

# Bombay Natural History Society

141<sup>st</sup> ANNUAL REPORT (DRAFT)

FOR THE YEAR

1st APRIL 2024 to 31st March 2025



## **CERTIFICATE**

This is to certify that this report is in compliance of the rules of the Society's registration Act, Bombay Public trust Act and all other relevant acts like the Foreign Contribution Regulations Act 1976, Income Tax Act, CSR Act etc.

Director  
BNHS

# 141st ANNUAL REPORT FOR THE YEAR 1st APRIL 2024 to 31st MARCH 2025

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**Bombay Natural History Society**

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## Vulture Conservation Breeding Centre, Assam

**Funding agency:** The Royal Society for the Protection of Birds (RSPB), UK



### Team:

Sachin Ranade	: Centre Manager
Aniket Pawar	: Biologist
Jayanta Rabha	: Office Assistant
Krishna Mohan Chutia	: Veterinarian
Dhiraja Rabha	: Driver cum Vulture Keeper
Basanta Rabha	: Vulture Keeper
Dilip Rabha	: Vulture Keeper
Hiren Majumdar	: Vulture Keeper
Pranab Deori,	: Vulture Keeper-Night watchman
Pradip Rabha	: Vulture Keeper-Night watchman

**Long-term goal:** Conservation breeding of the White-rumped vulture and Slender-billed vulture, with a founder population of twenty pairs of each species, with the objective of releasing one hundred pairs of each species in to the wild within fifteen years

### Objectives:

- Maintenance of vulture stock at VCBC
- Conservation breeding of the White-rumped vulture and Slender-billed vulture.
- Re-introduction of the White-rumped vulture and Slender-billed vulture.

**Duration of the project:** Long-term

#### **Location**

The centre is located 20 km off the Kolkata–Guwahati National Highway 17 and 6 km from Rani, Kamrup District. It lies 40 km from Guwahati city and about 20 km from Guwahati Airport. The centre spans 2 hectares of Assam Forest Department land within the Jorsal Reserve Forest, Rani Range, East Kamrup Forest Division. The Meghalaya state border is only 5 km away. Land was provided to BNHS under permissive possession for the establishment of the centre.

#### **Vulture stock at VCBC Rani, Assam**

Total vultures	:	203
White-rumped vulture	:	139
Slender-billed vulture	:	64



**A pair of White-rumped vultures on nest A slender-billed vulture constructing nest**



During the 2023–24 breeding season, six Slender-billed and fourteen White-rumped Vultures were successfully parent-reared—the highest breeding success recorded at VCBC Rani to date. The current breeding season (2024–25) began in October and will conclude by June 2025, when chicks of both species are expected to fledge. Aviaries with nestlings are monitored intensively throughout the breeding period.

#### **Routine activities:**

1. Provision of safe food and water to vultures
2. Repair of nests and perches, and additions to aviaries
3. Periodic cleaning of aviaries, including replacement and addition of sand, and bamboo lining repairs
4. Spreading stone crush around aviaries and maintaining pathways within the campus
5. Maintenance of office building, aviaries, vehicles, and overall infrastructure
6. Repair of solar fencing at VCBC; materials for solar fencing at the Release Aviary were received

#### **Veterinary & Husbandry activities**

1. Ringing and health check-ups of twenty nestlings from the 2023–24 breeding season. Nestlings from 2024–25 are still under parental care in the three colony aviaries.
2. Health assessments of select vultures after breeding season. Blood samples were collected and preserved for further studies. Samples from 18 immature Slender-billed Vultures were sexed, revealing 8 females and 10 males—indicating a balanced ratio.
3. Management of aggressive pairs: one pair of Slender-billed Vultures (A00 & A02) was transferred from the colony to Holding Aviary 3.
4. Treatment of unwell vultures: two Slender-billed Vultures and one White-rumped Vulture were successfully treated. The Slender-billed was treated for lesions acquired during a fight and the White-rumped was given nutritional supplementation.
5. Post-mortem conducted on an immature male Slender-billed Vulture casualty.
6. Rescue and rehabilitation: Eight Himalayan Vultures showing symptoms of poisoning were rescued and treated this year.



**Release of rescued Himalayan vulture by the Divisional Forest Officer,  
Kamrup West, in April 2024**

## Sick and injured vulture treatments at VCBC 2024–2025

### Case 1. Treatment of an open wound in Slender-billed vulture

**History:** On March 11, 2025, a Slender-billed vulture with ring A39 was observed on the ground around 9:30 hrs via CCTV. The vulture was closely monitored for 10 minutes and the legs and feathers of the bird were observed to be smeared with blood. The vulture was then immediately captured for examination and treatment and brought to the Hospital aviary.

The wound site was cleaned properly with anti-septic solution. The feathers near the wound were removed. Analgesic meloxicam was administered; fluid therapy was provided by giving Ringer's Lactate intravenously and an antibiotic was administered. The wound was closed using simple interrupted sutures and was dressed routinely till it recovered completely.

### Case 2. Calcification of uric acid deposition in Slender-billed vulture

**History:** On routine monitoring of Colony II, a Slender billed vulture with ring J06 was observed with weakness and reduced activity. The vulture was captured and shifted to temporary hospital aviary where on clinical examination it was seen to have ruffled feathers, emaciated body condition.

Blood was collected aseptically for hematology and biochemistry and the individual was diagnosed with articular gout. Treatment was administered for one month.

### Case 3. Debilitation and dehydration in a White-rumped Vulture

**History:** On routine monitoring of Colony III, a White-rumped vulture with ring G73 was found weak and reduced activity. The vulture was captured and shifted to temporary hospital aviary. On clinical examination it was observed to have ruffled feathers, a prominent keel bone, and emaciated body condition. Blood was collected aseptically for hematology as the individual was suspected to be suffering from weakness due to dehydration. Treatment was provided and the bird recovered well.

### Visitors to the VCBC

The Vulture Conservation Breeding Centre (VCBC) serves as a nodal point for awareness and advocacy. This year there were 160 visits by stakeholders. We trained twelve batches of forest trainees from Assam, Maharashtra, Kerala and Karnataka. Sessions included presentations and hands-on rescue training for vultures.

The VCBC at Belguri celebrated International Vulture Awareness Day (IVAD) on September 7, 2024. As part of the occasion, the VCBC scientists organized a district level drawing competition with the theme 'Nature and Vulture', inviting students from 50 schools across the Kamrup district to showcase their artistic talents. The celebration featured a prize distribution ceremony, where outstanding participants were recognized for their efforts. The event was graced by guests including Dr Oinam Sunanda Devi, Scientific Officer of the State Biodiversity Board; Dr Paul, an Anthropologist; and Mrs Renu Deori, Block Development Officer of Rani, who served as chief guests.

Additionally, the event included felicitation of five individuals honoured for their extraordinary contributions to vulture conservation. The recipients were Mr Prasanna Kolita, Mrs Shahida Bibi, Mr Ranjit Nath, Mrs Renu Nath and Mrs Mallika Gogoi, showcasing the local community's commitment to protecting these vital scavengers. Students were encouraged to join Friends of Vulture, a youth advocacy group. The celebration reinforced community commitment to conservation and highlighted the ecological importance of vultures.



**IVAD 2024: Prize distribution programme arranged by VCBC Rani Assam on September 7, 2024**



**Hands on training for Forest Staff – A batch of Forest trainees from Karnataka Forest Department**

### **Media coverage and Government support**

The vulture conservation efforts this year received more than fifty media features in local and national outlets, including Niyamia Barta and Times of India, as well as electronic platforms. The topics covered were vulture rescue operations, thematic training on vulture conservation and ban on nimesulide.

The local Government has been taking interest in the activities of VCBC, Rani. This year two District Commissioners visited the VCBC and assured continued support. The Kamrup district website has added information on the Vulture Conservation Programme.



**Smt Keerthi Jalli, District Commissioner visited the VCBC on August 1, 2024**





**Mr Deba Kumar Mishra, DC, Kamrup with other dignitaries visited VCBC on December 31, 2024**

## Vulture Safe Zone Assam

### Team:

Mr Sachin Ranade	: Coordinator
Mr Sthita Pragyan Mallik	: Biologist
Ms Aneena L.	: Biologist
Mr Ghanashyam Gogoi	: Biologist
Mr Hemanta Buragohain	: Field assistant
Mr AmarJyoti Das	: Driver

### Location

14 districts of Assam (Sivasagar, Charaideo, Jorhat, Golaghat, Karbi-Anglong, Nagaon, Morigaon, Sonitpur, Bishwanath, Lakhimpur, Dhemaji, Majuli, Dibrugarh and Kamrup)

Additionally, the Northwest zone of Meghalaya (East Garo Hills, West Garo Hills, South-West Garo Hills), six districts of western Assam (Goalpara, Chirang, Bongaigaon, Kokrajhar, Dhuburi, and South Salmara-Mankachar) and seven districts for central Assam (Darrang, Udalguri, Kamrup Rural, Barpeta, Nalbari, Baksa, West Karbi Anglong) were covered during pharmacy surveys and awareness meetings.

### Objectives

- Conduct pharmacy surveys to monitor availability of NSAIDs in the veterinary sector
- Monitor wild and breeding vulture populations
- Record causes of death and detect NSAID contamination in vultures
- Monitor NSAID contamination in ungulate carcasses
- Build capacity and conduct local advocacy/awareness programmes
- Prepare for trial releases of vultures from VCBC
- Respond to poison bait incidents
- Operate the Vulture Conservation Breeding Centre
- Develop sustainable funding plans

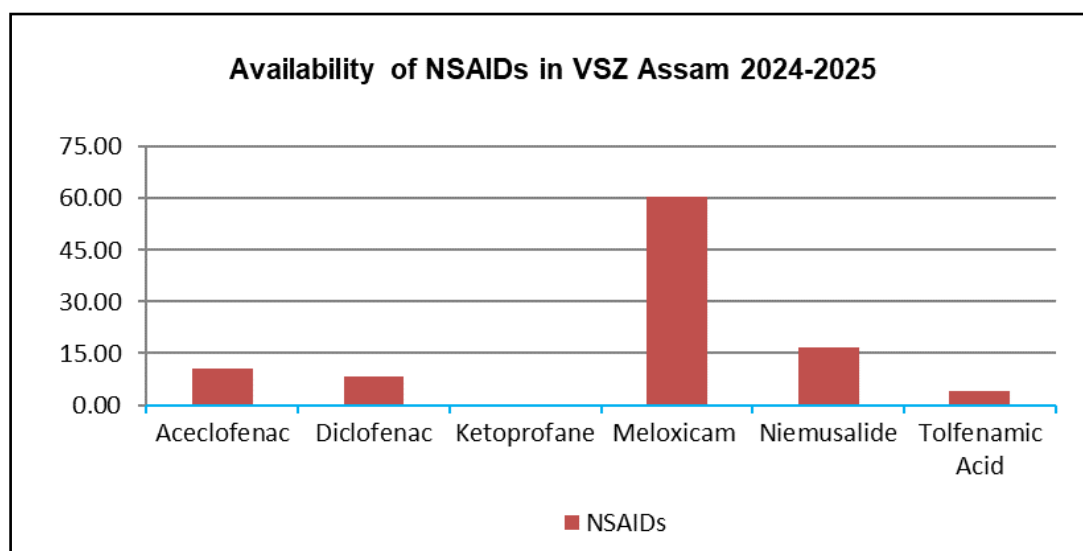
## Pharmacy surveys for monitoring NSAIDs

Undercover pharmacy surveys were repeated in Assam during January-February 2025 to estimate the prevalence of veterinary NSAIDs (Non-Steroidal Anti-Inflammatory Drugs) used in cattle treatment, with a focus on vulture-toxic drugs.

The surveys covered 74 pharmacies in 14 districts within the Vulture Safe Zone (VSZ) of Assam. Meloxicam was the most widely used drug. The surveys were also expanded to the Vulture Release Zone and western Assam districts overlapping with the West Bengal VRR zone. Nimesulide was found in several pharmacies, despite its recent ban. The findings highlighted a need for intensified efforts in western and central Assam, where Nimesulide (8%) and Aceclofenac (5%) remain readily available.

Among veterinary medications, vulture-safe drugs (both NSAIDs and non-NSAIDs) accounted for 83% of the available stock, while unsafe drugs were 17%, including Diclofenac (4%). Ketoprofen was not detected in the market.

The expansion of surveys to western and central Assam confirmed the continued prevalence of Nimesulide and Aceclofenac. An open survey was also conducted to evaluate NSAID availability. Pharmacists reported that meloxicam was available in almost all outlets. These interactions also served as opportunities to raise awareness about vulture-toxic drugs and vulture conservation.



## Monitoring of wild vulture populations and nesting

### Vulture Colony Monitoring:

Vulture colonies were surveyed at Dimow (Sivasagar), Mahamaya, Kokrajhar, Lakhimpur, and Dibrugarh districts.

- Dimow: 21 Slender-billed and 12 White-rumped Vulture nests recorded; 69% active, fledging expected by May 2025.
- Mahamaya: 20 White-rumped Vulture nests recorded; 75% active with parents and nestlings observed.
- Lakhimpur: 4 White-rumped Vulture nests recorded.
- Dibrugarh: 5 Slender-billed Vulture nests recorded.
- Kaziranga National Park (Nagaon & Golaghat): 3 Slender-billed Vulture nests recorded.

A total of 29 Slender-billed and 36 White-rumped Vulture nests are currently being monitored. This year the nesting colonies were disturbed by tree cutting; mitigation measures are being pursued by the team.

## Road Transects

Four road transects were repeated six times covering the Vulture Release Zone:

1. Rani-Goalpara-Dhuburi
2. Rani-Nagaon
3. Rani-Tezpur
4. Rani-Gelephu border

Only Himalayan Vulture – a migratory vulture species – was sighted during these transects (encounter rate 5/100km). No resident Gyps vulture were recorded during the transect. During an opportunistic transect, while travelling for pharmacy survey, the team recorded a White-rumped vulture in western Assam along Meghalaya border.

## Monitoring of causes of death and NSAID contamination of wild vultures

Regular monitoring of vulture colonies also helped document mortality cases. Three carcasses of White-rumped Vultures were collected in 2025. Of which One was of fledgling death, which was attributed to a fall from the nest. The two sub-adult deaths were complex and potentially caused by multiple factors. The tissue samples were collected and submitted for laboratory testing to detect NSAID residues.

## Monitoring NSAID Contamination in Ungulate Carcasses

NSAID contamination is monitored through liver tissue analysis from ungulate carcasses collected both systematically and opportunistically from skinners. 150 liver samples were submitted for NSAID detection and quantification using High-Performance Liquid Chromatography (HPLC) techniques.

## Capacity Building and Local Advocacy / Awareness Raising

Capacity-building and awareness programmes conducted throughout the year targeted key stakeholders, including animal Husbandry and Veterinary departments, forest Department, local communities, educational institutions. Advocacy efforts included individual meetings with government officials and other stakeholders to highlight the dangers of toxic NSAIDs and the importance of vulture conservation.

