

# ZOO OUTREACH ORGANISATION



**ACTIVITY REPORT**  
**2023-2024**

**zooreach**  
Zoo Outreach Organisation









The background is a soft watercolor wash in shades of pale yellow, light green, and off-white. Scattered throughout are several autumn leaves in various stages of color, from bright yellow to deep orange and brown. Some leaves are whole, while others are just stems or partial shapes. There are also decorative gold leaf accents, including a circular ring on the left and a larger, textured gold shape on the right.

# **RESEARCH AND CONSERVATION**



# HIMALAYAN LANGUR PROJECT & HIMALAYAN RESTORATION PROJECT



## PURPOSE

Himalayan Langur & Restoration Project brings coexistence between humans and wildlife by training the communities and women self-help groups with eco-based adaptations along the mid elevations of western Himalaya to restore the highly degraded forests with native plants, provide ecology-based livelihoods to communities, create corridors for wildlife, and mitigate negative interactions.

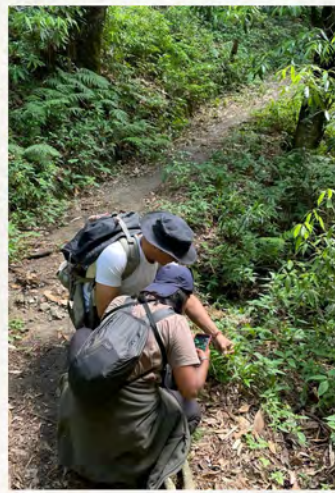
## NURSERY

- Construction of rain shed and fencing for protections from cattle & goats.
- Sowed around 2220 seeds of diverse species. Soil preparation and treatment for 3500 *Quercus leucotrichophora* seeds.
- 308 Himalayan Poplar *Populus ciliate*, 460 Walnut *Julans regia*, 256 *Celtis australis*, 117 Plum *Prunus armeniaca*, 180 Soapnut *Sapindus mukoros*, and 100 wild Pear *Pyrus pashia*, Horse Chestnut *Aesculus indica*, and *Grewia optiva* saplings have been germinated or propagated.
- Regular seed collection, weeding, & counting of germinated saplings.
- Collected 203 *Aesculus indica* seeds and approximately 1000 *Celtis australis* seeds.

## COMMUNITY

- The village panchayat head of Rathiyar has committed to a project involving seven wards, 28 villages, and 538 families. The project requires 860 ha of farmable land. Support from Pradhan and Principal of Rajkiya Varisht Madhyamik Vidyalaya, Chamba, and, and 5-year Himachal Pradesh Forest Department approval. On March 21, 2024, the Himalayan Restoration Project began.
- Prepared map of Rathiyar panchayat
- Perception studies & crop damage assessment in Rathiyar panchayat villages.
- Discussions with women self-help groups in 3 villages.







# HIMALAYAN LANGUR PROJECT & HIMALAYAN RESTORATION PROJECT

## FIELD WORK

- Behavior studies of Chamba sacred langur.
- Study on people's dependency on forest products and livelihood.
- Recording a photographic list of plant species, List of plant species fed upon by langurs & Nativity list of species in the area.
- Designing a tourist awareness board.
- Labeling and arranging herbarium sheets.
- Setting up camera traps with the forest department.:
- Survival count of saplings (~576).
- Perception studies and crop damage assessment data.
- 2nd langur census conducted in Kalatop Khajjiar Wildlife Sanctuary.
- 10+ publications in Zoos Print in the past 1 year.
- Collected 5000+ native seeds for propagation and plantation.
- Surveyed and selected areas for plantation in 2024.

**Sponsors:** American Association of Zoo Keepers; T&I Projects Ltd, Microsoft through Online Giving Foundation, International Council for Research in Agroforestry (ICRAF) & Restoration Stewards.





