Manjula (District Tribal Welfare Officer), Zilla Budakattu Girijan Abhivrudhi Sangha and the Taluk Soliga Abhivrudhi Sangha leaders and parents participated in the event.

Scholarships were distributed to deserving students to counter dropout rates by offering financial relief and incentivising education.

ATREE's BR Hills and MM Hills community conservation centres coordinated the programme in partnership with Samatva Trust.



DARJEELING

Established in 1998, the Community Conservation Centre conducts place-based research and other activities in Darjeeling and Kalimpong districts in the Eastern Himalayan range to address environmental challenges. The centre works towards developing sustainable models to tackle issues related to agriculture, water, tourism, livelihoods and forests that directly affect local people. It also prioritises engaging with young people.

Assessing and enhancing biodiversity in the Khangchendzonga landscape, Eastern Himalaya, India

India's formal Protected Area (PA) network consists of 987 formally gazetted PAs covering 5.26% of the national land area (a total of 173,054 sq. km) and representing many of South Asia's unique ecosystems. However, most of these PAs are small. Many of the species targeted for protection are wide-ranging, while some of the most endangered (e.g., Indian and Chinese pangolins, rare amphibians and many plants) are found outside PAs. The network is thus inadequate on its own.



Therefore, this project aims to study the prospective biodiversity corridors between four protected areas in the districts of Darjeeling and Kalimpong, part of the Eastern Himalayan biodiversity hotspot.

- We assessed the diversity of mammals, birds, butterflies, amphibians, reptiles and trees in the areas falling between these PAs.
- The areas were heterogeneous in their patterns of land use and land cover. Tea and cinchona plantations, rural subsistence farming communities, tourist hotspots and reserve forests formed the primary categories.
- 2300 camera trap nights operated in 115 different locations in all types of land use categories and recorded 26 species of mammals, including the Critically Endangered Chinese pangolin, vulnerable Mainland serow and Common leopard.
- Five rapid assessments over 26 days and 264.8 km of trail walking through the heterogeneous habitat yielded 220 bird species, 213 butterfly species and 140 tree species.

Value-added products from invasive plant species for improving livelihoods of marginalised communities

Invasive Alien Plant Species (IAPS) such as *Lantana camara*, *Eupatorium adenophorum*, *Ageratum conyzoides*, *Chromolaena odorata*, and *Bidens pilosa* have spread rapidly across the Indian Himalayan region, threatening biodiversity and reducing agricultural productivity. This project aims to transform these invasive plants into value-added products. The focus is on empowering rural women and promoting both ecological restoration and sustainable livelihoods.

- A rapid field survey conducted across 36 sites (25 in Darjeeling and 11 in Kalimpong) documented 47 IAPS in agri-ecosystems at altitudes between 900 and 2400 m.
- Ninety-one women from 62 Self-Help Groups (SHGs) across five villages in Darjeeling-Kalimpong districts have been trained and benefitted through various livelihood activities under this project.
- We trained women in local self-help groups to develop the appropriate skills needed to commercialise various value-added products developed from IAPS, such as briquette from *Lantana camara*, natural dye extraction from *Eupatorium adenophorum*, *Ageratum conyzoides*, *Chromolaena odorata* and *Bidens pilosa*, and herbal soap from *Eupatorium adenophorum* and *Ageratum conyzoides*.
- Three community-based enterprises were successfully formed and registered at the village level Gram Panchayats in Darjeeling and Kalimpong districts.
- The first year's combined sales of briquettes, soaps and natural dye products recorded a total income of more than ₹28,000 by WEO Sittong Darjeeling.

Integrated WADI development project (Orchard Development and Allied Livelihood support activities in 252 households of Darjeeling district)

Sittong, once renowned for its premium mandarin oranges, has suffered a massive decline in orchards over the past decade due to neglect and disease. This loss has severely impacted household incomes and triggered an increase in youth migration. The Integrated WADI Development Project, implemented by ATREE in Sittong III, Kurseong Block, Darjeeling district, addresses this crisis.

- We hope to enhance the livelihoods of 252 tribal farming families through ecologically sustainable orchard development and allied livelihood support.
- Some of the activities under the project include restoring orchards, combining Avocado and Mandarin oranges, introducing nature-based solutions and diversifying incomes for 50 landless families through apiculture, backyard poultry, vermi-composting and vegetable cultivation.
- So far, we have successfully established combined orchards across 80 hectares, with support from decentralised water harvesting structures and soil conservation measures.
- Local farmers now operate in organised groups, such as Sittong Agro Horti Farmers Association, Village Planning Committees and Water Guardian groups, promoting collective resource management.
- A mustard oil extraction unit has been installed to boost value addition and local processing.
- The project also focuses on gender inclusion, nutrition and market linkages, aiming to reduce youth migration by 15% and increase incomes by 20% over six years.

The Sittong WADI model stands out as a replicable, climate-resilient approach integrating livelihoods and ecosystem conservation.



Piloting holistic human-elephant coexistence solutions in the Khangchendzonga Landscape

This project, implemented along the Mechi River in the Indo-Nepal border in India, focuses on building institutional capacity for comprehensive human-elephant conflict mitigation strategies. It aims to balance conservation goals with community well-being, ensuring that the communities in the Khangchendzonga Landscape develop greater tolerance towards Asian elephants.

So far, as part of the project, we have:

- Completed consultations with the community and other stakeholders.
- Set up the project implementation modality.
- Completed the baseline surveys of farmers impacted by the presence of elephants.
- Organised an awareness campaign to build tolerance for elephants within local communities and provided essential equipment to Rapid Response Team (RRT) members.
- Constructed six watch towers and mobilised community support, in-kind contributions and the continuous engagement of various stakeholders.