## Veterinary Sector

Awareness programs were conducted at 15 veterinary dispensaries, district veterinary offices, and research institutes, reaching over 400 veterinarians and paraveterinary professionals.



**Veterinary Practitioners' awareness meeting at DVO Office Barpeta, Assam**

### Educational institutions:

Awareness programmes were conducted in 47 schools and colleges, reaching approximately 4,460 students and parents, along with 333 teachers. Students from Classes 8 to 10 in schools and biology students in colleges were chosen for lectures and workshops. Programmes included presentations, documentary screenings, interactive discussions, and Q&A sessions. Participants were encouraged through token prizes for answering questions or taking part in activities such as drawing, poem writing, and article writing on vultures.

The institutes covered are as follows:



**Awareness programme at Upperdani High School, Kamrup, Assam**

### Community meetings

Twelve community meetings were attended, and where talks on vulture conservation were delivered. These included groups working on conservation issues and local bodies supportive of vulture conservation efforts. Events such as the Assam Sahitya Sabha were attended, allowing messages to reach a wide audience. A total of 1,472 individuals were engaged and sensitized through these programmes.

### Forest staff Training

Nine training programmes were conducted for frontline forest staff and trainees, during which the participants were given the opportunity to handle a surrogate species (Himalayan Vultures) during release events. A thematic session introduced staff to vulture identification, conservation activities, and hands-on training through presentations and practical exercises.

### Advocacy

Advocacy involved one-to-one interactions, explaining the severity of the problem and requesting support. A total of 194 advocacy meetings were conducted: 98 with government officials; the rest with school principals, NGO representatives, scientists, and activists



## Preparation for Vulture Release Program

1. Releasable vultures: Six sub-adult White-rumped vulture were selected, sexed (3 female, 3 male), and were checked for their health parameters, so that these could be released in nature
2. GSM and PTT tags were procured
3. The Release aviary at Nalapara, Kamrup District was constructed by the Forest Department Assam. Dimensions: 100 × 40 ft with an internal gallery. Features include roofing at one end, a sliding door at the distal end, a food hatch, two water troughs, and a sand-covered floor.
4. A two-room hide was constructed about 75 ft away from aviary. from where the sliding door can be operated with a pulley–cable system. A CCTV camera will be installed for monitoring.
5. A solar powered fence was set around the 2-acre land for safety.
6. Carcasses are being placed near the aviary to attract wild vultures, which will act as guide birds for the released individuals.

## Response to poison bait events

Two incidents of vulture mortality due to poisoning were reported in Assam. In total, 24 vultures died, while 8 Himalayan Vultures were rescued and treated. On two occasions, the discarded poultry waste was noticed and buried by the staff of VCBC and Forest department. The Range Officer Rani issued letter for the concern authorities regarding the incidences.

In Sivasagar district, two suspicious carcasses were buried on intervention of our staff Mr Sthita Pragyan and Mr Hemanta Buragohain. Both carcasses, which had been bitten by feral dogs and left exposed, were suspected cases of retaliation poisoning.

To prevent such incidents, awareness messages were consistently spread among stakeholders. During veterinary meetings, practitioners were shown short training clips on rescue techniques and treatment of poisoned vultures.



**Two rooms for CCTV and staff Release aviary - inside view**

## Jatayu Conservation Breeding Centre, Pinjore

**Funding agency:** Forest Department of Haryana and MoEF&CC, New Delhi

### Team at JCBC, Pinjore:

Hemant Bajpai	: Centre Manager
Jeff Francis	: Conservation Biologist
Prakash Mehta	: Conservation Officer
Dr. Raghavender Sharma	: Senior Veterinarian
Dr. Shravan Singh Rathore	: Senior Veterinarian
Niranjan Dalei	: Administrative Officer
Jaikishan Sharma	: Supervisor
Prakash Chand	: Night watchman
Balakram Sharma	: Accounts Assistant
Lalit Kumar	: Technical Assistant
Tek Chand	: Vulture keeper
Ravi Kumar	: Vulture keeper
Sukh Dev	: Vulture keeper
Manohar Lal Singh	: Vulture keeper
Ved Prakash	: Vulture keeper
Devi Dutt	: Vulture keeper
Mohammed Mansoor	: Vulture keeper cum Night Watchman

### Introduction

The Jatayu Conservation Breeding Centre (JCBC), located at the edge of Bir Shikargaha Wildlife Sanctuary, Pinjore, is a collaborative initiative of the Haryana Forest Department and the Bombay Natural History Society (BNHS).

Established to conserve India's Critically Endangered vultures – the White-rumped Vulture (*Gyps bengalensis*), Long-billed Vulture (*Gyps indicus*), and Slender-billed Vulture (*Gyps tenuirostris*) – JCBC aims to breed and release 100 breeding pairs of each species over a 15-year period.

### Vulture Population & Breeding Success

As of March 2025, JCBC Pinjore housed the highest number of captive Gyps vultures globally, with 379 individual (including nestlings), comprising 236 Long-billed, 80 White-rumped, and 63 Slender-billed Vultures.

During the 2024–25 breeding season, 47 eggs were laid (25 LBV, 14 WRV, and 8 SBV). From these, 31 chicks successfully hatched, including 20 Long-billed, 9 White-rumped, and 2 Slender-billed vultures. These results continue the Centre's upward trajectory in conservation breeding.

Artificial incubation and double clutching techniques played a significant role in these successes. Out of nine eggs incubated, five successfully hatched. White-rumped Vultures showed a 66% success rate in artificial incubation, while the Slender-billed Vultures had a lower success rate of 33%.





**White-rumped nestling feeding and resting on a nest perch in the nursery aviary**

### **Health Monitoring & Husbandry Care**

In September 2024, a detailed health check was carried out on 135 vultures. Assessments included weight measurement, blood tests, parasite screening, and overall physical assessment. Birds were found to be in generally good health.

Routine care continued with strict protocols. Vultures were fed twice weekly with fresh goat meat sourced through a diclofenac-free protocol. Aviary maintenance remained a top priority, with seasonal upgrades, daily cleaning, and careful perch arrangements to prevent foot infections.



## Reintroduction of 25 White-rumped Vultures

On 17 December 2024, JCBC Pinjore released 25 White-rumped Vultures, marking a landmark event in vulture conservation. The event was graced by Hon'ble Chief Minister of Haryana, Sh. Nayab Singh, presided as Chief Guest, joined by senior officials including Sh. Anand Mohan Sharan, IAS, Sh. Rao Narbir Singh, and MLA Shrimati Shakti Rani Sharma.

The Chief Minister appreciated JCBC and BNHS's efforts and assured continued government support. A documentary presented by Sh. Kishore Rithe, Director BNHS, showcased JCBC's achievements. A booklet on the Centre's conservation work was officially released.

A total of 25 captive-bred White-rumped Vultures were released, each fitted with a GSM–GPS transmitter. These included both sub-adults and juveniles. By March 2025, 16 birds had survived, six of which showed excellent adaptation by interacting with wild vultures. However, eight birds died due to electrocution or dehydration, and one bird went missing.



**Hon'ble Chief Minister of Haryana releasing vultures and booklet on JCBC Pinjore**



Several challenges were encountered during post-release monitoring. GSM transmitters had limited coverage and battery life, especially for birds that did not fly frequently. Some locations were difficult to access due to rugged terrain. Food scarcity was observed linked to changes in cattle carcass disposal practices. Hand-reared birds showed lower adaptability, stressing the need to prioritize parent-reared individuals.

Recommendations include using satellite PTT transmitters for better tracking, prioritizing parent-reared birds, conducting release near existing wild vulture populations, and maintaining provisional feeding sites to support released birds during their transition.

### **Covert Pharmacy Survey**

The Jatayu Conservation Breeding Centre (JCBC), Pinjore, conducted an undercover pharmacy survey between August and November 2024 to monitor the availability of non-steroidal anti-inflammatory drugs (NSAIDs) in the Vulture Safe Zone (VSZ), a 100 km radius around the centre. This initiative supports the vulture reintroduction program by ensuring a safe environment for released birds. The survey targeted 115 pharmacies across 112 administrative blocks in five Indian states – Haryana, Punjab, Himachal Pradesh, Uttarakhand, Uttar Pradesh – and one Union Territory, Chandigarh.

The survey revealed that 92% of the pharmacies offered NSAIDs, and of these, 51% stocked drugs toxic to vultures such as diclofenac, aceclofenac, and nimesulide. Meloxicam, the only known vulture-safe NSAID, was available in only 39% of the pharmacies. Nimesulide was the most frequently encountered toxic drug, found in 36% of pharmacies, followed by aceclofenac (10%) and diclofenac (5%), despite bans on veterinary diclofenac and aceclofenac.

State-wise findings:

- Haryana and Punjab: Highest prevalence of toxic NSAIDs, with poor representation of meloxicam.
- Himachal Pradesh: Safest zone, with over 84% of pharmacies stocking meloxicam and minimal harmful alternatives.
- Uttarakhand, western Uttar Pradesh, and Chandigarh: Limited sampling still indicated misuse of human formulations for veterinary purposes.

The survey highlights significant regulatory gaps and continued misuse of banned NSAIDs, posing a serious threat to vulture survival in the wild. Based on the findings, the report recommends an immediate ban on veterinary use of nimesulide, stricter enforcement against diclofenac and aceclofenac misuse, promotion of meloxicam as a safer alternative, stakeholder awareness campaigns, and regular NSAID monitoring within the VSZ. These measures are essential to ensure the success of vulture conservation and reintroduction efforts in India.

### **Outreach and Awareness Activities**

JCBC organized 38 educational and awareness programs for various states participants, reaching over 3,200 participants. These initiatives involved forest training institutes, colleges, and schools. Additionally, JCBC hosted International Vulture Awareness Day 2024 featuring inter-school competitions and centre tours. Over 160 students and teachers from nearby villages participated.

### **Advocacy and Policy Engagement**

JCBC conducted multiple advocacy meetings with key stakeholders including drug controllers, animal husbandry officials, and policy advisors. Discussions focused on eliminating the use of toxic NSAIDs like diclofenac and supporting vulture-safe zones through awareness, training, and interdepartmental coordination.

Due to continuous advocacy efforts by BNHS and related stakeholders, the Government of India banned nimesulide for veterinary use in December 2024. This milestone decision, acknowledging its proven toxicity to vultures, marks a significant advance in conservation policy.

### Population Monitoring and Food Availability

From May 2024 to March 2025, JCBC conducted extensive monitoring using road transects and carcass dump surveys in the Vulture Safe Zone, Pinjore. While four vulture species were sighted, most commonly White-rumped and Himalayan Griffons, food availability remained irregular. Approximately 4,890 kg of edible biomass was recorded at four monitored dumps, highlighting the need for regulated carcass disposal and supplementary feeding.

### Workshops and Collaborative Events

On August 6, 2024, JCBC hosted a workshop on the Vulture Conservation and Reintroduction Programme, bringing together experts, government officials, and stakeholders from five states of India. The workshop highlighted conservation progress, policy gaps, and developed collaborative action plans to strengthen nationwide vulture recovery.



**Participants of the Vulture Conservation and Reintroduction Programme Workshop (left) and Forest trainees from Forest Training Institute, Haldwani (right) at JCBC Pinjore**

### Conclusion & Way Forward

The 2024–25 breeding season reaffirmed JCBC's critical role in vulture conservation. With continued success in breeding and gradual improvements in reintroduction techniques, JCBC is committed to releasing 100 breeding pairs of each species. The next year will focus on refining artificial incubation, improving release strategies, and expanding collaborations with state forest departments.

## Vulture Conservation Breeding Centre Bhopal, Madhya Pradesh

### Team:

Centre Manager	: Dr. Arockianathan Samson, M.Sc., M.Sc., Ph.D.,
Research Biologist	: Mr. Sanjay Parihar
Centre Supervisor	: Mr. Raphick Uddin
Sr. Vulture Attendant	: Mr. Timan Singh
Vulture Attender Cum-	
Night Watchman	: Mr. Devkaran
Driver	: Mr. Atul Yadav

### PREAMBLE

The Vulture Conservation Breeding Centre (VCBC), Bhopal, located near Kerwa Dam, is a dedicated facility working to save two Critically Endangered species – the White-rumped Vulture (*Gyps bengalensis*) and the Long-billed Vulture (*Gyps indicus*) – from extinction. This joint initiative between the Madhya Pradesh Forest Department and the Bombay Natural History Society (BNHS) plays a crucial role in India's ex-situ vulture conservation efforts.

Established with the vision of developing a viable breeding population, the primary objective of the centre is to house and breed 25 pairs of each species and eventually release 100 pairs of each species into the wild within a 15-year timeframe from the commencement of the release programme. Given that vultures are slow-breeding and long-living birds, with age identification possible only up to five years, 75% of the birds were collected as nestlings or juveniles and the remaining as adults or sub-adults. The inclusion of adults was intended to serve as guide birds during breeding and release operations.

The release programme, expected to begin after ten years, was also a strategic insurance mechanism against extinction, especially since the core threat – NSAID poisoning of livestock carcasses (primarily through Diclofenac and other harmful drugs) – remains prevalent. The programme ensures that a healthy captive population exists until a safe environment is restored in the wild.

### Infrastructure and Governance

The VCBC is located on 5.5 acres of land provided by the Madhya Pradesh Forest Department near Mendori village, on the edge of a Reserve Forest. Situated just 9 km from Bhopal city and 7 km from Van Vihar National Park, it is both secluded and accessible. Infrastructure includes secure aviaries, feeding stations, and quarantine units, all developed by the Forest Department. Proposals for a veterinary facility and laboratory have been submitted to further strengthen diagnostic and breeding capabilities.

The centre is governed by a council chaired by the Chief Wildlife Warden, Madhya Pradesh, with the Director of Van Vihar National Park serving as Member Secretary and Project Leader.

### Current Population and Activities (2024–2025)

As of 2024–2025, the centre houses 93 vultures, comprising 56 Long-billed Vultures and 37 White-rumped Vultures.

The major activities at the centre include:

- Regular husbandry (feeding twice a week, enclosure maintenance)
- Routine and annual health monitoring
- Observation and documentation of breeding behaviour
- Bi-annual aviary maintenance for infrastructure upkeep

Daily biological management is overseen by BNHS, while the Madhya Pradesh Forest Department (Van Vihar National Park) provides administrative support and funding.

### Objectives of the VCBC

- To establish a founder population of 25 breeding pairs of each of the two Critically Endangered vulture species.
- To produce a minimum of 200 individuals of each species in captivity, for reintroduction into the wild.
- To act as an insurance population until the threats in the wild – especially NSAID contamination – are fully mitigated.

The VCBC, Bhopal, stands as a landmark in India's conservation history, combining scientific breeding protocols, habitat management, outreach, and inter-agency collaboration to secure the future of India's vultures.