# ACTION FOR THE UNIQUE & THREATENED WG FRESHWATER FISHES OF INDIA

## OBJECTIVES

- To build strong communications and engagement between local stakeholders, and for the general public to put freshwater fish conservation on the map.
- **1. Denise and her friends conservation:** Sahyadria denisonii or Miss Kerala, the world-famous ornamental fish in the aquarium trade is distributed in 9 west-flowing rivers of Kerala and southern tip of Karnataka. The project envisages to identify suitable stretches for conservation, build community networks, public participation, education & outreach, and establish community conservation reserves
- **2. Subterranean fish research:** The proposed project will use an integrated framework based on science and knowledge, outreach, education and communication to secure the future of the enigmatic and ancient taxa.

## ACTIVITIES

### FIELD SURVEYS IN KERALA

- Intensive surveys conducted across 11 villages and 3 major towns.
- Collected approximately 26 fish samples from various districts.
- Three home-stead wells drained for the SHOAL project.

### EDNA-BASED SAMPLING & DETECTION APPROACH

- Water samples collected from wells, paddy fields, & wetlands.
- Primers designed for eDNA work.
- Extraction protocol standardized using PCI Method.

**Sponsor:** Synchronicity Earth.



SYNCHRONICITY  
EARTH





# NALLUSAMY WETLAND RESTORATION

## OBJECTIVES

- Baseline biodiversity assessment.
- Master planning for canal and check dam reservoir restoration.
- Education outreach for local communities.
- Volunteer programs and talk series for Bosch Global Software Technologies Pvt. Ltd (Bosch) employees.

## ACTIVITIES

- Rapid biodiversity assessments (30+ birds, 120+ invertebrates, 120+ plants of which 70% are native, 15+ reptiles and amphibians, 2 fish species (both non-native) and 4 mammals) .
- Networking with local NGO partners.
- Community surveys.
- Outreach programs in Keeranatham model school.
- 3 Educator training workshops for local NGO partners, Bosch employees, and community leaders/teachers.

## RESULTS

- Training of 60 NGO members and Bosch employees in education techniques and they were provide educational packets to conduct their own programmes.
- Profile of species based on wetlands and waterbodies.
- Collaborative approach to wetland restoration with stakeholder involvement.
- Sensitization of 1076 Bosch employees about restoration and biodiversity conservation through 12 online talk series and 2 trips to Nilgiri Biosphere Nature Park visit.
- Clean-up drive conducted with local stakeholders and Bosch volunteers. About 200 kg of non-degradable garbage was removed from the wetland and segregated into plastic, glass and metal to ensure recycling.

**Sponsor:** Bosch Global Software Technologies Pvt. Ltd.

Local NGO partners: RAAC, Kowsiga Neerkarangal, Recompose Recyclers.











# RIPARIAN FLORA RESTORATION ECOLOGY, AND CITIZEN SCIENCE ALONG THE CAUVERY RIVER

## ACTIVITIES

- 1. Restoring and strengthening riparian (riverbank) habitat, through community involvement and stakeholder led participation.
- 2. Developing robust restoration guidelines based on trial and error, restoration practices and efforts.
- 3. Creating a long term network for citizen science and river monitoring, in the Cauvery catchment situated in Coorg District.
- 4. Replicating restoration practices and planning in highly threatened habitats, of the tributaries of the Cauvery.

**Sponsor:** Global Green Grants Fund.



# SOUTH ASIAN INVERTEBRATE SPECIALIST GROUP

## ASSESSMENT

- Redlisting of Tiger beetles – The data compilation of the tiger beetles, that are primarily endemic to the forests of the Western Ghats mountains of the southwest, and the forested highlands of northeastern India, and the mapping are completed. The Redlist workshop to assess the status is scheduled to be held in June 2024. The results will be uploaded on the IUCN Red List website ([www.iucnredlist.org](http://www.iucnredlist.org)) and will be published in a peer-reviewed journal.
- Global Red List assessments of 60+ Tarantula species in India targeted for completion by 2024. The Redlist workshop is scheduled to be held in July 2024. Compilation of data and the experts for the workshop is over.