One of the key highlights of the project has been the co-designing and participatory planning process. To build and enhance local coordination in this transboundary landscape, ATREE organised a one-day learning and capacity-building tour for 40 farmers, RRT members and panchayat leaders from the Naxalbari and Panighata regions.

A comprehensive awareness, sensitisation and outreach programme, featuring short skits performed by the RRT, aimed to educate and engage rural communities on strategies for peaceful coexistence with elephants in the villages critically affected by human-wildlife conflicts.



THE MALAI MAHADESHWARA HILLS

The Malai Mahadeshwara (MM) Hills Community Conservation Centre engages with local communities on the importance of forest restoration, sustainable use of non-timber forest products and the ecological threats posed by invasive species. It conducts awareness programmes emphasising environmental protection and forest conservation.

Entrepreneurs collaborate with artisans to enhance production and scale their businesses, promoting economic growth.

- Forest managers find opportunities to engage with local artisans to balance ecological and economic goals. Research indicates that lantana removal reduces forest fire risks and promotes the regeneration of native species. The centre demonstrates how controlled harvesting of lantana can aid forest restoration.
- It is a platform for researchers to analyse how lantana harvesting affects biodiversity and soil health. Studies focus on the economic viability and scalability of lantana-based industries. Findings from the centre inform government and NGO strategies on invasive species management.
- The Lantana Craft Centre has trained over 1400 artisans across the states of Karnataka, Tamil Nadu and Maharashtra. Its success highlights the potential of design-driven ecological solutions.

Moving forward, it aims to expand collaborations with design schools and research institutions, develop new product lines integrating modern aesthetics with traditional craftsmanship and strengthen market linkages.

Lantana Craft Centre: A living lab for innovation and sustainability

A part of the Weeds to Wealth initiative, the Lantana Craft Centre, a living lab for innovation and sustainability, serves as a dynamic hub for handicrafts, hands-on learning, research and sustainable entrepreneurship. By transforming the invasive *Lantana camara* into valuable products, the centre promotes design innovation, ecological restoration and rural livelihoods.

The centre serves as a multidisciplinary platform for various stakeholders:

- Students are encouraged to explore lantana as a sustainable alternative to conventional materials like bamboo and cane. Through immersive training sessions, they work alongside artisans to create new furniture, bridging traditional craftsmanship with modern design principles.
- For educators, the centre provides tools to incorporate lantana crafting into design and sustainability courses, serving as a case study for environmental management and rural entrepreneurship.
- For entrepreneurs, it offers insights into the market potential of lantana crafts.



Weaving prosperity: Upskilling women in lantana crafting through NABSKILL under the Weeds to Wealth initiative

Lantana camara, an aggressive invasive species, has long disrupted native ecosystems and agricultural lands. While its unchecked spread poses environmental concerns, its sturdy wood holds untapped potential for sustainable handicrafts.

Recognising this opportunity, ATREE, through NABSKILL programme, has stepped in to train indigenous women in lantana crafting. Through structured workshops, artisans learn:

- **Harvesting Techniques** – Sustainable methods to extract lantana without harming the ecosystem.
- **Craftsmanship Skills** – Designing furniture, baskets and decorative items from lantana wood.
- **Entrepreneurial Training** – Market linkages, pricing strategies and business development.

Transforming Weeds into Wealth

- The initiative not only curbs lantana's spread but also fosters economic independence among women. Across MM Hills and neighbouring forest areas, women-led cooperatives are booming. Artisans who once struggled for employment now showcase their creations at exhibitions, attracting buyers from urban markets.
- Over the last year, women-led lantana crafting has generated Rs 30 lakhs. In particular, the journey of Sivani and Manjula, two Soliga women, in lantana artistry has created history in the dense forests of MM Hills. Once struggling to make ends meet, they are now master artisans, leading the charge in transforming the invasive lantana into beautiful handicrafts. They were selected to participate in the national-level Bharat Grameen Mahotsav held in January 2025.
- Lantana furniture and crafts from MM Hills are now sold in cities like Bangalore, Chennai and Mumbai. Most of the life-size elephants are exported to the UK and the USA. The initiative has benefited over 200 families, reducing lantana density and promoting forest conservation.
- The programme aims to expand training programmes, enhance product diversification and strengthen market access.



SEMBANAD

The Vembanad Community Conservation Centre, also known as the Community Environmental Resource Centre (CERC), focuses on wetland conservation, sustainable livelihoods and climate action. It has been working in the Vembanad region in Kerala since 2007 to enhance the capacity and institutional networks of local communities and stakeholders for the sustainable management of wetlands.

India: conservation, climate and culture – Study abroad programme by the University of Illinois

The CERC hosted the “India: Conservation, Climate, and Culture” – a study abroad programme – in partnership with the University of Illinois in May 2024. The programme commenced in the Vembanad wetlands, a Ramsar-listed ecosystem where the CERC has long led conservation efforts.

- It offered an intensive, hands-on learning experience for the international students.
- It explored conservation challenges and sustainable development solutions across diverse ecological and cultural landscapes in Kerala.
- Students were introduced to innovative practices such as below-sea-level paddy farming, community-driven wetland restoration, and sustainable tourism models.
- A key highlight was the hands-on construction of fish sanctuaries in Vembanad Lake, which reinforced practical conservation learning. The CERC facilitated field sessions with clam collectors, Lake Protection Forums and rainwater harvesting initiatives to showcase inclusive, community-rooted environmental governance.
- In the Western Ghats, the programme extended to the Periyar Tiger Reserve and Munnar.
- Students gained insights into biodiversity conservation, forest management, ecodevelopment committees, plantation economies and human-wildlife conflict mitigation.