### PROJECT HIGHLIGHTS 2024–2025

#### 1. Number of birds

A total of 93 vultures were housed at the centre during 2024–2025, comprising 56 Long-billed Vultures and 37 White-rumped Vultures. This included 6 Long-billed Vulture chicks and 1 White-rumped Vulture chick born in 2024–2025.

#### 2. Breeding at the Centre

During 2024–25, seven nestlings (6 LBV and 1 WRV) hatched successfully. All seven chicks are healthy and developing well.

#### 3. Artificial incubation at the Centre

In 2024–25, six eggs 3 WRV and 3 LBV were selected for artificial incubation. Of these, two Long-billed Vulture eggs hatched successfully, while all three White-rumped Vulture failed to hatch (Fig. 2).



**A successfully hatched Long-billed Vulture egg**

#### 4. Mortality at the Centre

During 2024–2025, a total of seven mortalities were recorded of which four adult and one juvenile White-rumped Vulture and one Long-billed vulture and, a six-day old Long-billed Vulture chick.

#### 5. Infrastructure at the Centre

The centre is equipped with three colony aviaries (100x40x20'), two holding aviaries, one hospital aviary, one nursery aviary, and, one quarantine aviary. The aviaries are designed to provide vultures with near-natural conditions and exposure to their surroundings. Additional facilities include a CCTV monitoring room-cum-office, haematology laboratory, incubation centre (32 × 14 × 12 ft), and staff accommodation.



All infrastructure was developed by the Madhya Pradesh Forest Department with funding from the Central Zoo Authority. The new incubation centre will facilitate artificial incubation and double clutching, both vital for improving vulture breeding productivity.

## 6. Advocacy and Awareness Programmes

### **International Vulture Awareness Day 2024** **Van Vihar National Park & Zoo, Bhopal, in collaboration with** **Bombay Natural History Society, VCBC, Bhopal**

International Vulture Awareness Day (IVAD) was celebrated on 7 September 2024 at Van Vihar National Park & Zoo, Bhopal. The annual global event aimed to highlight the ecological importance of vultures and the urgent need for their conservation.



A workshop for Gaushala representatives under MNREGA (CM Gauseva Yojana), focusing on the harmful impact of NSAIDs (e.g., Diclofenac) and promoting safer alternatives like Meloxicam. The workshop was addressed by key officials and experts, including Shri Avdhesh Meena, I.F.S. (Field Director, Van Vihar), Dr. Arockianathan Samson and Ms. Zainab Zaheer Khan (BNHS), Dr. Ajay Ramteke (Deputy Director, Veterinary Services), and Shri Mohammed Khaliq (Bhopal Birds).

Educational sessions were complemented by interactive activities including a drawing and painting competition for school students, a vulture-themed 'Snake and Ladder' game, and an on-the-spot quiz for tourists. These events engaged diverse age groups, increasing awareness of the threats vultures face and the importance of conservation measures.

Winners received certificates and mementos from the Field Director. The programme effectively blended education, entertainment, and advocacy, leaving a strong impact on public awareness of vulture conservation in Central India.



**Workshop on Vulture Conservation (Gaushala Representatives)**



**Prize winners receiving certificates and mementos from Field Director,  
Van Vihar National Park and Zoo, Bhopal**



**On the Spot Quiz programme with tourists at the  
Snake Park, Van Vihar National Park & Zoo**



**Vulture Conservation based Snake & Ladder game  
conducted at Snake Park, Van Vihar National Park & Zoo**

### **Vulture Conservation Awareness Programme – Wildlife Week Celebration 2024**

As part of the 70th Wildlife Week celebrations (October 2–8, 2024), the Bombay Natural History Society (BNHS) – Vulture Conservation Breeding Centre, in collaboration with Van Vihar National Park & Zoo, Bhopal, Madhya Pradesh, successfully organised a Vulture Conservation Awareness Programme to highlight the importance of protecting India's critically endangered vulture species.



This year's Wildlife Week theme, 'Safeguarding Our Natural Heritage', emphasized collective responsibility in preserving biodiversity. Special attention was given on involving youth and the general public in conservation awareness.

On October 6, 2024, a key awareness event was held at the Snake Park area in Van Vihar National Park. It included an informative stall, online quiz, and direct public engagement activities, attracting 800–1000 visitors. The visitors received brochures and pamphlets detailing vultures' ecological role, the threats they face (e.g., habitat loss, poisoning, and diclofenac use), and ongoing conservation efforts. Interactive discussions helped deepen public understanding of vultures as nature's essential clean-up crew.

Parallely, a Painting and Drawing Competition was organized for school students, with themes tailored across three grade-levels:

- Vultures in Their Element (Grades 6–8)
- Vulture Guardians: Protecting Nature's Clean-Up Crew (Grades 9–10)
- Vultures in Harmony: Biodiversity and Conservation (Grades 11–12)

55 students from three schools participated. The top 10 entries were awarded by the Honourable Governor of Madhya Pradesh during the Wildlife Week closing ceremony (October 7, 2024).

The programme successfully raised awareness among youth, tourists, and the public, fostering community-driven support for vulture conservation.



**Prize winners were awarded with a certificate and memento at the WWC-2024**

## **7. Rescue and Release of Eurasian Griffon (*Gyps fulvus*)**

### **BNHS–Vulture Conservation Breeding Centre, Bhopal**

A Eurasian Griffon was rescued on 8 December 2024 from Nagaud Range, Satna, and treated at Mukundpur Zoo. After an unsuccessful release attempt, the bird was re-rescued and transferred to BNHS–VCBC, Bhopal, on 29 January 2025. The bird was weak but showed no injuries and weighed 6.9 kg. It was housed alone initially, then shifted with Long-billed Vultures and fed goat meat with supplements (Vimeral and Liv 52).

Following full recovery, the bird was tagged with a GPS-GSM device aid by WWF-India. After an initial technical issue, a second tag was successfully attached on 29th March 2025. The same day, the vulture was released near Halali Dam, Raisen, in a vulture-rich area with an active carcass dump and gaushala. The release was attended by senior forest officials, including the PCCF (HoFF) and PCCF (Wildlife), marking a successful rehabilitation and release effort.



## 8. Vulture Release Programme in Madhya Pradesh

### Assessment of NSAID Availability Around Vulture Release Zones in Bhopal and Raisen, Madhya Pradesh

A survey was carried out within a 50 km radius of proposed vulture release zones in Bhopal and Raisen to: assess the availability and distribution of NSAIDs, evaluate the enforcement of bans on vulture-toxic drugs, Record the prevalence of vulture-safe alternatives, and provide actionable recommendations for strengthening conservation efforts.

#### Key Findings

- **Veterinary Drug Availability:** Out of 111 pharmacies surveyed, 92% provided veterinary medicines. Bolus form was most common (85%), while only 15% offered injectable forms.
- **Toxic NSAIDs:** Nimesulide, a known vulture-toxic drug, was the most widely available (found in 36 pharmacies), followed by other toxic NSAIDs like Aceclofenac and Flunixin. Human-use Diclofenac was found in only one pharmacy, indicating some regulatory compliance.



- **Safe NSAIDs:** Meloxicam, a proven vulture-safe drug, was available in 30 pharmacies. Tolfenamic Acid, another safe alternative, was also found but with limited awareness among users.
- **Drug Cost Comparison:** Vulture-toxic NSAIDs (e.g., Flunixin – ₹ 155) were more expensive than vulture-safe options like Meloxicam (₹ 73) and Tolfenamic Acid (₹ 80), making safer drugs more cost-effective.
- **Gaushala Practices:** Among 14 surveyed gaushalas, 8 were government-run. Cattle carcasses were commonly disposed of in open areas, providing foraging opportunities for vultures. While Meloxicam was predominantly used, occasional use of untested or toxic NSAIDs was reported.
- **Awareness Levels:** Awareness about Diclofenac's impact was relatively high among gaushala representatives. However, knowledge of Tolfenamic Acid as a safe alternative was notably low.

## Recommendations

1. **Ban Enforcement:** Strictly implement the ban on Nimesulide and prevent misuse of Diclofenac and Aceclofenac in veterinary practice.
2. **Promote Safe Alternatives:** Encourage the widespread adoption of Meloxicam and Tolfenamic Acid through subsidies and veterinarian engagement.
3. **Awareness Campaigns:** Conduct targeted outreach for pharmacists, veterinarians, and livestock handlers on the ecological role of vultures and safe drug use.
4. **Monitoring and Evaluation:** Establish regular monitoring systems to track drug availability and compliance with regulations.

## Conclusion

The study highlights the persistent threat posed by vulture-toxic NSAIDs, particularly Nimesulide, in areas near proposed vulture release sites. Ensuring stronger regulatory enforcement, promoting safer alternatives, and raising awareness are essential steps toward securing the long-term survival of critically endangered vultures in Central India.

## Way ahead

1. Breed at least 15 individuals of two vulture species annually.
2. Enhance breeding productivity through artificial incubation and double clutching.
3. Release five White-rumped Vultures and five Long-billed Vultures at Halali Dam, Raisen, and initiate Vulture Safe Zone (VSZ) work within a 100 km radius of the release site.
4. Rescue injured wild vultures and incorporate them into the captive breeding programme if fit.
5. Continue advocacy to educate the public, decision-makers, and stakeholders on the dangers of Diclofenac and other toxic NSAIDs, and promote awareness of safe alternatives.

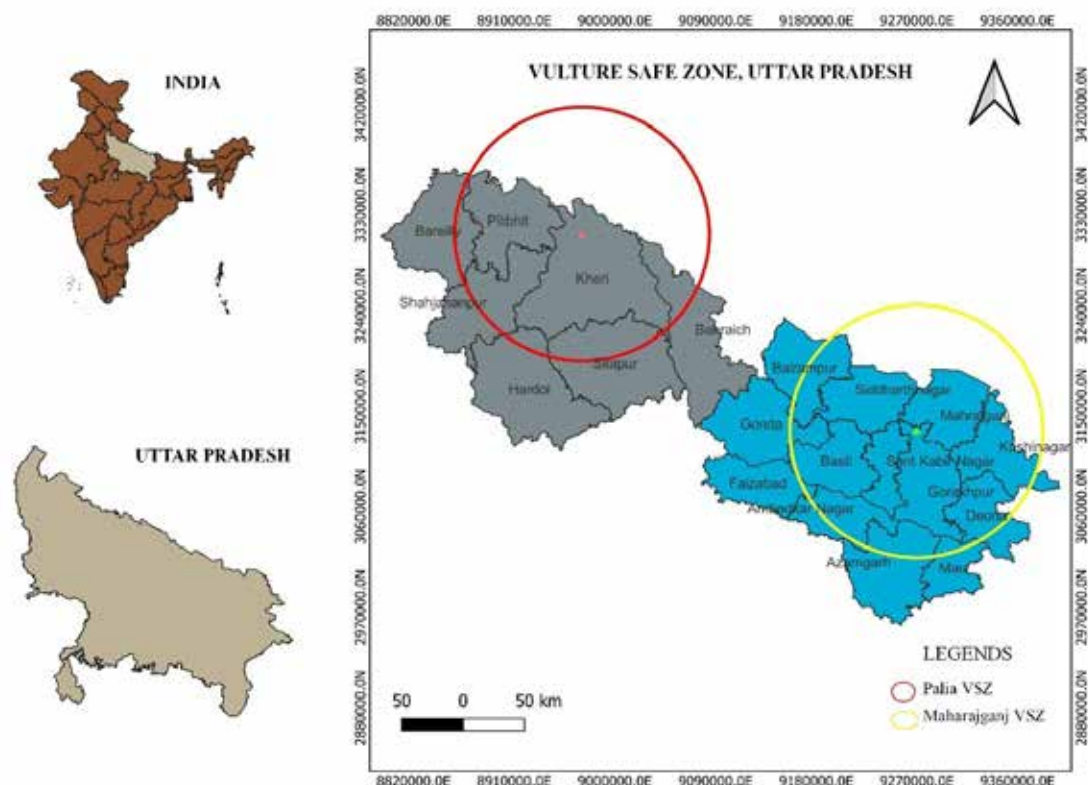
# Advocacy and Awareness Efforts in VSZ U.P. for saving the vultures from possible extinction

**Team:** Alka Dubey, Vulture Advocacy Officer

## Introduction

Currently, India hosts an estimated 20,000–30,000 resident Gyps vultures in the wild. The Vulture Recovery Plan recommends that every state should establish at least one Vulture Safe Zone (VSZ). In Uttar Pradesh, two VSZs have been designated.

## VULTURE SAFE ZONE, UTTAR PRADESH



Map showing the Vulture Safe Zones in Uttar Pradesh

### There are two vulture safe zones in Uttar Pradesh:

- Zone 1:** Comprising Kheri, Bahraich, Sitapur, Hardoi, Shahjhanpur, Bareilly, and Pilibhit districts, with Palia Kalan as the center point.
- Zone 2:** Comprises of Maharajganj, Gorakhpur, Balrampur, Gonda, Azamgarh, Ayodhya, Sulthapur, Basti Nagar, Sant Kabir, Ambedkar Nagar, Jaunpur, Mau, Ghazipur, Ballia, Deoria, Siddharth Nagar, and Kushi Nagar districts, with Maharajganj as the center point.

### Summary

In-situ conservation requires strong support from diverse stakeholder groups. Since vulture populations were primarily impacted by the veterinary use of Diclofenac, advocacy and awareness initiatives were essential to sensitize those directly or indirectly linked to the issue—drug sellers, veterinarians, decision-makers, livestock owners, and the general public.

During the year 2024–25, a 193 advocacy meetings, including one-to-one meetings and group-level discussions, were conducted with senior officials of various departments, including Forest Department, Animal Husbandry Department, Food and Drugs Administration, and District Administration.

Additionally, 371 follow-ups via phone and online meetings were made to keep officials updated and engaged. These efforts resulted in advisories, directives, and cooperation for effective Diclofenac ban implementation were issued by the officials to their subordinates.

A total of 32 online awareness programmes were conducted, directly sensitizing about 10,000 people in the process. 10 offline awareness programmes were conducted at schools and grassroots level, sensitizing over 3,000 people. The efforts had a notable impact, generating public concern and support for vulture conservation. During 2024–25, a total of 37 articles on vulture conservation were published in widely circulated local and state-level newspapers.

The project also had transboundary significance: the VSZ team monitored White-rumped Vultures released in Nepal that later moved into Uttar Pradesh, and shared movement data with both the Forest Dept, U.P. and Nepalese authorities. As recognition of these efforts, the VSZ–UP team was awarded by the Chief Minister of Uttar Pradesh for outstanding contributions to vulture conservation.