## ACTIVITIES

- Recce survey to Muttom, Chinnamuttom, Colachel, Thoothukudi, Thengapattinam & Mangalore harbours to conduct landing surveys harbours to assess trawling impacts on marine invertebrates and to document species diversity.
- Invertebrate surveys at Nallusamy Check Dam, Coimbatore, Tamil Nadu, recording 150+ species.
- Highlighted the need for marine invertebrate conservation at the IOCEAN Conference-cum-Workshop for educators in Coimbatore.

**Sponsor:** The Mohamed bin Zayed Species Conservation Fund.  
Re:wild.





# AFFILIATION WITH MANIPAL ACADEMY OF HIGHER EDUCATION (MAHE)



- Elaborated on research collaborations and academic partnerships
- Approval for affiliation by 31 October 2023
- Approval of Dr. Sanjay Molur and Dr. Bhargavi Srinivasulu as Ph.D. Supervisors by 02 Jan 2024.
- 1 Fellow started PhD studies under Dr. Sanjay Molur's guidance during the March 2024 cycle.

# CONSERVATION ACTION PLANNING (HORNBILL)



Zoo Outreach Organisation helped NCF with the facilitation of a Conservation Action Planning workshop. The team met with West Bengal Forest Department heads to discuss conservation planning for North Bengal landscape using Hornbills as a mascot and in 21-23 January 2024 A three-day 'Conservation Action Planning' workshop was held here from 21 February to discuss and formulate an action plan for hornbill species in this region. The North Bengal region harbours five hornbill species like Great, Oriental Pied, Rufous-necked, Wreathed and Indian Grey hornbills.

# CRINUM MALABARICUM CONSERVATION INITIATIVE

- Third-year population monitoring of endemic freshwater plant, *C. malabaricum*, conducted at Periyar by representatives from Government College of Kasaragod, Biodiversity Club Kasaragod, IUCN SSC Freshwater Plant Specialist Group, and Zoo Outreach Organisation.
- Collaborators developing recommendations for the Conservation Action Plan for *C. malabaricum*, found only in five sites in Kerala.