- Visits to tea plantations, spice gardens and Shola forests contextualised ecological restoration efforts led by the Forest Department and supported by community participation.
- The CERC team provided end-to-end coordination – from academic content design and expert facilitation to field logistics and cultural integration – ensuring a transformative and well-rounded educational experience.

Despite unforeseen challenges such as inclement weather and logistical constraints, the programme was a resounding success. It not only deepened students’ understanding of conservation science and socio-ecological resilience but also affirmed the CERC’s leadership in field-based education and international collaboration.



SUSAJJAM – Building disaster-resilient schools in Vembanad

The Vembanad region, known for its rich ecology, faces significant risks from floods, waterlogging, and climate-induced disasters. Building disaster-resilient schools here is vital for community safety and preparedness.

Key interventions carried out by the CERC included

- Disaster preparedness workshops
- Hands-on mock drills simulating floods, fires and earthquakes
- Installation of weather labs
- Distribution of emergency kits in vulnerable schools

Specific schools targeted for these activities included St. Michael's HSS, Kudavechoor; KKKPS GHS, Karumady; AB Vilasam HSS, Muhamma and St Mary's HSS at Kainakary and Champakulam.

A district-level training programme was organised for over 750 educators, covering risk assessment, school safety audits, emergency planning and psychosocial support services. These educators have become local champions, embedding disaster management into school curricula.

Environmental education initiatives enhanced sustainability awareness. A weather lab and Green Library at Government HS, Kuppuram, foster scientific curiosity and environmental literacy. Wetland Study Centres at select schools engage students through field visits and biodiversity monitoring, emphasising wetland conservation.

A notable community workshop trained parents and teachers to create life jackets from upcycled plastics, highlighting practical, sustainable solutions to safety and environmental challenges.

These collective efforts have had a profound impact on local resilience, benefiting over 3,000 students and 750 teachers while strengthening disaster preparedness and promoting ecological responsibility across the community.





CENTRE FOR POLICY DESIGN

The Centre for Policy Design (CPD) at ATREE was enabled through the long-term commitment of Westbridge Capital to strengthen the science-policy-practice interface on environment in India. Drawing on ATREE's deep expertise, CPD advocates for evidence-based, ecologically sound sustainability and conservation policies, through close collaboration with governments and civil society partners.

Prioritising the conservation of ONEs in India

Open Natural Ecosystems (ONEs) – grasslands, savannas, scrublands, and deserts – make up more than half of India’s landmass, yet remain overlooked in conservation policy and are often misclassified as ‘wastelands’. Their degradation threatens biodiversity, pastoral livelihoods and climate resilience. CPD’s policy goal is to secure the recognition of ONEs as critical ecosystems in national and state governance frameworks, backed by scientific evidence and practical models of restoration.

White Paper on ONEs:

To build the evidence base for policy reform, CPD published a pioneering white paper on ONEs, highlighting their role in supporting livelihoods, sequestering carbon and sustaining biodiversity.

- The paper featured India’s first comprehensive ONEs map, biodiversity prioritisation maps and livestock grazing sustainability maps, alongside a nine-fold policy action framework for governance reform.
- It has since shaped advocacy at national and international platforms, from UNCCD COP-16 in Riyadh to the Living Lightly Utsav in Bengaluru, and is guiding state-level dialogues.

Grassland Restoration in Maharashtra and Rajasthan:

Restoration pilots are designed not just to regenerate landscapes but to demonstrate models that can inform policy.

- In Maharashtra, CPD signed an MoU with the Forest Department to integrate grassland restoration into official programmes. We assisted natural regeneration of 25 hectares across project sites and have ongoing restoration of 50 hectares in Ahmednagar and Solapur districts. We established nurseries at all sites, with over 2.5 lakh native

saplings. These pilots were showcased to senior officials, including a field visit by Mr Nitin Khade, Joint Secretary, Ministry of Rural Development, to inform national watershed and rural development schemes.

- In Rajasthan, CPD is working with the Karni Mata Temple Trust and local communities to restore arid grasslands, including invasive species removal and waterbody rejuvenation in Deshnok. A forthcoming MoU and partnership with the Rajasthan Forest Department will institutionalise grassland science in policy and planning.

Net Zero Dialogues

In partnership with IIT Kanpur, Ecological Society, and 14Trees, CPD convened a *Net Zero Dialogue* bringing together leaders from industry (Adani, Tata Power), government (Ministry of New and Renewable Energy), and civil society (World Resources Institute, Land Conflict Watch, ESG India). The dialogue advanced socio-ecological parameters for renewable energy siting, ensuring that India’s energy transition does not come at the cost of ONEs and local livelihoods.



Addressing policies and procedures related to Community Forest Rights

The Forests, Governance and Livelihoods programme at ATREE aims to resolve challenges in claim-making, institutional convergence, and NTFP market liberalisation to enhance livelihoods of tribal communities in India, with a specific focus in Central India.

CPD collaborated with the programme on focused engagements with the state governments to strengthen the implementation of Community Forest Resource (CFR) rights under the Forest Rights Act (FRA). Key highlights:

- **MoU with Tribal Department:** Signed in October 2024 to formalise collaboration.
- **CFR Potential Atlas:** Developed in November 2024 to set clear goals for CFR claims recognition.
- **State's First CSO Consultation on FRA:** Co-organised with TDD on 6 January 2025, bringing together 24 civil society organisations and 3 government departments to discuss challenges and opportunities under the DA-JGUA scheme.
- **Roadmap and Guidelines:** CPD supported the preparation of a one-year roadmap for DA-JGUA implementation, approved by the Principal Secretary, TDD, in April 2025. Draft SOPs were submitted for district convergence committees and correction of CFR title errors.