**Chief Minister of Uttar Pradesh awarding BNHS VSZ-UP team for their excellent work on vulture conservation in the state**

## Bringing back the apex scavengers: reintroducing Critically Endangered Vultures in select Tiger Reserves of Maharashtra, India

**Funding agency:** Maharashtra Forest Department

**Duration** : 3 years

**Principal Investigator** : Kishor Rithe

**Team** : Kazveen Umrigar  
Hemant Bajpai  
Manan Singh Mahadev  
Bhanu Pratap Singh  
Bhaskar Das  
Jonathan D'costa  
Lakhan Basudev  
Kasim Mohammed

### Introduction

Since the catastrophic population crash of Gyps vultures in the Indian subcontinent during the mid-1990s, the Bombay Natural History Society (BNHS) has been working to address the causes of decline and to augment vulture populations through captive breeding. Over the last two decades, vulture conservation breeding centres have successfully bred more than 400 birds in captivity. Due to the efforts of BNHS and partner organizations, the use of vulture-toxic drugs has also shown a significant decline.

A proposal was submitted to the Government of India and the Government of Maharashtra to release captive-bred vultures into the wild, particularly in areas that had experienced severe population crashes or local extinctions, such as Melghat Tiger Reserve (MTR), Tadoba Andhari Tiger Reserve (TATR), and Pench Tiger Reserve (PTR). These TRs provide relatively high levels of protection, are largely free from human settlements, and can be considered vulture-safe since the risk of vultures feeding on carcasses contaminated with toxic NSAIDs is low. It was proposed to reintroduce captive-bred White-rumped Vultures (*Gyps bengalensis*) in TATR and Indian Vultures (*Gyps indicus*) in PTR, sourced from the Jatayu Conservation Breeding Centre, Pinjore, Haryana. After release and post-release monitoring, additional species were planned for reintroduction in subsequent years, with Indian Vultures also slated for release in MTR.

The aim of this pioneering and ambitious project is to restore vultures – apex scavengers – to Maharashtra's prime tiger habitats. If implemented successfully, it could pave the way for the reintroduction of captive-bred vultures across India, aiding the recovery of wild populations and reinstating their critical ecological role.

## Objectives

**Goal:** Reintroducing vultures as the apex scavengers in areas where they suffered severe population decline and/or local extinction

## Project objectives

- Assess food availability and food-safety for vultures in Tadoba, Pench, and Melghat Tiger Reserves of Maharashtra.
- Train and build capacity of Forest staff on vulture care and health monitoring in pre-release aviary.
- Reintroduce captive-bred vultures in Tadoba, Pench and Melghat Tiger Reserves.
- Conduct long-term monitoring of survival rate, foraging and breeding behaviour of reintroduced vultures through GPS tagging.
- Establish vulture safe policy and practices in the TRs and adjoining area to ensure long-term safety of vultures in the region.

## Activities carried out:

### 1) Transfer of birds from Pinjore to Pench Tiger Reserves and Tadoba-Andhari Tiger Reserves

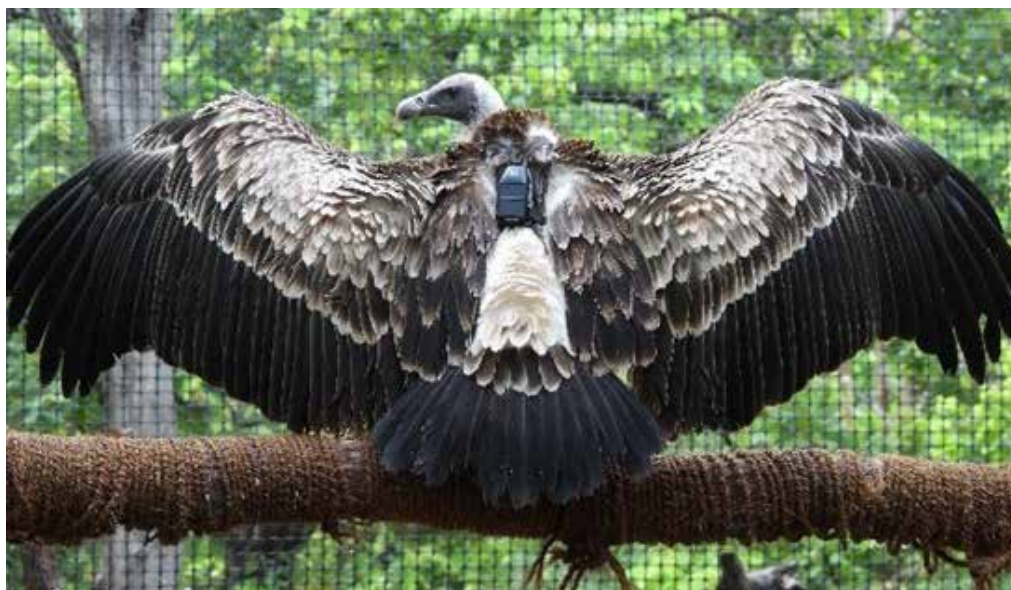
On 21 January 2024, ten White-rumped Vultures and ten Long-billed Vultures were transferred from the VCBC, Pinjore, to TATR and PTR respectively. This coincided with the launch of the Rajyastariya Jatayu Samvardhan Prakaalp (State-level Vulture Conservation Project) by the Honourable Minister of Forests, Cultural Affairs, and Fisheries, Government of Maharashtra.



**White-rumped Vultures being released in the aviary at TATR by the Hon. Minister of Forests, Cultural Affairs and Fisheries and President BNHS**



Birds over two years of age were selected and housed in pre-release aviaries for acclimatization. Within two months, they adapted to eating carcasses with skin and showed rewilding behaviours. In July 2024, the birds were fitted with GSM-GPS tags using the backpack harness method. Health checks, including blood tests, confirmed they were fit for release. The birds were released in August 2024 from their respective aviaries.



**Tagged vulture, after being released back into the aviary at PTR**

Post-release observations showed varied responses: while some birds stayed near the aviary, others dispersed to explore their surroundings. From the total number of twenty birds that were released, six birds remained untraceable as the GSM Tags stopped providing their location signals. Unfortunately, nine birds were found dead: 4 likely from disease, one died from electrocution and four birds possibly from dehydration and malnourishment. Precise causes could not be determined due to advanced carcass decomposition. Two birds successfully integrated with wild vulture populations in PTR and learned to forage independently. One white-rumped vulture was released in Achanakmar Tiger reserve after being rehabilitated in Naya Raipur. Two birds were recaptured and brought back into captivity as they were not able to survive in the wild and ended up in human settlements or resorts.

## **2) Capacity building of Forest Department staff**

The BNHS team have trained the staff of the Forest department at TATR and PTR on vulture care and health monitoring in pre-release aviary. The field staff are trained in husbandry practices at the pre-release aviary and in maintaining records on feeding and behavioural of the birds. They were shown how to capture and restrain the birds.

The team trained the field staff of the two tiger reserves in vulture identification and nest monitoring. Training of frontline officers of the Kolsa and Karwa ranges at TATR focussed on vulture monitoring and ensuring a safe habitat. They were taught how to conduct pharmacy surveys and to identify possible dumpsites in their respective beats and villages.

## **3) Establishing vulture safe zones and assessing food availability and food safety for vultures**

Vulture safe zones (VSZs) were delineated within a 100 km radius around the pre-release aviaries in TATR and PTR. Activities in these zones included vulture population monitoring, pharmacy surveys, and advocacy/awareness programmes with local stakeholders.

**The VSZs cover:**

- In Maharashtra: Buldhana, Akola, Nagpur, Wardha, Amravati, Washim, Chandrapur, Gadchiroli, Bhandara, Gondia, and Yavatmal districts.
- In Madhya Pradesh: Burhanpur, Khandwa, Betul, Harda, Seoni, and Chhindwara districts.

Vulture populations were monitored in both zones and No consistent population trend could be established during the study period, indicating the need for long-term monitoring. Vultures were only recorded during the road transects of August 2024, December 2024 and January 2025.

During the nest surveys conducted in Pench from October 2024 to March 2025, a total of eight nests were recorded.

In June 2024, a carcass dump was identified in the Vulture Release Zone (VRZ) of PTR, on the outskirts of Bhandara, Maharashtra. The site contained eight carcasses (six cows and one bull). Monthly surveys were conducted at the site until March 2025. However, no additional carcasses were found, and no vultures, dogs, or other scavengers were recorded at the site.

In VRZ TATR, no carcass dump was identified for regular monitoring during the reporting period.

Food is a critical resource for the survival of any living organism. Therefore, while working on the conservation of species, it is important to regularly monitor the availability of food, and to check whether it is sufficient to sustain the existing population of the species in the region. Vultures, being obligate scavengers, are completely dependent on carrion for their food.

A total of 90 villages located in the buffer areas of TATR were surveyed to determine carcass disposal methods.

**Findings:**

- Burial was the most common method (practiced in 19 villages).
- Open dumping was practiced in 12 villages.
- Burial along with open dumping was practiced in 18 villages.

Information provided by villagers about cattle carcass disposal practices in VRZ TATR

A total of 45 villages located within the buffer zone of Pench Tiger Reserve in Maharashtra were surveyed to determine the cattle carcass disposal methods.

**Findings:**

- Burial was the most common method (34 villages). Many villages followed this practice on the advice of the Forest Department, while others preferred it to avoid attracting carnivores.
- Open dumping was practiced in 11 villages, but only rarely due to low cattle mortality.
- None of the villages reported selling infirm or dead cattle to slaughterhouses.
- Covert pharmacy surveys revealed that the vulture population remains at risk from NSAID poisoning. While the prevalence of banned vulture-toxic drugs such as diclofenac, ketoprofen, and aceclofenac was low, nimesulide (toxic to vultures) and piroxicam (toxicity unknown) were widely available, raising serious concerns.



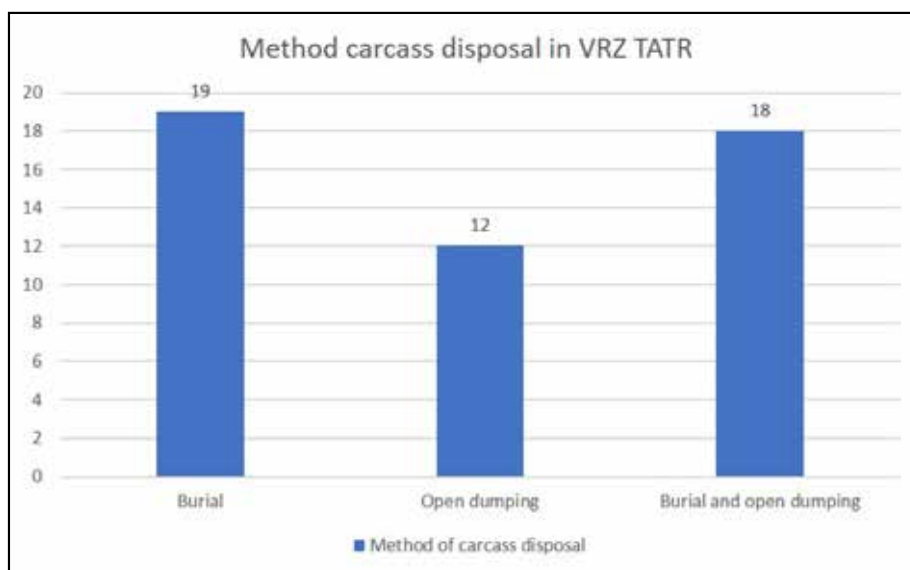
**Forest staff maintaining records of vulture behaviour**

## Awareness and advocacy programme

State-level webinars were conducted with officers of the Forest Department and Animal Husbandry Department of Maharashtra. The Food and Drug Administration (FDA), Maharashtra held meetings with chemists and druggists in Chandrapur, Ramtek, and Nagpur (January–February 2025), informing participants about the ban on vulture-toxic drugs.

## Significant Observations of the project

- Out of 20 vultures released in the Vulture Release Zones, two successfully integrated with wild populations. One travelled across five states, covering more than 4,000 km after release from TATR.
- A total of 39 awareness programmes and two workshops were conducted for stakeholders including forest staff, veterinary staff, villagers, and schools.
- A professional working relationship was established with the government and non-governmental organizations in the Vulture Release Zones.
- Approximately 3,726 people were reached through targeted awareness and advocacy initiatives.



**Information provided by villagers about cattle carcass disposal practices in VRZ TATR**



**Meeting for Druggists and Chemists conducted by the Food and Drug Administration at Ramtek**

- A workshop for veterinary officers in Vidarbha was held in February 2024 with support from the Maharashtra Forest Department at Chandrapur.
- Awareness programmes were also organized on occasions such as World Wildlife Day and International Vulture Awareness Day.
- All seven species of vultures recorded in the Central Indian Landscape were documented in Vidarbha during



the project. These included three resident species, three winter visitors, and one species (Cinereous Vulture *Aegypius monachus*) with both resident and wintering populations. Notably, the first photographic record of the Cinereous Vulture in Pench Tiger Reserve was made by the project team in January 2025, and a note was published in the Journal of the Bombay Natural History Society (March 2025).

- A nesting colony of White-rumped Vultures was identified and monitored in PTR from October 2024 to March 2025. Of the eight nests recorded, seven remained active.
- Food availability estimates within VRZs (TATR, PTR, and MTR) indicated approximately 6,096 kg of meat (excluding hide and bones) was available during the study period. Since one vulture requires about 90–100 kg of meat annually, this was sufficient to sustain a population of about 61 vultures.
- Surveys of gaushalas and villages around TATR, PTR and MTR confirmed burial as the dominant carcass disposal method.
- Covert pharmacy surveys confirmed that, although banned drugs like diclofenac, ketoprofen and aceclofenac were less prevalent, the widespread use of nimesulide and piroxicam (a drug of unknown toxicity) remains a major threat to vultures.

### Future plans

Revise existing strategies and refine reintroduction protocols to improve the success rate of captive-bred vultures adapting to the wild.

## Bird Ringing and Monitoring of Migratory birds along the Central Asian Flyway & Development of State CAF Action Plan, and Promotion of associated Extension Education & Outreach activities in the State of Bihar

**Location:** Six Selected Study sites of Bihar: Vikramshila Gangetic Dolphin Sanctuary (VGDS), Nagi-Nakti Dam Bird Sanctuary, Kanwar Lake, Baraila Lake, Kusheshwar Asthan, and Gogabeel Community Reserve.

**Funding Agency:** Department of Environment, Forest and Climate Change (DEF&CC), Bihar

**Duration:** 5 years (2020–2025)

### Team:

Dr P. Sathiyaselvam

Ms Khushboo Rani

Ms Vertika Patel

Mr Abhay Rai

Mr Abilash R.

Mr Susmit Bole

### Summary

In the fifth year of the project, field activities were conducted for eight months. Monthly bird and habitat monitoring, bird ringing, and awareness programmes were undertaken, along with monitoring of threats to habitats and birds. The team also monitored sandbar-nesting riverine birds and provided technical support to the Forest Department for organizing the Asian Waterbird Census. Additional technical support was extended for the Bhagalpur Bird Atlas and to the Bihar State Biodiversity Board (BSBB) for training workshops and development of educational materials.

**Bird Monitoring and Habitat Assessment:** Bird monitoring and wetland habitat assessment were conducted in six selected sites and their satellite wetlands across Bihar.