# BUILDING EVIDENCE FOR CONSERVATION GLOBALLY!

12

issues published

2092

pages published

232

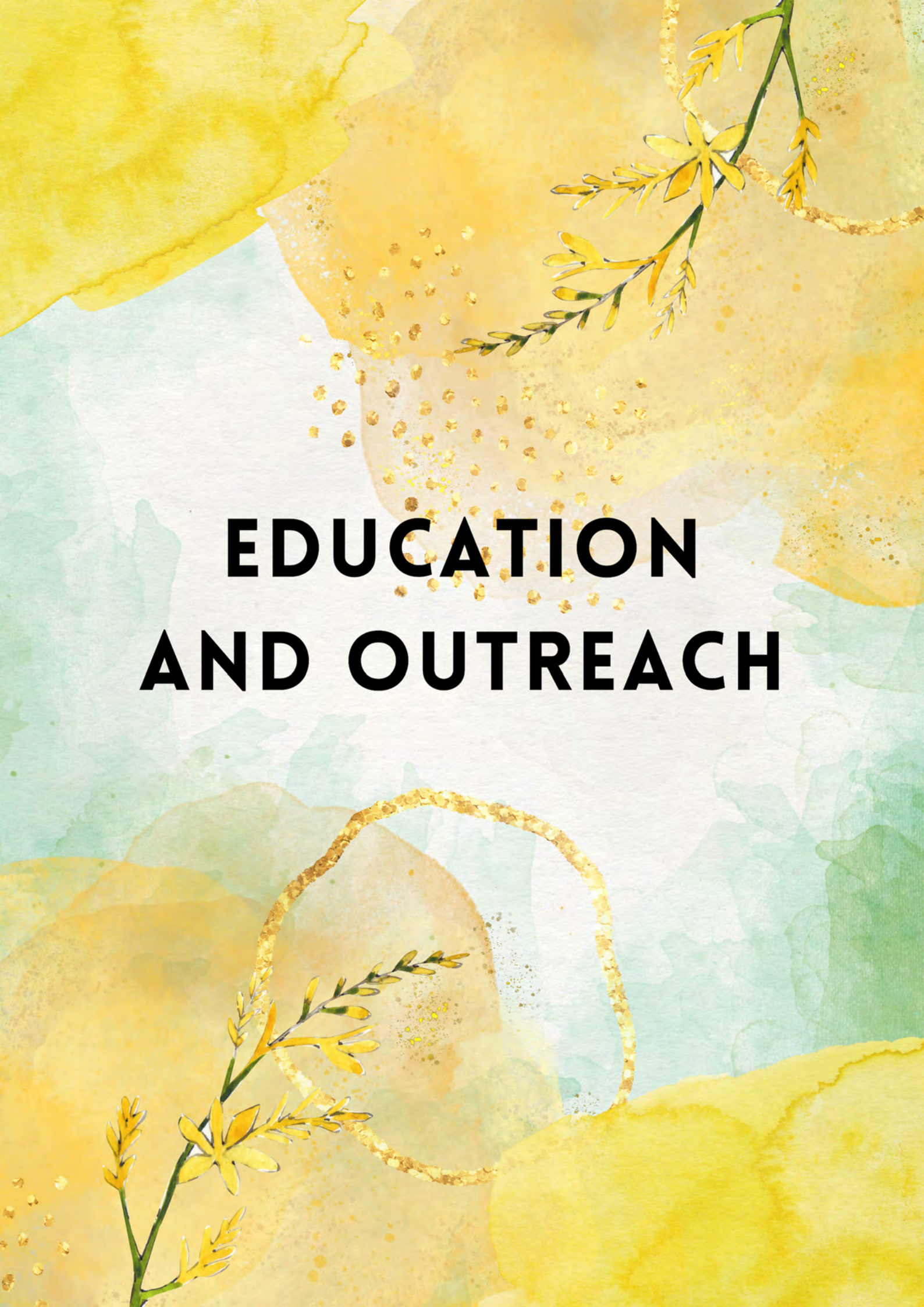
publications



## THE JOURNAL OF THREATENED TAXA

The Journal of Threatened Taxa (JoTT) is an open access and print, peer reviewed monthly (not including special edition, supplementary and monographs), rapid, international journal for conservation and taxonomy. JoTT is a platform for quick and timely publication of research findings, reviews and other aspects of science related to conservation and taxonomy including subject areas like ecology, behavior, physiology, methodology, veterinary, diseases, management, and models among others. JoTT encourages professional and amateur upcoming scientists from around the world to publish. The journal provides assistance and mentors first time writers, or writers of non-native English language countries in presenting science to the world. **Wildlife Information Liaison Development publishes JoTT, and Zoo Outreach Organisation hosts and supports the journal.**





**EDUCATION  
AND OUTREACH**



# HUMAN ELEPHANT COEXISTENCE (HECX)

## INSPIRING HUMAN ELEPHANT COEXISTENCE (HECX) AMONG THE COMMUNITY THROUGH STREET THEATRE & AWARENESS PROGRAMS.

- Conducted eight (8) school awareness programs promoting Human Elephant Coexistence among School Children in October.
- Participants included seven hundred (700) students and seventy (70) teachers.
- Organizations involved: School Education Department, National Green Corps (NGC), Department of Environment and Forest Department.