Policy engagement related to wetlands and urban lakes

Lake rejuvenation guidelines workshop, Karnataka: CPD collaborated with the Water and Society Programme to develop standardised guidelines for lake rejuvenation. On 27 September 2024, a workshop titled Formulating DPR Guidelines for Lake Rejuvenation saw the coming together of experts from civil society. They focused on improving a set of DPR guidelines prepared by ATREE. The updated guidelines will be shared with the Karnataka Tank Conservation and Development Authority (KTCDA) for review.

MoU with Tamil Nadu Wetlands Mission: On 27 February 2025, CPD facilitated ATREE's MoU with the Tamil Nadu Wetlands Mission to develop Integrated Management Plans (IMPs) for three wetland ecosystems: Longwood Shola Reserve Forest (Nilgiris), Sakkarakottai Bird Sanctuary (Ramanathapuram) and Kazhuveli Bird Sanctuary (Villupuram). These IMPs align with the Wetlands Rules, 2017, and the National Plan for Conservation of Aquatic Ecosystems, promoting science-driven governance and community engagement.





Outreach and Communication

Over the past year, CPD engaged with three central government departments, five state-level ministries, five international organisations and seven civil society groups. It produced legislative inputs, academic and popular articles, and earned mentions in leading publications while expanding its field presence to five pilot locations.

CPD amplified its impact through strategic outreach, which included legal responses and popular articles.

Popular Articles: CPD has authored 14 popular articles published in leading dailies and magazines, such as Frontline, Down to Earth, Land and Climate Science and The Wire Science

Legislative Engagement: CPD actively contributed towards environmental policy through targeted academic and legislative inputs:

- **Response to NBA's Access and Benefit Sharing Regulations (2014):** CPD submitted recommendations to improve the Biological Diversity Act, 2002. These recommendations emphasised on custodianship, BMC jurisdiction, traceability, prior informed consent, mutually agreed terms, decentralised approvals, valuation criteria, local biodiversity fund management, monitoring, compliance and capacity building.
- **Joint Response with Vidhi Centre for Legal Policy:** CPD submitted comments and suggestions to MoEFCC's draft notification (31 July 2024) proposing 56,800 sq. km of the Western Ghats as an Ecologically Sensitive Area (ESA).



ACADEMY FOR CONSERVATION SCIENCE AND SUSTAINABILITY STUDIES

The Academy for Conservation Science and Sustainability Studies at ATREE offers a doctoral programme, a master's programme and certificate courses that enable researchers and practitioners to develop interdisciplinary skills and gain experience in sustainable development and environmental conservation. ATREE is a recognised Research Centre of the Manipal Academy of Higher Education, Manipal (MAHE) for the PhD programme and is associated with The University of Trans-Disciplinary Health Sciences and Technology (TDU) for its master's programme.