**A flock of Bar-headed Geese *Anser indicus* recorded in Nagi Dam Bird Sanctuary, Janui, Bihar**

**Bird ringing:** Bird ringing was carried out in five sites namely, Sundarvan, VGDS, Kanwar Lake, Nagi-Nakti Dam Bird Sanctuary, and Gogabeel. A total of 1,105 individuals of 60 species were ringed. Out of which, two Bar-headed Geese *Anser indicus* were GPS-GSM tagged in Nagi Dam Bird Sanctuary. A total of 77 individuals of 19 species were recaptured/recovered.

**Community and School Awareness Program:** Nine community awareness programmes were organised, engaging 190 participants. Under the education and awareness initiative, nine schools were covered, reaching 548 students.

**Riverine Breeding Bird Survey:** 866 active nests of seven waterbirds species were documented across 23 sand-bars in VGDS, Bhagalpur. 287 nests of three land bird species breeding along the riverbank were also recorded. Two capacity-building programmes on riverine breeding bird monitoring were conducted for frontline staff in the Bhagalpur and Jamui Forest Divisions, with 59 participants in total.

**Asian Waterbird Census (2024 & 2025):** The Asian Waterbird Census (AWC) 2025 was conducted in collaboration with the Department of Forest, Environment, and Climate Change (DoFECC), covering 115 wetlands across 31 districts of Bihar. A comprehensive report on AWC 2024 was also prepared and released.

**Bhagalpur Bird Atlas, 2025:** In collaboration with the Bhagalpur Forest Division, the Bhagalpur Bird Atlas survey recorded 105 species during the non-migratory season. A total of 37 participants took part in this systematic survey.

**Participation in Bihar State Biodiversity Board Programmes:** The team provided technical support for nine training workshops organized by the Bihar State Biodiversity Board across five forest divisions (Gaya, Aurangabad, Jamui, Bhagalpur, and Banka), reaching 690 participants.

**Way ahead:** Strengthening and expansion of the Bird Ringing and Monitoring Station, Bhagalpur, to cover the entire state. Strengthening scientific monitoring and conservation efforts.

Continuing youth and community awareness programmes. Enhancing bird migration studies based on the database generated, to gain deeper insights into movement patterns along the Central Asian Flyway (CAF). Conducting targeted training programmes for frontline staff and local stakeholders. Continuing riverine breeding bird monitoring and providing data-driven recommendations for effective wetland management in Bihar.

## Research, monitoring and conservation of the Vulnerable Sarus Cranes in Vidarbha region, Maharashtra

**Locations:** Gondia, Bhandara and Chandrapur districts

**Funding Agency:** Maharashtra Forest Department

**Duration:** Three years

**Team:**

Dr P. Sathiyaselvam, Mr Barath, Mr Mukund Dhurve and

Mr Ramesware Neware

### Status and Summary

Fieldwork was conducted from November 2023 across three districts of Maharashtra. Surveys covered 72 wetlands and paddy fields, spanning over 6,500 hectares. Regular surveys were conducted to assess population status, nest locations, breeding success, territory quality, and population dynamics of the Sarus Crane. 32 individuals were recorded in Gondia and Bhandara districts. During the monsoon survey (August–October 2024), seven nests were located in Gondia District. One adult and two sub-adults were ringed/tagged to study dispersal, habitat use, and movement patterns.

121 species (waterbirds and wetland-dependent birds) were documented across the three districts in other Associated Bird Surveys. Threat Assessments were carried out at nesting, foraging, and roosting sites. Public Awareness, educational outreach and awareness programmes were conducted in selected villages.



**Sarus Crane *Grus antigone* found near Shivani wetland in Gondia district, Maharashtra**

Reports submitted: One progress report, one annual report and one tagging/ringing.

**Way ahead:**

- Conduct Sarus Mitra meetings for conservation planning in Vidarbha.
- Implement Sarus Crane habitat management and wetland restoration in Gondia, Bhandara, and Chandrapur districts.
- Promote Sarus Crane-friendly farming practices in key villages.



## Elucidating the status of migratory waterbirds in ornithologically important wetlands in Maharashtra; Central Asian Flyway perspective

**Locations:** Nandur-Madhmeshwar Wildlife Sanctuary, Jayakwadi Bird Sanctuary, Ujani reservoir, Gangapur wetland, Hatnur reservoir and Visapur dam.

**Funding Agency:** Mangrove Foundation, Government of Maharashtra

**Duration:** 5 years

**Team:**

Dr P. Sathiyaselvam, Abhinav Nair,  
Nikhil Ghadigaonkar, Mohijit Podder and Ganesh Pallela,

### Status

**Training Workshop:** Conducted at Gangapur Forest Nursery (12–13 December 2024) in collaboration with BNHS–EIACP. 30 staff members, including the ACF and Range Forest Officers of Nashik West Division, participated. Training focused on bird monitoring and ringing.

**Asian Waterbird Census 2025:** Conducted with the Maharashtra Forest Department across five wetlands: Nandur-Madhmeshwar WLS (January 7), Gangapur Reservoir (January 10), Jayakwadi Bird Sanctuary (January 19), Ujani Reservoir (January 23), and Hatnur Reservoir (January 25).

Provided inputs on Nile Tilapia eradication and the impact of floating solar panels at the Jayakwadi stakeholder meeting. A committee was appointed to address key issues.

Identified and mapped congregation points and breeding islands at Jayakwadi were mapped to assess the impact of floating solar panels.

Excessive growth of Typha reeds was identified as a threat to waterbird habitats in the Nandur-Madhmeshwar Wetland. Recommendations for removal were submitted to the Forest Department.



Training workshop with Nashik Forest Department





**Asian Waterbird Census at Nandur-Madhmeshwar**



**Mapping of Islands**

## Building a surveillance model for detecting zoonotic spill-over in increased bird-human interaction setting using the One Health approach: A study at selected bird sanctuaries and wetlands

**Team:** Dr P. Sathiyaselvam, Mr S. Sivakumar, Dr Himadri Sekhar Mondal  
Mr Abhinav Nair, Mr Nikhil Ghadigaonkar, Mr Mohijit Podder and Mr Ganesh Pallela.

**Locations:** Kitam Bird Sanctuary, Khecheopalri Lake, Fambong Lho Wildlife Sanctuary, Pangolakha Wildlife Sanctuary including Bedang Tso (Elephant Lake/ Phedang Tso lake), Sidkeong Tulku Bird Park and Himalayan Zoological Park in Sikkim and Bhigwan, Mayani Bird Conservation Reserve, Veer Dam and Visapur Dam from Maharashtra

**Funding Agency:** Indian Council of Medical Research (ICMR), New Delhi

**Duration:** Three years

### Status and Summary

Initial funds for the project received in February 2025. Letters sent to respective State Forest, Animal Husbandry, and Home Departments seeking collaboration. Sikkim Forest Department issued permission to conduct research at study sites. Project PI (Dr. Himadri) attended the ICMR Workshop at Sikkim Zoological Garden, organized by STNM, Sikkim, and Ila Foundation, Pune. Vendors in Sikkim, Siliguri, and Kolkata were contacted for procurement of instruments. Two quotations from Kolkata vendors are under process. In Maharashtra, sample collection permissions are awaited. Vendors have been contacted for materials.

### Way ahead

Secure all remaining permits. Procure project-specific instruments through competitive quotations. Conduct site surveys to identify key trapping and ringing sites. Carry out ringing and sample collection, followed by laboratory analysis. Establish and operationalize the full research setup.

## BNHS BIRD MIGRATION STUDY CENTRE, POINT CALIMERE, TAMIL NADU

**Team:** Dr P. Sathiyaselvam, Mr S. Sivakumar, Mr Paul Antony B. and Ms Rose Francis

Established in 2008, the Bird Migration Study Centre (BMSC) plays a crucial role in conducting ecological studies and delivering training programmes for diverse groups. From July 2024 to March 2025, the Centre organized extensive training programmes, hosting 401 officer trainees from various forestry cadres, including Assistant Conservator of Forests (ACF) trainees, Range Officer trainees, and in-service foresters. These participants represented renowned institutions across South India, such as the Central Academy for State Forest Service (CASFOS) and the Tamil Nadu Forest Academy (TNFA).

Visit of Forest Guard trainees from Tamil Nadu Forestry College, Vaigai Dam to BMSC on February 10, 2025

In addition to forestry professionals, the Centre engaged with 217 students (40 school students and 177 college students) from institutions across Tamil Nadu.

For the academic year 2024–2025, seven batches of the Basic Course in Field Ornithology and Bird Migration Studies were conducted between November and January. A total of 96 participants attended these three-day capsule courses (Table 2), with an almost equal gender split (51% male, 49% female). The 2.5-day course introduced participants to bird identification, migration study techniques, counting methods, conservation issues, and provided field exposure, including practical sessions on bird ringing.





**Visit of Forest Guard trainees from Tamil Nadu Forestry College, Vaigai Dam to BMSC on February 10, 2025**



**Participants observing waterbirds during one of the basic ornithology courses**

### **Others Assignments**

- A bird mortality and diversity survey was conducted on 10–11 July 2024 at aquafarms in Kallimedu and Thalainayar. The survey recorded net types used, bird mortality due to netting, and the diversity of bird species at the sites.
- On 1 February 2025, the Principal Chief Conservator of Forests, Tamil Nadu, granted permission for bird ringing for 2025–2026. As of March 2025, 101 individuals had been ringed, including 78 individuals of nine shorebird species and 23 individuals of 11 terrestrial species.
- The BNHS team participated in the Asian Waterbird Census (AWC) at Coringa Wildlife Sanctuary, Kakinada, Andhra Pradesh, on 4–5 January 2025.
- The BMSC conducted a week-long training programme for four in-service Forest Guards from the Bhagalpur Division, Bihar, between 27 February and 5 March 2025. Senior officials, including Shri Sudhir Kumar Singh,

IFS (RCCF, Bhagalpur Circle, Bihar), and Sushri Sweta Kumari, BFS (DFO, Bhagalpur Division, Bihar), visited the centre on 28 February and 1 March 2025.

- The team assisted the local forest department in the annual synchronized state-wise bird census in March 2025.
- Of six proposals developed, two received funding support:
- Building a surveillance model for detecting zoonotic spillover in bird-human interaction settings using the One Health approach (ICMR).
- Establishing school bird clubs to create environmental awareness and cadre building (Buimerc India Foundation).
- The library book inventory was updated and digitised.
- An inventory of materials (furniture, electrical/electronic items, instruments, etc.) was prepared.
- A detailed action plan for centre maintenance was drafted and sent to the Head Office for further action.
- Minor repairs and construction were carried out to improve campsite facilities.
- Researchers contributed to the centralisation of bird ringing data, processing 1,788 files during this period.

### Way ahead

The Centre urgently requires maintenance, including painting, minor cement work, protective sheds, and fencing, to safeguard the buildings and facilities. Camping materials, such as tents, are deteriorating and will need replacement soon. A steady flow of funds is essential for both maintenance and staff support at Point Calimere.

Looking ahead, the team is: developing proposals to secure grant support for maintenance and programme needs, planning to conduct basic ornithology courses during the coming season, preparing additional proposals to attract funding, and re-engaging with past supporters to seek their continued support.

## Pulicat Bird Festival – 2025

### Project: Conducting symposium on Biodiversity and Wetland Conservation and The Corporate Social Responsibility (CSR) Conclave

**Location:** Sri City, Krea University, Pulicat Lake, Andhra Pradesh.

**Funding Agency:** Government of Andhra Pradesh

**Team:** Dr P. Sathiyaselvam, Dr Himadri Sekhar Mondal, Dr Reshma Pitale, Ms Khushboo Rani,  
Mr Rushikesh Pawar and Mr S. Sivakumar

### Summary of the Symposium on Biodiversity and Wetland Conservation

The Andhra Pradesh Forest Department organized a two-day National Symposium on Biodiversity and Wetland Conservation as part of the Flamingo Festival 2025 in Pulicat, with technical expertise provided by the Bombay Natural History Society (BNHS). The symposium was held on January 18–19, 2025, at the scenic Krea University, Sri City, with support from Sri City Operations and Krea University.

The symposium's primary focus was on the conservation of Pulicat Lake and its surrounding ecosystems, which hold immense ecological and socio-economic importance.

The event brought together a diverse group of participants, including scientists, researchers, NGOs, government officials, and community stakeholders, all collaborating on innovative strategies for sustainable resource management. A total of 52 scientists, professors, teachers, and subject matter experts participated – 49 in person and 3



online. In addition, 12 students from local academic institutions attended, along with a wider audience that joined via Krea University Zoom and the BNHS YouTube channel.



**Delegates from a variety of sectors attended the symposium**

Delegates represented a variety of sectors: 11 from government agencies (e.g., WII, ZSI, CIBA, NIOT), 22 from non-government organizations (e.g., WISA, WTI, BNHS, WWF), 9 from educational institutes (e.g., Tamil Nadu Fisheries University, Madras Christian College, Krea University), and 5 from government projects, private companies, and freelance backgrounds.

The two-day programme featured 36 presentations – 23 on the first day and 13 on the second day. The sessions covered a wide range of topics, including: Biodiversity, Ecosystem services, Hydrology, Potential and existing threats to Pulicat Lake, Community participation in conservation and Citizen science and community awareness. The symposium concluded with a collaborative discussion on strategies to sustainably address conservation concerns in Pulicat Lake and its surrounding ecosystems. The collective recommendations of participants are being compiled and will be published as symposium proceedings.