**Sponsor:** Asian Elephant Support.



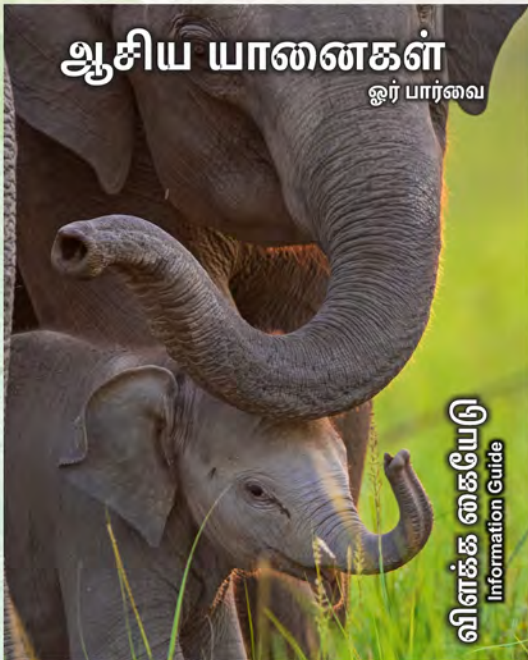
## AMPLIFYING ASIAN ELEPHANT CONSERVATION THROUGH CAPACITY BUILDING AND SENSITIZATION PROGRAMS IN TAMIL NADU, INDIA

- Conducted capacity building training for forest frontline staff at Sathyamangalam Tiger Reserve, 27-28 February 2024.
- Conducted sensitization program for journalists at Sathyamangalam Tiger Reserve, 20th January 2024 and Srivilliputhur Megamalai Tiger Reserve, 27 January 2024.
- Participants included forest staff and journalists from various organizations such as Tamil Nadu Forest Department, Sathyamangalam Environment and Wildlife Association (SEWA), Erode, P.S.G College of Arts and Science, Coimbatore, and Wildlife Association of Rajapalayam (WAR).

**Sponsor:** U.S. Fish and Wildlife Service.



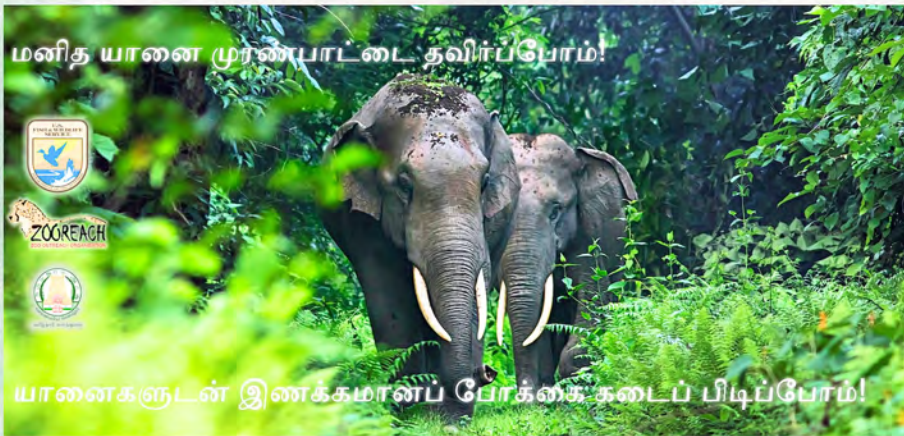




# ஆசிய யானைகள்

ஓர் பார்வை

விளக்க கையேடு  
Information Guide



மனித யானை முரண்பாட்டை தவிர்ப்போம்!



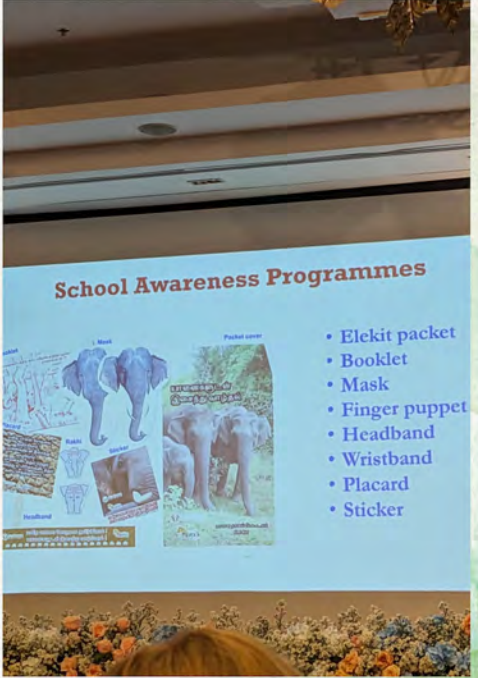
யானைகளுடன் இணக்கமானப் போக்கை கடைப்பிடிப்போம்!