38

Student
Publications

15

Students
Receive
Awards and
Grants

27

Talks

48

Interns

2

National and
International
University
Collaborations

31

Conferences/
Workshops
Attended by
Students

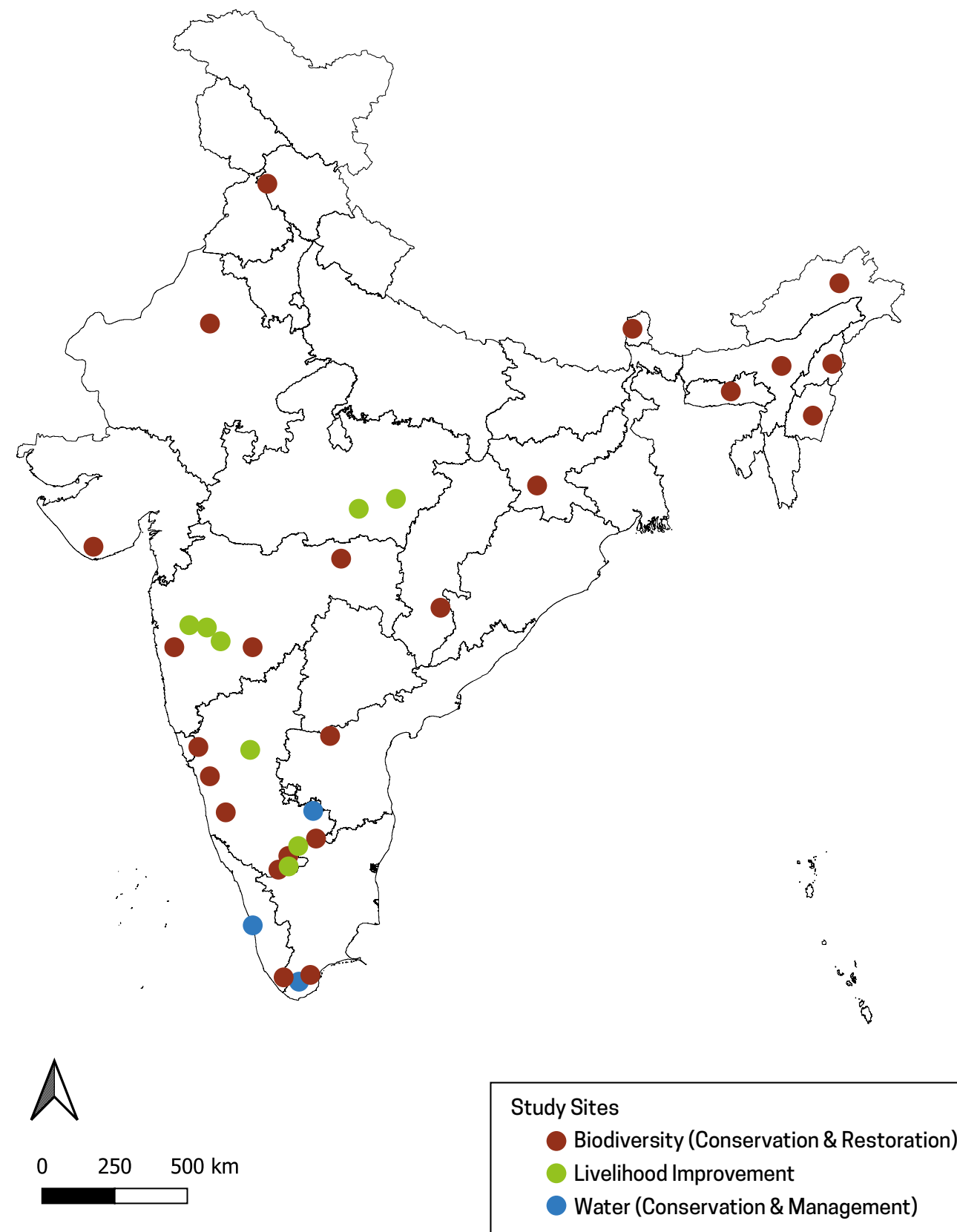


PC: Vinhu V

The Academy at ATREE offers higher education programmes at the doctoral and master's level and certificate courses that enable practitioners interdisciplinary skills and gain experience in sustainable development and biodiversity conservation.

In the 2024–2025 academic year, the Academy launched a focused fellowship programme at the PhD and master's level prioritising research in the Indian Himalayan Region as a part of The Himalaya Initiative (THI).

PhD Student Study Sites & Research Themes



source: www.surveyofindia.gov.in/pages/outline-maps-of-india

PhD Programme

ATREE is a recognised centre of the Manipal Academy for Higher Education (MAHE) doctoral program – the institution that awards the PhD degree.

The doctoral programme in Conservation Science and Sustainability Studies encourages interdisciplinary research and frameworks, integrating tools and approaches from ecology, economics, sociology and climate science.

The 2024–25 period saw:

- Three synopsis presentations
- Six pre-submission presentations
- Nine defences of PhD dissertations

As of March 2025, 41 students are enrolled in the programme and 52 research scholars have received their PhD through the Academy since 2009.

Student Annual Seminar (SAS) 2025

- The Academy organised the seventh annual Student Annual Seminar (SAS) and 24 registered students presented their work and outlined their plans for the upcoming year.
- The SAS is a platform for students to present their research progress to faculty members, particularly those outside their Doctoral Advisory Committees. Presentations included conceptual and/or methodological discussions and field, lab or archive data analysis.

MSc Programme

The MSc Environmental Studies course in Conservation Practice is jointly offered by ATREE and the University of Trans-Disciplinary Health Sciences and Technology (TDU).

- Four cohorts (82 students) have enrolled since the start of the programme (2021) and 41 students have graduated.
- The 2023 batch is in their final semester, engaged in their projects across various locations in India.
- Enrolment for the academic year 2025 commenced on 24 February 2025.

Certificate Courses

In 2024–25, the Academy offered a certificate course titled ‘Rooted in Place, Flowing with Nature – Bioregionalism in India’ from 28 to 30 March 2025.

1. The three-day course was organised as a collaborative effort between ATREE Academy, Pitchandikulam Forest, Kalpavriksh and the South Asian Bioregional Working Group (SABWG).
2. Six faculty – Ashish Kothari (Kalpavriksh/Vikalp Sangam), Nisha Mary Poulouse (South Asian Bioregional Working Group), John Kurien (CDS, Trivandrum), Joss Brooks (PF-Auroville) and Asmita Sengupta and Pallavi Varma Patil (ATREE) – held sessions over three days.
3. Twenty-six diverse participants from across the country attended the course held in the Kaliveli bioregion, Auroville, Tamil Nadu.
4. The participants included university students, designers, ecologists, researchers, artists and educationists.

Environment Education

ATREE’s Environment Education programme focuses on enriching Place Based Environment Education (PBEE) at the school level in India by supporting capacity building of school educators.

During the year, the programme organised three School Educators’ workshops with three ecosystem-centric themes. The workshops saw three groups of K-12 level stakeholders (Urban/Rural/Tribal teachers) completing a one-year pilot project – Jal Jungle Jameen – in classrooms by January 2025. The workshops were held in Bengaluru, Karnataka, Melghat in Maharashtra and Santiniketan in West Bengal.

In March 2025, ATREE launched S.N.A.I.L (School of Nature, Action, Inquiry and Learning), a K-12 level environment education initiative.

Under this initiative, ATREE Academy will provide curriculum and pedagogy-related inputs to diverse environment educators in India.

- A key part of this initiative is the multilingual and multi-format repository, www.snailnetwork.org, that was test launched with 15 prominent environment educators in India

The work under the Environment Education project was shared at three prominent conferences in India and abroad.