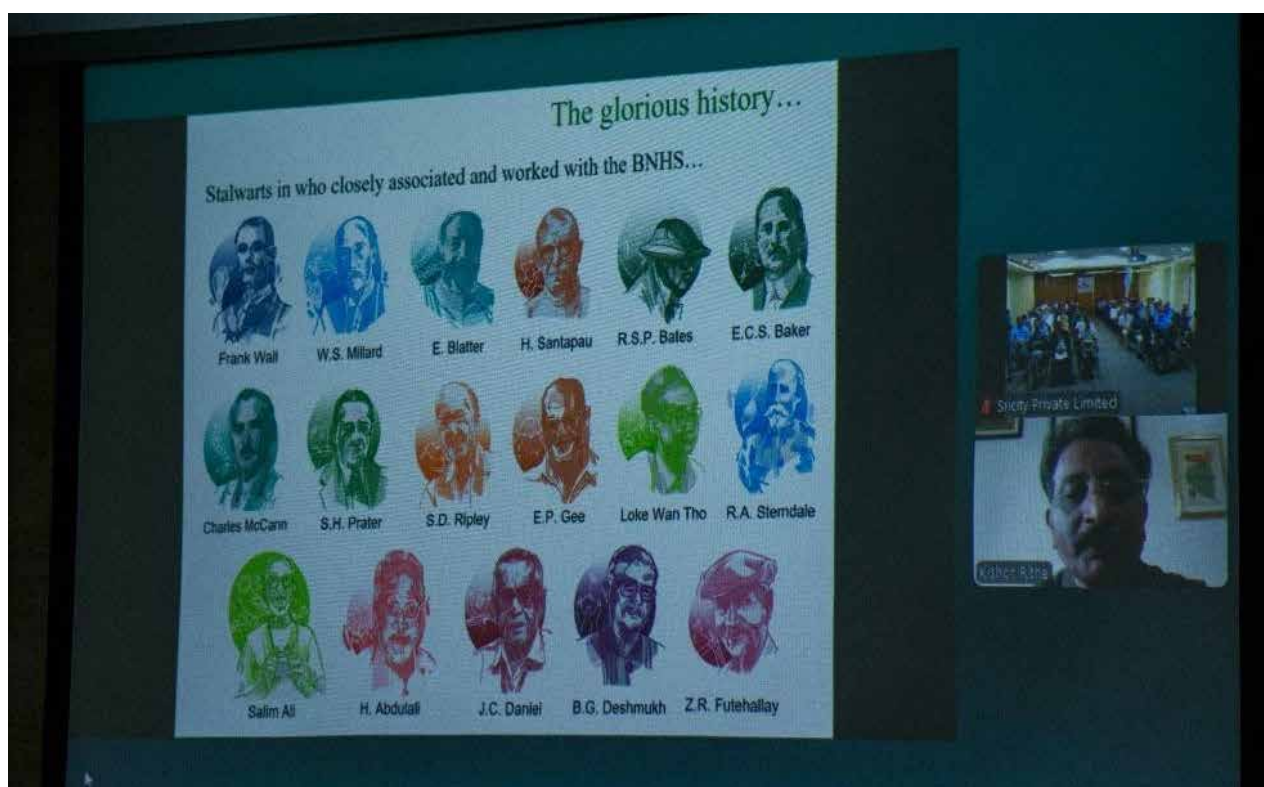
**Delegates at the Symposium**



## Summary of the Corporate Social Responsibility (CSR) Conclave

The Corporate Social Responsibility (CSR) Conclave was held on January 18, 2025, at the Business Centre, Sri City, Andhra Pradesh, as part of the Flamingo Festival 2025. The event was jointly organized by Sri City and the Andhra Pradesh Forest Department, with technical support from BNHS. The conclave was inaugurated by Mr. C. Selvam, IFS (Conservator of Forests, Andhra Pradesh), Mr. Reddy (Managing Director, Sri City), Mr. Srini (Chairman, Sri City), and Dr P. Sathiyaselvam (Deputy Director, BNHS). A total of 55 representatives from various companies and industries attended the event.

In his keynote address, Mr. Selvam highlighted that Andhra Pradesh is a model state for conservation, with 20% forest cover, 16 wildlife sanctuaries, and a significant increase in tiger populations in the Nagarjunasagar-Srisailem Tiger Reserve. These achievements demonstrate how effective conservation policies can yield tangible results. Mr. Kishor Rithe, Director, BNHS, delivered a detailed presentation on CSR support for conservation initiatives, emphasizing how CSR is increasingly driving biodiversity conservation and sustainable development efforts.



**Mr Kishor Rithe, Director, BNHS giving an online presentation**

Participants underscored the importance of aligning CSR strategies with biodiversity conservation and ecological restoration. Several successful industry-led initiatives – such as habitat restoration at Pulicat Lake and Nela-pattu Bird Sanctuary – were highlighted as exemplary models of integrating corporate responsibility into conservation practices.

The Managing Director of Sri City appealed to industry leaders, both within and outside Sri City, to increase CSR support for nature conservation, noting that currently only 10% of CSR funds are allocated for this purpose.

The conclave emphasized the need for collaborative approaches, encouraging partnerships between industries, NGOs, academic institutions, and government agencies to scale up conservation efforts.

Awards were presented to companies and industries playing significant roles in conservation by Dr. S. Venkateshwar, IAS (District Collector), who urged businesses to support the Andhra Pradesh Forest Department's initiatives, particularly for Pulicat and Nela-pattu Sanctuaries.

Notable financial commitments were also announced: Tirupati Nature Foundation (Sri City) pledged an annual contribution of ₹1 crore for biodiversity conservation. ISUZU pledged ₹10 lakh for conservation initiatives. These commitments mark a significant step in mobilizing resources for conservation, reflecting growing recognition of the need to invest in preserving natural ecosystems.

**Call to Action:** The CSR Conclave 2025 reaffirmed that sustainable development is achievable through collective responsibility. Industries were urged to integrate CSR initiatives that promote biodiversity conservation, community welfare, and eco-friendly development. With strong financial commitments and collaborative action, stakeholders can ensure a balance between economic growth and ecological integrity.



**Group photo of CSR Conclave**

### Way ahead

Participants' inputs on the conservation of Pulicat Lake have been forwarded to the concerned authorities for further discussion and implementation. BNHS will play a key role in this process and aims to develop a dedicated project to advance conservation efforts in the region.

## Satpuda Landscape Tiger Partnership-SLTP Conservation Education Program

### Team:

Project In-charge	: Mr Kishor Rithe, Director
Community Officer	: Mr Saurabh Dande
Driver-cum-Field Assistant	: Mr Charandas Shende.

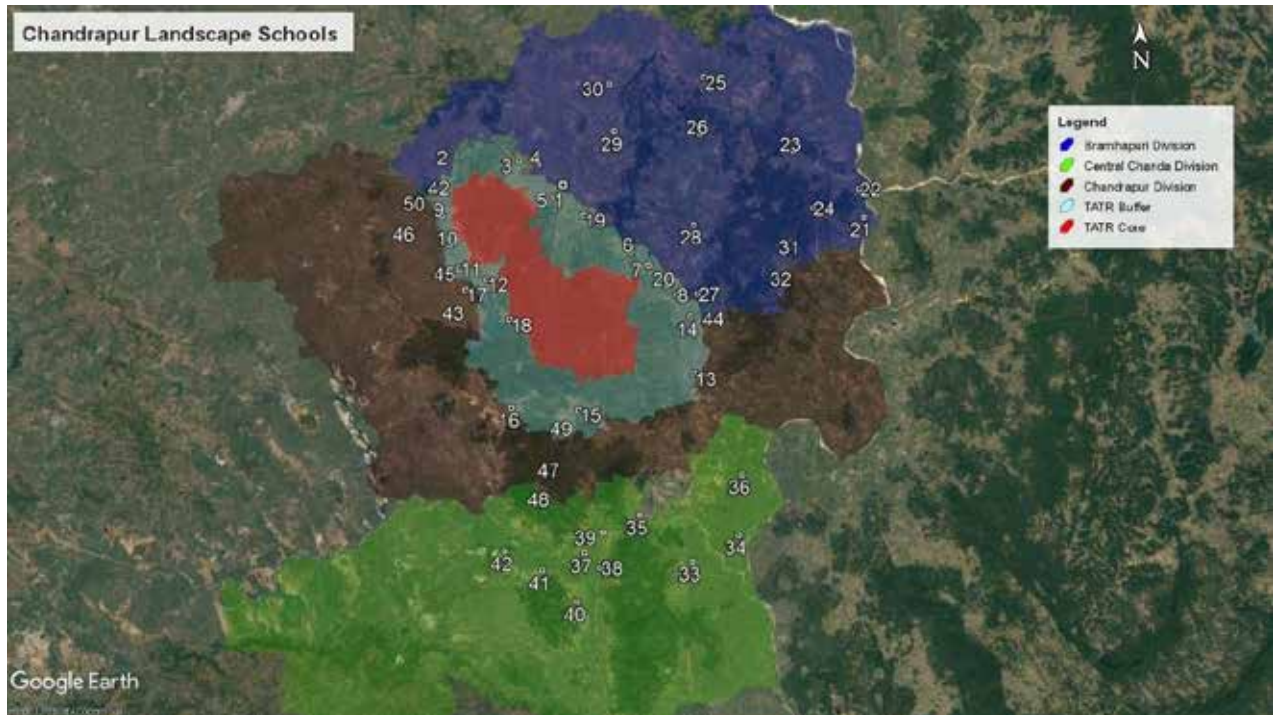
We are grateful to the Field Director of Tadoba-Andhari Tiger Reserve, Dr. Jitendra Ramgaonkar, for his continuous and valuable support to this project. We also extend our sincere thanks to Kushagra Pathak (Deputy Director, Buffer), Anand Reddy (Deputy Director, Core), and Sachin Shinde (DFO, TATR) for their constant support in all our conservation activities.

We are especially thankful to the Born Free Foundation, UK, for its support. The Born Free Foundation has been supporting BNHS in various conservation education activities for the past 21 consecutive years.

### EXECUTIVE SUMMARY

This year, the BNHS conservation education team carried out highly impactful and enthusiastic work in the Chandrapur landscape. The planned outputs were smoothly and passionately implemented, with the vital support of the Born Free Foundation.

### Location of the project: Chandrapur district



Over the past two years, the team has focused exclusively on Chandrapur district, where human–wildlife conflict has become increasingly severe. In 2023, there were 26 human deaths, and in 2024, 28 deaths were recorded – all caused by large carnivores. For this reason, the team concentrated its efforts in this conflict-prone area.

As in the previous year, the BNHS team selected 50 schools from four forest divisions of the district. A total of 186 programmes were conducted in schools, with participation ranging from 1,468 to 2,174 students across different rounds. This year, the education team successfully completed four school rounds.

#### Output 1

By the end of the year, we had reached over 2,000 students from 50 schools in Chandrapur district through activities focused on human–wildlife conflict and the impact of resource collection on forests.

To achieve this output, the BNHS team implemented a series of round-wise programmes across the 50 selected schools.

#### FIRST ROUND IN SCHOOL- Pre-test

After the summer vacation, schools reopened in the last week of June. Until 15 July, school authorities were occupied with admissions and administrative tasks. In July 2024, the BNHS team began distributing introductory letters and school information forms. This year, 7 schools with very low student numbers were replaced with new schools. Out of the 50 schools, 25 were selected as sample schools for assessment. These included 8 schools from Bramhapuri division, 7 from the TATR Buffer, 4 from Central Chanda division, and 6 from Chandrapur division. Pre-tests were then conducted in these schools to monitor students' environmental awareness. However, mid-July activities were disrupted by heavy rains and floods. Many rural students were also absent, as they were helping their families with paddy cultivation. Additionally, widespread conjunctivitis outbreaks in July and August further affected participation.

Despite these challenges, the pre-test was conducted in all 25 ambassador schools, with 1,036 students participating. The test included questions about Tadoba-Andhari Tiger Reserve, Chandrapur district forests, and general conservation knowledge. Students showed active and positive participation.



### SECOND ROUND IN SCHOOL- Activity 1 Lecture

This round included the distribution of BNHS and project information brochures, as well as school information forms. These forms recorded basic school details, total student strength, the number of 9th-grade students, the proportion of tribal students, and the villages the 9th-grade students came from. The first activity was conducted in July and August, with 2,056 students and 93 teachers from 50 schools participating. At the start, students were introduced to BNHS, the project, and the education team. The lecture focused on the biodiversity of Chandrapur district, covering: Forest areas of the district, an introduction to TATR, Ghodazari, and Kanhargaon sanctuaries, basic information about local mammals, birds, reptiles, and flora

### THIRD ROUND IN SCHOOL- Activity 2 Lecture

The third round of the conservation education programme was conducted in August and September, with 2,033 students and 90 teachers from 50 schools participating. In the second activity, students were taught about the relationship between forests and water in the Chandrapur landscape, with a focus on Tadoba-Andhari Tiger Reserve. The team explained that tiger habitats serve as excellent watersheds and discussed the carnivores and herbivores of the reserve. The lecture also covered the food chain and the importance of tigers in maintaining ecological balance. As an interactive activity, students were asked to prepare a list of tree species found in their area.

### FOURTH ROUND IN SCHOOL- Activity 3 Film Show

In September and November, the fourth round of the conservation education programme was conducted. A total of 2,174 students and 91 teachers from 50 schools participated.

In this third activity, the education team showed a documentary film to explain the condition of tiger habitats and the threats they face. The film highlighted the life of tigers in the forest, their struggles in raising cubs, the dangers they encounter, and the actions needed for tiger conservation. Through this activity, students gained a clearer understanding and vision of tigers and their habitats. The programme was conducted by Saurabh Dande with the support of Charandas Shende.

### FIFTH ROUND IN SCHOOL- Activity 4 Slide Show

In November and December, the fifth round of the conservation education programme was carried out. A total of 1,468 students and 47 teachers from 36 schools participated.

In this fourth activity, the education team conducted a slide show on forest resource collection and grazing issues. The presentation covered the collection of fuelwood, bamboo, mahua and tendu leaves, wild vegetables, and other minor forest produce (MFP). Students were also informed about the impacts of cattle grazing in forests. The team encouraged students to reduce the use of fuelwood by promoting LPG use at home. Additionally, students were asked to prepare a list of wild vegetables available in their area. This round across 36 schools was conducted by Saurabh Dande with the assistance of Charandas Shende.



**SUMMARY OF ALL ACTIVITIES****List of activities in 50 schools during the year 2024–25**

Sr. No.	Activities	No. of schools	Total Students present	Present Girls	Present Boys	Teachers present
1	Lecture 1 (Biodiversity in Chandrapur District)	50	2,056	1,138	918	93
2	Lecture 2 (Forest-Water Relation)	50	2,033	1,167	866	90
3	Film Show (Truth About Tiger)	50	2,174	1,103	1,071	91
4	Slide Show (Resource collection and conflict)	36	1,468	853	615	47
5	Nisarganubhav (Jungle Safari)	15	592	364	228	30
<b>Total...</b>		<b>186</b>	<b>8,323</b>	<b>4,261</b>	<b>3,968</b>	<b>3,351</b>

**Output2**

50 students (one boy & one girl), from 25 schools, were selected as Wildlife Ambassadors. The Ambassadors will further the sensitization activities to the community

**AMBASSADOR SELECTION**

From 50 programme schools, 25 were selected for the Wildlife Ambassador initiative. Selection was based on the schools' response to earlier BNHS programmes. Each selected school was asked to nominate one boy and one girl, resulting in 50 Wildlife Ambassadors in total. The enthusiasm of teachers played an important role in the selection process. Ambassadors were chosen by principals and coordinator teachers, who were familiar with students' talents and interests.

To assess students' knowledge and perceptions of their surrounding forests and biodiversity, a Pre-Post Test module was conducted in 25 ambassador schools this year. The module covered local biodiversity, flora and fauna of Chandrapur district, forest produce and its uses, and human–wildlife conflict. The test included both knowledge-based and perception-based questions. The same test was administered at the end of the session to measure changes in understanding. Out of the total number of 9th-grade students in these schools, 82% participated in the pre-test.



### Output 3

One-Day Jungle Safari arranged for the students with the support from the Tiger Reserve

#### NISARGANUBHAV

Nisarganubhav was a joint initiative of BNHS and the Tadoba-Andhari Tiger Reserve Foundation. A total of 592 students and 30 teachers took part in the jungle safari, making it the largest activity of the year in terms of logistics and team management. This event had been included in the annual roadmap from the beginning. Each school sent 40 students and 2 teachers.