### யானைகள் நடமாடும் பகுதிகளில் வசிக்கும் மக்களுக்கான ஆலோசனைகள்

யானைகள் நடமாடும் உள்ள பகுதிகளில் குறிப்பாக இரவு நேரங்களில் யானைகள் அந்தப் பகுதியில் உள்ளது எனக் கேள்விப்பட்டால், வேளையில் செல்வதை தவிர்க்கவும். இதில் மனமேயசைந்து போது அகல்கருகுகள் அல்லது ஒளிநழுவியை நுகராமல் எடுத்துக் கொள்ளவும். யானை விழிப்புடன் பயி்க்குண்ட பிட்டு போய்வும். யானைகள் தண்ணீர் அல்லது குளம் போன்ற இடங்களைத் தவிர்த்து வசிக்கும் இடத்தில் இருந்து தூரத்தில் போகக்கூடும். கிணறு, குளம் மற்றும் இது திட்டமிடக்கூடிய அருகே குடிநீர் குடிக்கக் கூடும்.

விளம்பரம், யானைப்பூங்கா, தேயிலைப் பண்ணை, மெய்க்கால், தொழில் திட்டங்கள், சரணம் போன்றவைகளை விட்டுவிட்டு மனமேயசைந்து தவிர்க்கவும். இடம் பெற்ற யானைகளின் அருகில் செல்லாத தவிர்க்கவும். இடத்தில் யானைகளை நிறுத்தும், குற்றம் ஆகிய யானையையும், யானை யானைகளை குடிநீர் குடிக்க இடம் பெறாமல் தவிர்க்கவும். உட்கால் பகுதிகளில் விளம்பரம் அமைக்கக்கூடாது. இடத்தில் யானைகள் அமைக்கக்கூடாது. உட்கால் போய்வும். யானைகளை விட்டு விலகி இருக்கவும். யானைகளை குடிநீர் குடிக்காமல் போது அகல்கருகுகள். இடம் பெறாமல் தவிர்க்கவும். இடம் பெறாமல் தவிர்க்கவும்.

- ✓ குடியேறும் இடங்களில் காது மற்றும் அழகுயாழ்க்கைகள்.
- ✓ உட்கால் போய்வும்.
- ✓ உட்கால் போய்வும்.
- ✓ உட்கால் போய்வும்.
- ✓ உட்கால் போய்வும்.
- ✓ உட்கால் போய்வும்.
- ✓ உட்கால் போய்வும்.
- ✓ உட்கால் போய்வும்.



### School Awareness Programmes

- Elekit packet
- Booklet
- Mask
- Finger puppet
- Headband
- Wristband
- Placard
- Sticker



### யானைகளுடன் இசைந்து வாழ்தல்





# RAM HATTIKUDUR ADVANCED TRAINING IN CONSERVATION (RHATC)

The RHATC course is developed to address a big lacuna in the system that connects conservation with daily life living. It prepares successful and holistic conservation leaders irrespective of their gender, educational, social, & economic status. It builds leaders to take up conservation as a career standing on the shoulder of giants in their field. It is a unique course which looks at practical aspects of conservation, situational challenges, cooperative works, inclusive thought processes, ethics and practice, democratic and objective decision making, application of science, etc.

The program is dedicated to the memory of Ram Hattikudur and Sally Walker. The course bridges the gap between theory & conservation action. This year was the third successful year. The theme of the third course was grassland ecosystem conservation.