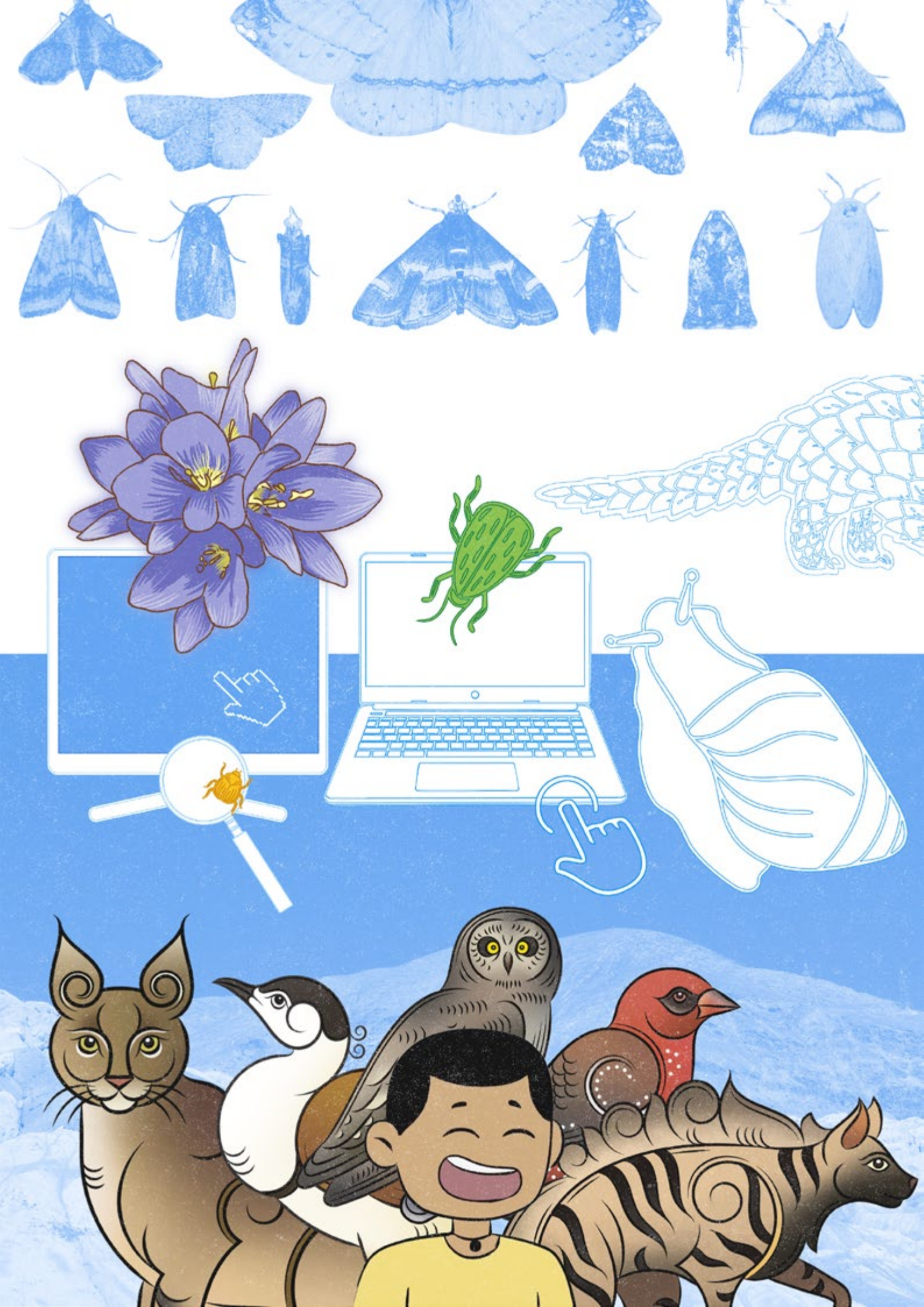
- The FAO organised ‘Agrobiodiversity and climate change’ held in Delhi on 24 August 2024
- The ‘Children Need Nature’ conference organised by Bhoomi College, Bangalore (30 September 2024)
- The Global Development Network (GDN) conference on Quality Education for Sustainability, held in Fiji on 26 November 2024.

These platforms allowed us to showcase the vision, impact and progress of our work with national and global audiences. The presentations received positive feedback, highlighting ATREE-India’s innovative approach to environmental education.

Immersion and Internships

The Academy facilitated the visit for 25 Indian and Nordic students from the Short-Term Exchange Program (STEP) of EchoNetwork, accompanied by 2 faculty members, to the Community Conservation Centres at BRT and MM Hills from 11 to 13 July 2024. It also facilitated the visit of 14 students and two faculty members from the University of Illinois to the Vembanad Community Conservation Centre on 15 May 2024. The field visit to Kerala was part of their elective course, “Conservation, Climate, and Culture.”

ATREE internships target diverse applicants, including undergraduates, postgraduates, mid-level professionals in environment and development, government employees, policymakers and educators. The Academy helps match intern interests with requirements of current ATREE projects and initiatives. During the 2024–2025 academic year, ATREE hosted 48 interns across different projects.



COMMUNICATION

Communication aims to enhance ATREE's visibility and promote an understanding of its interdisciplinary conservation knowledge. Key highlights include simplifying ATREE's interdisciplinary research for broader audiences, fostering creative collaborations, developing evidence-based communication to inform policy decisions and showcasing ATREE's grassroots impact to strengthen partnerships and initiatives.

Showcasing ATREE's Work

A diverse array of traditional and new media, like newspapers, books, magazines, films and social media, is utilised to communicate ATREE's work. During 2024–2025, contributions were made to key events ranging from literature festivals to COPs.

Print Media

We bring out bulletins at regular intervals, providing updates on ATREE's progress and various activities, and work towards the publication of popular articles in different media platforms.



Branches is a quarterly that highlights our ongoing projects across diverse landscapes.



The Week That Was is a weekly bulletin that provides a peek into ATREE's work as reported in the mainstream media, our publications and our participation in events, talks and conferences across the globe.

Films

The films focus on ATREE's work and disseminating awareness on a host of subjects related to ATREE's programmes and projects.