Participants entered the core area of the reserve through Moharli, Khutwanda, and Kolara gates. During the safaris, they observed tigers, leopards, wild dogs, and sloth bears, along with various herbivores. Crocodiles were also sighted at Pandharpauni waterhole, Teliya, and Tadoba Lake. The jungle safari remains a favourite activity for both students and teachers. Feedback from participants was collected during the camp. The safaris were facilitated by Tadoba staff – RFO Moharli, RFO Wadala, and RFO Kolara – with support from drivers Sandip Patil and Suraj Bhonde.

#### MONITORING AND EVALUATION

Throughout the year, the education team engaged students in discussions on the intensity of human–wildlife conflict in the Chandrapur district through lectures, slide shows, and film screenings. The Wildlife Ambassadors were appointed to monitor classroom conservation education activities and to spread awareness in their villages.

This programme also aimed to encourage the inherent skills of tribal students. To measure overall knowledge of wildlife conservation and conflict, a pre-test and post-test were planned. Active participation, feedback, and photographs were used to gauge students' perceptions.

To assess improvements in knowledge of flora, fauna, and conservation attitudes, a pre-test was conducted during the first programme round in July, and a post-test was scheduled for March 2025 at the end of the school year. In total, 1,036 students from 25 schools participated in the pre-test. The post-test was not conducted this year (March 2015). Of the 50 schools participating in the conservation education programme in Chandrapur district, 25 were selected for the Wildlife Ambassador programme. These included 9 schools from the Bramhapuri division, 7 from the TATR buffer, 4 from the Central Chanda division, and 5 from the Chandrapur forest division.





## MEMBERSHIP DEPARTMENT

**TEAM:** MR ASIF KHAN, MEMBERSHIP OFFICER

The Membership Department at the Bombay Natural History Society (BNHS) has continued to play a pivotal role in expanding community engagement and fostering a sense of belonging among members throughout the 2024–2025 fiscal year.

### MEMBERSHIP INITIATIVES AND ENGAGEMENT

Besides the Mumbai-based local programmes, initiatives to start city/state chapters were undertaken.

**City/State Chapters:** In collaboration with the Programmes Department and the Rajasthan Team, the BNHS Membership Department facilitated three impactful outreach programmes under its City/State Chapters initiative:

#### Bengaluru, Karnataka

On October 6, 2024, the Bengaluru Chapter launched its inaugural Nature Trail at Lalbagh Botanical Garden during Wildlife Week. The event drew enthusiastic participation from local wildlife enthusiasts and highlighted the role of citizen science in biodiversity monitoring through bird counts and habitat conservation. The trail was led by BNHS members Mr Girish Gopalrao and Mr Vinod Karuvat, marking a strong beginning for the Chapter. Plans are underway to expand activities through regular nature walks, educational workshops, and conservation awareness programmes.

#### Jodhpur, Rajasthan

On October 8, 2024, BNHS, in collaboration with the Forest Department's Wildlife Division, organised a Bird Trail at Machiya Biological Park, Jodhpur. The event, chaired by Mrs Sarita Chaudhary, Deputy Conservator of Forests, and led by Dr Renu Kohli, attracted students, professionals, and birdwatchers. Dr Neelkanth Bora introduced BNHS's conservation initiatives in the Thar Desert, while experts highlighted the importance of birdwatching and habitat preservation. The trail strengthened community engagement with local biodiversity.

#### Ajmer, Rajasthan

On December 1, 2024, the Rajasthan Chapter conducted a Bird Walk at Anasagar Lake to raise awareness about wetlands and avian biodiversity. The walk was led by Dr Vivek Sharma, Dr Praveen Mathur, and Dr Sujit Narwade. Participants observed species such as herons and cormorants while learning about their ecological significance. Dr Narwade also drew attention to environmental challenges facing Anasagar Lake, including pollution and habitat degradation.

#### BNHS SEVA Initiative

To enhance member involvement in conservation and research, BNHS launched the **BNHS-SEVA initiative** – a structured volunteer programme encouraging members to contribute their time and expertise. Volunteers supported diverse departments including **Central Marketing Department (CMD), Publications, and Library.**

The response was overwhelmingly positive, with over **90 members volunteering**. Each volunteer was carefully matched with BNHS staff and scientists to ensure meaningful engagement aligned with their skills and interests. This collaborative model not only enriched BNHS's ongoing work but also deepened the bond between the Society and its member community, fostering a shared commitment to conservation and environmental education.

### Corporate Membership:

In collaboration with the CMD team, BNHS revitalised the **Corporate Membership Programme**, offering organisations a strategic platform to align their **Corporate Social Responsibility (CSR)** goals with impactful conservation efforts.

Corporate members enjoy benefits such as:

- Sustainable gifting options
- Priority access to BNHS's resource-rich library
- Discounts on exclusive merchandise
- Employee engagement opportunities, including volunteering at BNHS centres, EcoDay events, and expert-led sessions

Corporate membership also provides visibility in **Hornbill**, BNHS's flagship magazine, enabling organisations to showcase their sustainability leadership. The programme supports key **Sustainable Development Goals (SDGs)**: **SDG 13**: Climate Action, **SDG 15**: Life on Land, **SDG 17**: Partnerships for the Goals.

We invite businesses to become a part of this impactful journey through our Silver, Gold, or Platinum membership tiers, and reaffirm their commitment to a greener, more sustainable future.

### Celebration of 60 years at Hornbill House:

To commemorate **60 years of BNHS at Hornbill House**, all new and renewing members until **March 31, 2025**, received a **special commemorative mug** featuring artwork celebrating this milestone. This limited-edition memento fostered pride and engagement while honouring BNHS's conservation legacy. The initiative yielded **14 renewals and 25 new memberships** within just **19 days**.

## MEMBERSHIP DIGITAL TRANSFORMATION

The BNHS online membership form underwent a comprehensive **revision and streamlining process** to enhance usability and reduce barriers to joining. Technical issues, particularly with online payments, are being addressed to ensure a smoother experience.

### Membership Figures for FY 2024–2025:

Sr. No.	Category	Opening	Balance as of March 31, 2025
1	Life Membership	2372	2483
2	Annual Membership	655	464
3	Annual Membership 3 years	109	145
4	Annual Membership 5 years	95	118
5	Student Membership	128	123
6	Institutional Membership	8	7
7	Armed Forces Membership	1	1
8	Family of Four	7	5

**Membership Figures for FY 2024–2025 (contd.)**

Sr. No.	Category	Opening	Balance as of March 31, 2025
9	Family (Life) Couple	445	449
10	Complimentary List	2	2
11	Family Couple	20	7
12	Friends of BNHS (Gold)	2	0
13	Life Foreign	83	82
14	Ordinary Foreign	0	0
15	Friends of BNHS (Platinum)	1	2
16	Life (SAARC)	12	12
	<b>TOTAL</b>	<b>3940</b>	<b>3900</b>

The membership figures for the year reflect a stable and positive trend:

- Life Membership increased from 2,372 to 2,483, indicating sustained long-term engagement.
- Multi-year memberships (3- and 5-year) showed significant growth, reflecting member confidence and commitment.
- Annual Memberships declined slightly and will require renewed focus.

Given below are the comparative numbers for New and Renewal of Membership:

	2023–2024	2024–2025
New members	600	454
Renewals	60	205
Total Members Gained	660	659

Overall, BNHS welcomed **659 new members**, nearly matching the previous year's **660**. Importantly, **renewals increased substantially from 60 to 205**, indicating stronger engagement and retention.

## PROGRAMMES DEPARTMENT

**TEAM:** MR ASIF KHAN

The Programmes Department continued its mission through FY 2024–25 by delivering engaging, nature-focused experiences that foster awareness and conservation consciousness across all age groups. A wide range of themed walks, educational events, and camps were conducted, enabling deeper public involvement in biodiversity appreciation and citizen-led science.

### MEMBERS' PROGRAMMES

A total of 25 programmes were conducted. These programmes were conducted in and around Mumbai under the themes: Tree Walks, Bird Walks, Marine Walks, Nature Walks, and Flamingo Walks. These activities helped connect members while also spreading awareness of BNHS's work.

Besides the walks, outstation camps were conducted at the Melghat National Park with the collaboration of NCSA and Satpura Foundation, which was well-received by the members and covered by The EarthView.in on January 31, 2025.

A specialised camp studies at the BNHS Bird Migration Centre in Point Calimere focussed on migration studies, bird ringing, tagging, and long-term monitoring techniques. During the camp, the members actively participated in the ringing sessions, observed various migratory species closely, and interacted with BNHS researchers to under-



stand the methodologies. This year BNHS introduced Marine Walks in Mumbai, which explores the coastlines around the city in search of Marine diversity.

A trail was also conducted for the employees and their families of Mahanagar Gas Ltd at CEC-Mumbai. The trail was well-received and Mahanagar Gas Ltd plans to schedule more trails for the next season with BNHS.

Awareness trails were conducted for Earth Day, and a Butterfly Walk and Talk was conducted on the BNHS Foundation Day, and a talk on Bird Migration was conducted at SGNP for Dr Sálim Ali's anniversary.

The annual Bird Identification workshops conducted in association with the Collections Dept included an in-door AV session followed by a specimen study. The second day included a field visit.

Another highlight was 'Sketching in the Forest', a unique initiative combining art and nature. Held within the BNHS reserve, this creative trail allowed participants to experience wildlife through drawing and sketching. It was well-received and encouraged requests for similar programmes in the future.



BNHS programmes gained extensive media coverage. The BNHS Programmes was covered appearing in six different outlets including Deccan Herald, Mid-Day, and The Free Press Journal.

### SGNP Bird Monitoring Programme (SGNP BIRD COUNT)

A total of 12 systematic monthly counts were conducted to document avian diversity and seasonal patterns in Sanjay Gandhi National Park (SGNP). Over the year, species richness per count ranged from 67 to 97 species, with the highest number observed in March 2025 (97 species). By the end of FY 2024–25, the programme had recorded a cumulative total of 241 bird species.

Notable observations included migratory and uncommon species such as the White-bellied Sea Eagle (*Ichthyophaga leucogaster*) in May, White Stork (*Ciconia ciconia*) in November, and the elusive Common Grasshopper Warbler (*Locustella naevia*) in March. The winter months (November–February) showed a marked increase in migratory species, reaffirming SGNP's role as an important stopover and wintering site.

The programme continues to play an important role in mapping migratory trends and informing conservation planning for SGNP, which continues to serve as a vital stopover and wintering site for numerous bird species. The initiative also received wide media coverage in Deccan Herald, Mid-Day, Loksatta, and The Free Press Journal.

Sr	Common English Name (Alt Name)	Scientific Name	Month in which sp. was recorded
1	White-bellied Sea-Eagle	<i>Ichthyophaga leucogaster</i>	May
2	Knob-billed Duck (Comb Duck)	<i>Sarkidiornis melanotos</i>	September
3	Large-billed Leaf Warbler	<i>Phylloscopus magnirostris</i>	October
4	Tawny Pipit	<i>Anthus campestris</i>	October
5	White Stork	<i>Ciconia ciconia</i>	November
6	Western Marsh Harrier	<i>Circus aeruginosus</i>	December
7	Little Ringed Plover	<i>Thinornis dubius</i>	January
8	Common Snipe	<i>Gallinago gallinago</i>	January
9	White Wagtail	<i>Motacilla alba</i>	January
10	Common Grasshopper Warbler	<i>Locustella naevia</i>	March

### Given below is the list of Month-wise Bird Count conducted

Month	Date of Count	No of Species Recorded
April	28-04-2024	92
May	26-05-2024	71
June	30-06-2024	83
July	28-07-2024	71
August	25-08-2024	75
September	29-09-2024	69
October	27-10-2024	67
November	24-11-2024	83
December	29-12-2024	71
January	28-01-2025	86
February	23-02-2025	81
March	30-03-2025	97

The programme continues to play an important role in mapping migratory trends and informing conservation planning for SGNP, which continues to serve as a vital stopover and wintering site for numerous bird species. The initiative also received wide media coverage in Deccan Herald, Mid-Day, Loksatta, and The Free Press Journal.



## Conservation Department

### Marine turtle conservation in Andaman & Nicobar Islands

<b>Principal Investigator</b>	: Dr. K. Narasimmarajan
<b>Team Members</b>	: Mr Amey Bhogte, Mr Mohammed P Ishaq.
<b>Location</b>	: Andaman & Nicobar Islands
<b>Duration</b>	: One year
<b>Funding agency</b>	: SITA Information Networking Computing (India) Pvt. Ltd.

A Research Biologist was recruited to lead marine turtle conservation initiatives. In collaboration with the Forest Department and Tourism Department, BNHS facilitated the successful release of 18,218 Olive Ridley hatchlings along the South and Middle Andaman East Coast. A total of 441 Olive Ridley nests were documented in 2024–25.





## Conservation of the Amur Falcon in Nagaland by implementing skill development and subsistence livelihood programme for the local community

<b>Principal Investigator</b>	: Dr. K. Narasimmarajan
<b>Team Members</b>	: Sulanthung Humtsoe, Deeraj Thapa
<b>Location</b>	: Nagaland
<b>Duration</b>	: Two years
<b>Funding agency</b>	: Zycus Infotech & Ataavi Bird Foundation

BNHS successfully organised the first-ever Amur Falcon Festival in December 2024, in collaboration with St. Xavier's College and local stakeholders in Jalukie-Peren District, Nagaland.



### Publication:

A paper titled 'The splendour of roosting and feasting: Monitoring the roosting size, migratory times and conservation initiatives of Amur Falcons (*Falco amurensis*) in Nagaland, India', has been submitted to JBNHS and is under review

## Biodiversity assessment of the proposed TATA Motors Ltd. New Plant site in Panapakkam, Tamil Nadu – Greenfield Project

<b>Principal Investigator</b>	: Dr. K. Narasimmarajan
<b>Location</b>	: Panapakkam, Ranipet
<b>Funding agency</b>	: TATA Motors Ltd.

Final acceptance was provided to TATA Motors. The project is scheduled to commence in May 2025.

### Other work:

- Assisted the Director in drafting proposals, letters, and articles, as well as reviewing submissions for JBNHS.
- Submitted a recommendation to the Additional Secretary (Forest), Maharashtra to declare Delhi Public School Lake, Navi Mumbai, a Flamingo Conservation Reserve.
- BNHS filed a case with the Supreme Court regarding the threats posed by free-ranging and feral dogs to wild-life and protected areas. The SC requested a state-wise threat report, so that it could decide on the matter. A letter from BNHS was also sent to all CWLW asking them to submit their state's case history; only Ladakh and Meghalaya states submitted their reports to the SC.
- On 11 March 2025, the Jalchar smartphone app for monitoring marine megafauna was officially launched in Ratnagiri, Maharashtra.