- Ten Fellows selected from diverse regions across India.
- Included workshops, field visits, and interactive sessions with conservation experts.
- Topics covered included wildlife conservation, grassland restoration, wetland conservation, IUCN Red-list assessments, policies, food security, freshwater biodiversity, conservation biology principles, small mammal conservation, and human-wildlife coexistence.
- Other skills covered include nature guiding, conservation education, filmmaking, fundraising, and grant writing.
- Visited notable locations like Nilgiri Biosphere Nature Park, Achankulam Lake, Kangayam, Hunsur Liana Trust, Nallusamy Checkdam, Magnolia Mist, Rainforest Retreat, Holematti Nature Information Centre, Vagamon grassland hills, Ooty Upstream Ecology, Rameshwaram, Point Calimere Wildlife Sanctuary, and various locations in and around Pune.
- Interacted with 60 Mentors, 27 Resource People, 5 Leaders, 24 Field Assistants/contacts, 6 Alumni Interactions, and 32 organizations working on conservation issues.
- Published special edition of Zoo's Print and developed the grassland education packet.
- Concluded with a 15-day practical field challenge mentorship period with The Grassland Trust where the fellows worked on specific projects related to grassland restoration, poultry waste management, ecotourism, Dhangars, and wildlife monitoring.

**Sponsor:** Sanjay Manohar Family & Friends, Coromandel International Limited, Mansukhani Family, and RHATC alumni & many individuals through Ketto Online Ventures platform.











# 10 OCEAN LAUNCH

## OBJECTIVES

- Launched on 26 May 2023, aiming to unite educators, researchers, students & communities to improve ocean waters & their treatment & to conduct on-ground research, educate people, and employ sound science to influence policy decisions.
- Collaborated with 6 schools and 20 teachers.

## ACTIVITIES

- The Citizen Science website for sharks and rays is nearly ready for publication.
- Organised a 2-day workshop for 30 fishermen on understanding threatened marine animals & recording on board landings, July 2023.
- Identification of an important sea grass bed in Chinnapalam, Rameswaram, Gulf of Mannar, India, supporting diverse marine invertebrates.

**Sponsor:** The Habitat Trust



# MAGIC OF THE OCEAN

## EMPOWERING OCEAN LITERACY THROUGH AN INTERACTIVE E-LEARNING PLATFORM

- It will provide knowledge about the Indian Ocean, focusing on ocean literacy, biodiversity, fisheries, and livelihoods.
- Utilizes innovative lesson plans, videos, animations, and games.

## ACTIVITIES

- A literature review of existing publications on perception studies of fishing communities, teachers, and school curricula has been done.
- Semi-structured questionnaire surveys developed for the fisherfolk community, teachers, and students.
- Surveys conducted in Rameshwaram, Coimbatore, and Kerala.
- Analyzed survey data for the development of educational materials.
- Discussed the idea of co-creation with interested teachers of CS Academy for incorporating ocean-related topics into the curriculum.
- A capacity-building training educator workshop will be organized at 3 different locations for about 45 teachers in 2024.

**Sponsor:** National Geographic Society





# CLIMATE MITIGATION THROUGH ECOLOGY-BASED LEARNING

## EMPOWERING RAMESWARAM'S COMMUNITY EDUCATORS TO LEAD IN CLIMATE ACTION

Rameswaram's diverse ecosystem will be utilized as an educational tool, enhancing students' understanding of nature and ecology, addressing climate change impacts, and promoting a sense of ocean and biodiversity conservation.

### ACTIVITIES

- The first draft of the educator's manual is under preparation.
- Plans to reach 20 educators and have each connect with 20 students.
- Capacity-building training workshops for educators in Rameswaram will be conducted in June 2024.

**Sponsor:** Amazon



## EMPOWERING STUDENTS & WOMEN IN SEAGRASS CONSERVATION

### ACTIVITIES

- Will conduct perception studies of at least 60 respondents.
- Will develop educational/training modules based on the analysis of perception studies.
- Will ensure sustainability through trained teachers and education materials.
- Will hold a 3-day Leadership/Student Training workshop and a 2-day Training for the women self-help groups by students in 2024.

**Sponsor:** Ocean Conservation Trust









# ART FOR CONSERVATION AND CLIMATE CRISIS

This project aims to leverage art as a powerful tool to address the climate crisis by engaging artists from diverse cultural backgrounds.