The Himalaya



Heat Wave



Jal Ki Rani



Creatures on Canvas



Lake Explorers



Infomercial on Zoonosis



White-bellied Heron



I Am Carbon

Books



Botanist and the Vanishing Orchid



Reflections on Science and Nature: TNK

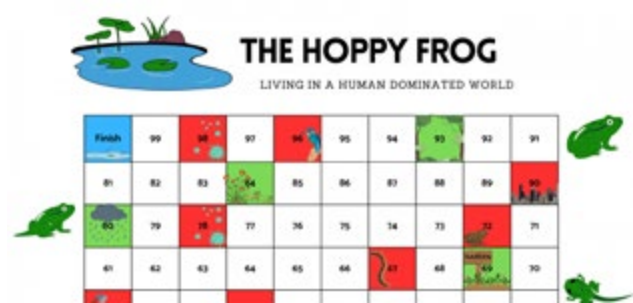


Champions of Change: Reviving India's Ecosystems

Apps and Games



Aquawise: A decision support tool for greywater treatment solutions for implementing integrated water resources management in government schools.



The Hoppy Frog: A game similar to Snakes and Ladders, that promotes awareness about amphibians and their conservation needs.

Policy Communication

Science communication can bridge the gap between researchers and policy makers. This year, our focus was a vision for a national policy on Grasslands of India.



The Open Natural Ecosystems (ONEs) map, done in collaboration with Sudarshan Shaw, visually translates the work done by researchers Abi Vanak and Madhusudhan to map the extent of ONEs in India. Additionally, an artwork as well as a calendar was created.



The film 'Gattu - Walking with the Herd', draws attention to the vulnerable plight of pastoralists affected by the fragmentation and repurposing of grasslands.

Social Media

ATREE's social media (SM) plan is aligned with its strategic plan and streamlined with the various programmes at ATREE. Periodic bursts of focused campaigns like the master's programme, the wildlife week, mountain week, water week and Mother's Day have increased our traction and improved our outreach numbers.

- To increase visibility and reach new audiences, we have cross-promoted with artists, influencers and partner organisations. We were able to reach an additional 20.1 K users through various platforms:



43.5 K



20.1 K



13.4 K



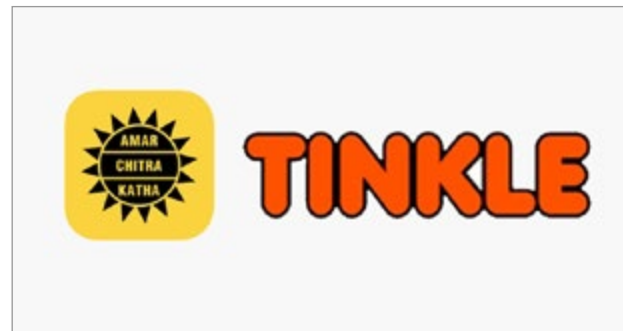
13.0 K



3.2 K

Creative Collaborations

Creative collaborations have enriched our outreach efforts.



Tinkle: A partnership with Tinkle led to the publication of ten comics based on our research work on species and landscapes so far.



Environmental film festival: In collaboration with ALT.EFF, ATREE showcased 14 ground-breaking environmental films from across the globe over two days.



Bangalore Literature Festival: An interactive sessions on canopies followed by a storytelling session.



Green Lit Festival: A book reading of “The Botanist and the Vanishing Orchid” was followed by a workshop with school children.



Living Lightly exhibition: ATREE contributed three unique exhibits: ONE map, Mistaken Identity (a grassland exhibit), and the film, I am Carbon to The Living Lightly exhibition.



Echoes of Earth: ATREE’s Insect Biosystematics and Conservation Lab conducted nature walks and exhibited the insect collection at the Echoes of Earth music festival in Bengaluru.

Outreach and Capacity Building

- **Workshops:** To build the capacities at ATREE, workshops were organised on verbal and visual communication, such as Storifying STEM by Bijal Vachharajani; Nature Journaling by Saksham Arora, NID Cinematography by Danny Raymond and How to write an Op-ed by Gopikrishna Warriar of Mongabay.
- **Restoration ADDA (Assembly for Dialogues on Diverse Restoration Activities):** The first Restoration Adda was organised, featuring speed talks that showcased the various restoration projects at ATREE with a special focus on challenges.
- **Nature walks:** Seven nature walks were organised across Bengaluru city. These walks (The Veggie Voyage Walk, The Medicinal Plant Walk, Bat Walk, Tree Walk, Beetle Walk, The Grassland Walk), covered by The Hindu, Deccan Herald and Bangalore Mirror, also led to the creation of WhatsApp groups of nature enthusiasts.
- **Lake restoration awareness:** Initiatives at Venkateshpura Lake included creating a mascot, organising biodiversity walks and painting biodiversity murals on rocks along the walking pathways to showcase the species diversity of the lake.
- **Youth engagement through schools:** Students from MC’NAY DOONS Public School and Neev Academy visited ATREE, gaining first-hand knowledge of our scientific labs and engaging in interactive and fun (quizzes and games) activities.





THE 2024 T N KHOSHOO MEMORIAL AWARD AND LECTURE

The 2024 T.N. Khoshoo Memorial Award and Lecture was held at the Bangalore International Centre (BIC), Bengaluru on 3 December, focusing on “Reviving India’s Ecosystems”. This annual event by ATREE honours individuals and organisations championing conservation and sustainable development. Key representatives Manish Rajankar and Shalu Kolhe accepted the 2024 award on behalf of the Dhivar fishing community of Vidarbha, Maharashtra. The award commemorated the community’s role in reviving lake ecosystems in the region. The TN Khoshoo Memorial Lecture was delivered by Pradip Krishen, followed by a panel discussion on Reviving India’s Ecosystems, moderated by Rohini Nilekani, Chairperson of Rohini Nilekani Philanthropies. The panel featured experts from various sectors contributing to ecological restoration in India: Pushpendra Rana, Indian Forest Service, Government of India, Namita Vikas, Founder & Managing Director of auctusESG and Anita Varghese, Director of the Keystone Foundation. “Reflections on Nature, Science, and the Future: Selected Works of TN Khoshoo”, edited by Prasanna N.S., was released on the occasion.

FINANCIAL STATEMENT



PC: Sailendra Dewan

ASHOKA TRUST FOR RESEARCH IN ECOLOGY AND THE ENVIRONMENT (ATREE)
Royal Enclave, Srirampura, Jakkur Post
Bangalore - 560 064, India

CONSOLIDATED BALANCE SHEET AS AT 31 MARCH 2025

(Amount in INR)					
LIABILITIES	Schedule	Amount	ASSETS	Schedule	Amount
Utilised Reserve		22,34,07,976	Fixed Assets		
			Project Assets		13,29,66,360
			Land and Building	5	8,65,02,279
			Other Assets		39,39,338
Corpus Fund	1	1,06,38,75,987	Corpus Investments	6	1,06,38,75,987
General Fund	2	3,06,79,006	Other Investments	7	8,24,39,019
Current Liabilities			Current Assets		
Project Fund	3	21,14,83,798	Deposits	8	67,77,900
Others	4	5,46,209	Loan and Advances	9	99,84,780
			Cash in Hand	10	1,27,839
			Cash at Bank	11	14,33,79,474
Grand Total		1,52,99,92,976	Grand Total		1,52,99,92,976

Place : Bangalore
Date: 23-10-2025

As per our Report of Even Date
For G. ANANTHA & CO.,
Chartered Accountants
Firm Reg. No. 005160 S


Executive Director


Trustee


Trustee




Rani N.R.
Partner
M. No. 214318
UDIN:25214318BMIZWV9529

ASHOKA TRUST FOR RESEARCH IN ECOLOGY AND THE ENVIRONMENT (ATREE)
Royal Enclave, Srirampura, Jakkur Post
Bangalore - 560 064, India

CONSOLIDATED INCOME AND EXPENDITURE ACCOUNT FOR THE YEAR ENDED 31 MARCH 2025

(Amount in INR)					
EXPENDITURE	Schedule	Amount	INCOME	Schedule	Amount
Centre for Environment and Development			Grants	13	28,25,66,894
Forests, Governance & Livelihoods	12	3,11,06,776	Interest on Endowment		6,32,12,836
Water & Society	12	3,19,16,294	Education & Training services		1,13,19,288
Centre for Biodiversity and Conservation			Other income	13	16,470
Ecosystem and Human Wellbeing	12	6,93,20,542	Donation	13	7,35,449
Biodiversity Monitoring & Conservation Planning	12	8,99,44,158	Interest on Savings bank	13	1,07,99,977
Centre for Policy Design	12	3,18,91,232			
Academy for Conservation Science and Sustainability Studies	12	64,80,798			
Salaries-Programme Support	12	1,51,17,074			
Administration and Support Expenses					
Salaries/Consultancy-Institutional Support	12	6,25,41,288			
Administrative Expenses	12	2,47,67,871			
Depreciation		24,28,261			
Surplus for the year transferred to General fund		31,36,620			
Total		36,86,50,914	Total		36,86,50,914

Place : Bangalore
Date : 23-10-2025

Executive Director



P. Balaram
Trustee

Trustee

As per our Report of Even Date
For G. ANANTHA & CO.
Chartered Accountants
Firm Reg. No. 0052003

Rani N.R.
Partner
M. No. 214318
UDIN:25214318BMIZWV9529



ASHOKA TRUST FOR RESEARCH IN ECOLOGY AND THE ENVIRONMENT (ATREE)
Royal Enclave, Srirampura, Jakkur Post
Bangalore - 560 064, India

CONSOLIDATED RECEIPTS AND PAYMENTS ACCOUNT FOR THE YEAR ENDED 31 MARCH 2025

RECEIPTS	Schedule	TOTAL	PAYMENTS	Schedule	Amount
Opening Balances			Fixed Assets		1,24,08,026
Cash		47,722			
Bank		8,26,91,112	Centre for Environment and Development		
Other than Corpus/Endowment		7,84,06,322	Forests, Governance & Livelihoods	14	3,19,22,500
			Water & Society	14	3,16,47,129
Fixed Deposits					
Receipts during the year			Ecosystem and Human Wellbeing	14	5,45,08,842
Grants		34,12,32,961	Biodiversity Monitoring & Conservation Planning	14	10,79,20,047
Receipts from Service		1,42,64,911			
Donation		7,35,449			
Corpus/Endowments		2,86,15,585			
Interest on Endowments		8,02,29,599	Centre for Policy Design	14	3,27,33,936
Other Interest		46,91,104	Academy for Conservation Science and Sustainability Studies	14	72,29,098
Interest on TDS refund		6,23,025	Salaries-Programme Support	14	1,42,61,284
Other receipts and recovery		2,56,782	Administration and Support expenses		
			Salaries/Consultancy-institutional Support	14	6,11,06,771
			Staff welfare	14	2,01,492
			Administrative Expenses	14	3,10,82,182
			Net movement in Current Assets/Liabilities		(74,88,632)
			Opening Balances		
			Corpus/Endowment		103,52,60,402
			Closing Balance		
			Corpus/Endowment		106,38,75,987
			Net Movement in Corpus/Endowment		2,86,15,585
			Closing Balances		
			Cash		1,27,839
			Bank		14,33,79,474
			Other than Corpus/Endowment		8,24,39,019
Total		63,40,94,572	Total		63,40,94,572

Place : Bangalore
Date : 23-10-2025

Executive Director



P. Balaram
Trustee

Trustee

As per our Report of Even Date
For G. ANANTHA & CO.
Chartered Accountants
Firm Reg. No. 0052003

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www.atree.org