- The project focused on communication and skills development among artists to effectively address climate change through art.
- 30 artists were selected from Tamil Nadu, Kerala, and Karnataka to ensure diverse representation.
- Application processes for workshops were completed, with workshop dates finalized and announcements made on social media and other platforms.
- Three workshops were conducted, each focused on storytelling, illustrations and performance arts.
- The project aims to create 30 different artworks to convey the message of climate change in various styles for a wider impact.
- Scientific data formed the foundation of the project, providing a structured database for climate change issues relevant to India.
- The project included the development of topics/themes on climate crisis and species conservation based on existing literature and expert consultations.
- Efforts are being made to secure venues for the final exhibition, with potential locations being explored and discussions in progress.

Overall, the project integrates art, science, and community engagement to raise awareness and encourage action on climate change and conservation issues. The workshops have been completed, and the final exhibition is the remaining component of the project.

**Sponsor:** US Consulate General, Chennai









**zooreach**  
 Zoo Outreach Organisation

*Art for Conservation and Climate Crisis*



# REVIVING AND STRENGTHENING JOINT FOREST MANAGEMENT FOR THE PROMOTION & LIVELIHOODS

## PURPOSE

- The project is to restore the tiger habitat in the Srivilliputhur-Megamalai Tiger Reserve (SMTR) in Virudhunagar districts of Tamil Nadu state, India. The goal of the project is to support the newly declared Srivilliputhur-Megamalai Tiger Reserve (SMTR) by carrying out activities that will help assist the department in strengthening the activities to achieve its goal.
- The main target groups of this project are 50+ village communities around the proposed Tiger Reserve in Virudhunagar district and the forest personnel.

## ACTIVITIES

- Completed the survey of villages around SMTR
- Took initiatives to revive Joint Forest Management JFM committees
- Conducted various Focal meeting to find the socio-economic status of the tribal settlements around SMTR and understood the status of the forest dependency, livelihood requirements
- purchased and issued field equipment such as camera traps, smartphones to use M-STrIPES, village economic status
- developed education programs to conduct a Trainers training programme
- initiated public awareness programs.
- Village Forest Committee formation involving the women, preparation of draft MoU with the villagers and the Forest Department
- Conducted exposure tour for 30 panchayat Presidents to understand various eco-development projects happening in the nearby Protected Areas, created linkages with the members of the Eco-Development committee and to gain support for the initiatives at SMTR villages
- Conducted teachers training program for selected 30 teachers from SMTR ranges with the support of the Tamil Nadu Department of Education and planned awareness programs for their audiences in & around SMTR.

**Sponsor:** U.S. Fish and Wildlife Service.









# ZOO'S PRINT

12

issues published

528

pages published

157

publications

Zoo's Print publishes simple natural history observations with the intention of putting out facts for the general public to understand and for scientists to build hypotheses and test them out.

Articles: 4 (16pp)

ATC 2023-24 thoughts: 1 (2pp)

Bird o Sour: 37 (127pp)

Bogs r all: 10 (39pp)

Frogley: 4 (10pp)

Funguy: 1 (2pp)

Mammal tales: 6 (11pp)

Plantasia: 5 (16pp)

Reports: 17 (40pp)

Reptile Rap: 17 (51pp)

Small Mammal Mail: 2 (8pp)

News update: 13 (52pp)

RHATC 2023-24 Report: 30 (124pp)

Book review: 2 (10pp)

Announcements: 7 (9pp)







## **Zoo Outreach Organisation**

3A2 Varadharajulu Nagar, FCI Road, Ganapathy  
Coimbatore, Tamil Nadu 641006, India

Website: [www.zooreach.org](http://www.zooreach.org) & [www.threatenedtaxa.org](http://www.threatenedtaxa.org);

Email: [zooreach@zooreach.org](mailto:zooreach@zooreach.org),

**zooreach**  
Zoo Outreach Organisation