## ‘Guardians of the Skimmer’ – Conserving riverine birds through community participation

### RESEARCH & CONSERVATION OF SANDBAR NESTING BIRDS WITH FOCUS ON INDIAN SKIMMER & BLACK-BELLIED TERN (2024-25)

**Team** : Parveen Shaikh (Scientist ‘D’) Omkar Joshi (Senior Project Fellow),  
Satya Siddharth Das (Project Biologist) & Mukesh Kumar (Field Driver )

**Principal Investigator** : Parveen Shaikh

**Study Area** : National Chambal Sanctuary

**Project Tenure** : 2 years (March 2023 to March 2025)

**Funding Agency:** The Habitat Trust Grant



- Nest monitoring programme was implemented under this project between April to June 2024
- Nest protection was done and nest survival was significantly improved. Approximately 500 chicks were saved from predation and trampling at Chambal during the nesting season of 2024
- Organized one-day capacity-building programs for Madhya Pradesh Forest Department staff and Nest Guardians in Chambal, focusing on nesting bird conservation techniques.
- Presented the update of this project at The Habitat Trust Partners Meet held on December 13th & 14th in New Delhi.
- Awareness programme was carried out in July 2024 at four villages to educate local communities near the nesting sites about the Indian Skimmer, an endangered bird species that relies on the Chambal River for nesting and survival.

## ‘Helping skimmers skim’: Expand protection and establish a community-based monitoring and conservation model for Indian Skimmer and Black-bellied Tern at the River Mahanadi, India

**Team** : Parveen Shaikh (Scientist ‘D’) Omkar Joshi (Senior Project Fellow),  
Satya Siddharth Das (Project Biologist) & Mukesh Kumar (Field Driver )

**Principal Investigators** : Parveen Shaikh

**Study Area** : River Mahanadi, Odisha

**Project Tenure** : 1 year (June 2023 to December 2024)

**Funding Agency** : BirdLife International

- Completed the nest distribution and nest survival monitoring in River Mahanadi between April and July 2024
- In September 2024, four awareness programs were organized with the fishermen community along the river. These sessions aimed to raise awareness about the conservation of sandbar-nesting birds, with a special focus on the Indian Skimmer.
- In January 2025, an engaging awareness workshop was organized with school children in the Mahanadi River region, focusing on the Indian Skimmer and its conservation. During the workshop, children painted wooden toys shaped like Indian Skimmers, using the bird's distinctive black-and-white plumage and bright orange beak. This creative activity enhanced their understanding of the species while allowing them to express their creativity.
- Submitted the Annual report in December 2024 and have extended the project till July 2025

## Securing & Protecting breeding habitat of Indian Skimmer and conservation through community participation in Chambal, Madhya Pradesh, India

<b>Principal Investigators</b>	: Parveen Shaikh
<b>Study Area</b>	: River Chambal, Madhya Pradesh
<b>Project Tenure</b>	: 1 year (July 2024 to Sep 2025)
<b>Funding Agency</b>	: General Insurance Corporation of India GIC Re

- In June 2024 a one-day training workshop was organized for 22 locals who will be working as nest guardians
- Four awareness workshops were conducted across four villages along the Chambal River. The program reached a total of around 300 locals. Participants expressed their willingness to help protect Indian Skimmer islands and provided positive feedback.
- Surveyed the River Chambal in February 2025 for monitoring the Indian Skimmer population and we counted more than 900 skimmers. A significant increase in breeding population was observed on this river.
- Nesting location for protection was shortlisted
- Nest guardian program will be implemented between April-July 2025.

### Brief Activities

1. On October 8, 2024, BNHS hosted a virtual screening of Saving the Indian Skimmer, a documentary by Shekar Dattatri. The film highlights the endangered Indian Skimmer and the 'Guardians of the Skimmer' initiative, which involves local communities in protecting nesting sites.
2. Nests of Indian Skimmer and Black-bellied Tern were monitored at National Chambal Sanctuary, Son Gharial Sanctuary between April-June 2024.
3. Nestlings, fledglings and adults were captured and marked at all three study sites in May-June 2024.
4. Several birds marked at these sites were resighted in Gujarat, Andhra Pradesh, and Bangladesh during the non-breeding seasons.
5. In January 2025, BNHS carried Indian Skimmer Count, a citizen science initiative launched in 2020.



## Digitisation at BNHS

**Principal Investigator:** Rahul Khot

### Highlights

1. Scanned 17,402 research notes, with bird ringing data extracted from ~50% of them into digital format.
2. Implemented Omeka software backend, serving as the cloud repository for digitised specimens and archival material.

### Summary and Details

**Bird Ringing Digitisation Project:** As part of the initiative, BNHS developed an AI pipeline to transcribe physical research notes into digital data. A user interface enabled volunteers and students to perform quality checks before the data was committed to the central database.

#### Key Statistics:

- Total sheets scanned: 17,402
- Processed through AI pipeline: 10,942
- Quality check completed: 8,182
- Bird ringing records added to the database: 98,859

This effort was supported by a volunteer program, with about 150 students from St. Joseph's University, Zoology Department, contributing significantly to the quality-checking process.

**Specimen Digitisation and Repository Project:** We have implemented a proof of concept (PoC) using Omeka as a repository for our archives. This repository currently includes:

- Digitised specimen collections
- Publications archives
- Other research materials

BNHS is now developing a Virtual Museum to make collections more accessible to researchers and the public.

## Long-term bird monitoring programme of Navi Mumbai International Airport (NMIA) area and its surroundings during construction and operational phases

**Principal Investigator :** Rahul Khot

**Location :** Navi Mumbai and Raigad district

### Highlights

- 1) Continued monitoring of seasonal and habitat-wise bird species richness and abundance within a 10 km radius of NMIA.
- 2) Recorded bird species and their seasonal abundance at the NMIA construction site and adjacent mangrove and creek habitats.
- 3) Prepared a comprehensive checklist of bird diversity, classified by family and IUCN status.
- 4) Collected data on meat shops across habitats and associated bird activity.
- 5) Monitored waterbird abundance and diversity in selected wetlands of the study area.
- 6) Estimated the bird strike risk at NMIA using generic severity data.

### Summary

In 2024, the main aim of the project was to track long-term terrestrial and aquatic bird around Navi Mumbai International Airport (NMIA) and associated regions. The present study aims to study the abundance, richness, and

diversity of terrestrial and aquatic avian fauna, alongside habitat and anthropogenic influences, in and around the NMIA construction site, during its construction phase.

**Terrestrial Bird Survey:** Fixed-radius point counts (10 min at each station in 1 km × 1 km grids within 100 m radius). Bird observations (seen/heard) were recorded along with distance estimates and site covariates (temperature, wind, visibility, cloud cover). Within a 20 m radius, habitat and anthropogenic factors were documented. Surveys were conducted in post-monsoon (Oct–Nov 2024), winter (Dec 2024–Feb 2025), and summer (Mar 2025).

Garbage and meat shop surveys were conducted within a 5 km radius of NMIA to map locations and assess bird associations.

**Wetland Survey and Creek Survey:** Monthly total count bird surveys are conducted in the creek-associated wetlands in Ulwe and Kharghar, a Lotus Lake in Nerul, Owe Dam in Kharghar, Morbe Dam in Raigad, Balalleshwar Lake in Panvel to understand the underlying patterns of bird assemblages in these sites. Site-wise variation in bird count during the intensive survey has been presented through individual detailed checklists. Additionally, monthly counts were done from the four vantage points in the Belapur-Panvel Creek area to get an estimate of migratory and associated water birds.

**Data analysis:** After four consecutive year of intensive bird sampling in and around NMIA site, data show mangrove habitats have the highest bird species richness, while urban habitats have the lowest across all seasons. We have also analysed and presented lists of the ten most abundant species for each habitat type and wetland site. The same analysis has been performed for the monthly surveys in the studied wetlands and Belapur-Panvel Creek area. Till now, we have observed a total of 231 species from the study area although the species recorded from the NMIA airport construction site has decreased as compared to last year. Additionally, we have updated the checklist of birds present in relevant meat locations along with bird association in the study points.

**Way Forward -** More intensive sampling will be performed season-wise and monthly on terrestrial and water birds respectively to understand their changing patterns based on species abundance and richness. We will also try to understand the changes in Land Use-Land Cover (LULC) for the last ten years to understand the alteration of habitat types and the shaping of bird community structure in these habitat.

## Conservation of Finn's Weaver in India

**Principal Investigator:** Rajat Bhargava

**Funding Agency:** UP Forest Department (through Sarus Sanrakshan Samiti), and BirdLife International (through Brahmaputra Grassland Bird Survey, 2021–2025)

The Finn's Weaver *Ploceus megarhynchus* is a globally threatened species, listed as Endangered by BirdLife International.

Currently the Finn's Weaver survives in only nine of the 47 locations previously identified by BNHS previously. Surveys in May 2024 were conducted in Manas National Park, Kaziranga National Park, Orang National Park in May 2024 followed by surveys in Uttarakhand and Uttar Pradesh in May-June 2024.

A total of 40 birds were sighted in three locations: two in Assam (within protected areas) and one in Uttarakhand (Haripura Dam in Udham Singh Nagar). The Uttarakhand birds were observed in non-protected grassland under the Irrigation Department. Fishing activities posed a major threat, as areas are drained before the rains by contractors to collect fish. This issue was highlighted in BNHS presentations. No Finn's Weavers were recorded in the traditional Uttar Pradesh sites.

Four workshops/meetings were conducted with Forest Department staff in the past year. At Kaziranga National Park, Director Ms Sonali Ghosh released a poster on Finn's Weaver, accompanied by a BNHS lecture for IFS probationers. A second workshop was conducted in Orang National Park for frontline forest staff. In Uttarakhand, the



Biodiversity Board organised a consultative meeting in Dehradun, followed by a stakeholders' workshop in Rudrapur with NGOs, Irrigation Department officials, forest officers, and administrators from the terai region. A BNHS scientist delivered the lead presentation on Finn's Weaver.

BNHS initiated collaboration with Dr Anuradha Reddy (CCMB) to explore DNA analyses for confirming subspecies status, subject to state-level permissions.

## Gulab Bagh Bird Park Consultancy for Green Avadavat and Other Birds

**Principal Investigator:** Rajat Bharagava

**Funding Agency:** Udaipur Forest Department, Rajasthan

BNHS provided a one-year aviculture consultancy (October 4, 2023 – October 3, 2024) to assist Gulab Bagh Park with conservation breeding of Green Avadavat and other avian species.



BNHS successfully bred one pair of Green Avadavat twice, yielding five chicks in two clutches during winters of 2022–23 and 2023–24. Additional successful breeding included: Alexandrine Parakeet, Blue-breasted Quail, Red Avadavat, Bobwhite Quail, Senegal Firefinch, Dark-rumped Waxbill, Red-cheeked Cordon Bleu, Barbary Dove, and Diamond Dove. BNHS also supported rescue, training, and rehabilitation of birds from the wild and from private holding. Two hands-on training workshops were conducted for park staff, covering enrichment, aviary construction, feeding schedules, and daily husbandry.



## Exotic Birds Study

**Principal Investigator:** Rajat Bharagava

**Funding Agency:** BirdLife International

BirdLife International awarded BNHS a two-year project to study the exotic bird trade in India with special focus on CITES listed exotic species.

### Objectives:

- Develop a detailed inventory of exotic birds (species, volumes) traded, farmed, or smuggled through porous borders.
- Evaluate the effectiveness of the exotic bird amnesty declaration.
- Build capacity among enforcement agencies to implement CITES.
- Eight capacity building workshops were conducted for enforcement agencies.
- Two workshops for enforcement agencies were conducted through Chandrapur Forest Academy and for IRS probationers through WII.
- Workshop on hornbill trade in Manipur, Karnataka and online for Birdlife Asia Bird Trade Core Committee members were also conducted.
- The other finding was on lesser known issues. The findings raised concerns about native species; stricter laws on exotic birds may lead tribal trappers to shift pressure toward wild native species
- A total of minimum 278 exotic birds were recorded in surveys across India.

## Monitoring and mitigating the impacts of Mumbai Trans-Harbour Link on flamingos and other avifauna and formulating a conservation blueprint for the Sewri-Nhava seascapes

**Principal Investigator:** Reshma Pitale

**Location:** Mumbai, Thane, Raigad and Navi Mumbai

### Highlights:

- Assessment of populations and factors influencing the distribution of flamingos and other waders
- Study of local and transboundary migration
- Behavioural ecology of shorebirds, particularly in response to disturbances
- Diversity and distribution of benthos
- Eco-toxicological studies

### Status and Summary (March 2024 and February 2025):

A total of 65 species of waterbirds and raptors were recorded in Thane Creek during monthly surveys. Of these, 45 were migratory shorebirds and 20 were residents.

- Migratory Shorebirds: Peak population recorded at 85,443 individuals in November 2024, with numbers gradually declining through February 2025.
- Flamingos:
  - Greater Flamingos: Estimated 30,785 individuals in March 2024, with 22% subadults and 20% juveniles.
  - Lesser Flamingos: Peak observed in April 2024 at 77,874 individuals, with 20% subadults and 3% juveniles.
- Both species showed reduced numbers during the pre-winter period near construction sites, but by March 2024, 1,785 Greater Flamingos and 18,090 Lesser Flamingos were recorded.

**Banding:**

- 55 trapping sessions were conducted between March 2024 and February 2025 at high-tide roosting sites (BPS, TSC, Mankhurd, and NRI).
- 2,804 individuals were ringed; 248 recaptured; 525 resighted.

**Behavioural Ecology:**

- 5,056 videos were captured across 10 species under varying disturbance regimes and seasonal conditions.
- Video transcription and analysis using BORIS software is ongoing to understand behavioural responses.

360 individual feather samples were collected from six different species (180 juvenile and adult birds). Adult feathers to be analysed Carbon, Nitrogen and Sulphur (CNS) isotopes to study feeding ecology. While studying migration ecology, Hydrogen (H) isotope will be analysed in juvenile bird feathers. Additionally, 11 transect water, soil and macrobenthos samples (N = 166) were collected from Thane Creek to establish an isotopic pattern from the food chain to create baseline data. In total, 72 samples out of 166 were analysed for CNS.

Thane Creek mudflats were explored to understand the abundance and diversity of macro fauna inhabiting these muddy shorelines.

- 37 transects (covering 3 zones × 5 vertical strata) surveyed to estimate the diversity of the lesser-known invertebrates from the intertidal areas of Thane Creek each month.
- Altogether, 555 macrofaunal samples were collected from the intertidal zone from October-March and 190 samples from the sub-tidal zone.
- From the wetlands adjacent to Thane Creek, i.e., NRI, BPS (Bhandup Pumping Station), and TSC (Training Ship Chanakya), a total of 124 samples were collected every month.
- Sediment (111 samples) and macrobenthic substances (134) collected to analyse heavy metal content.

This data will help in understanding the accumulation of heavy metals in the sediment and their transfer through the food chain in the mudflat ecosystem, eventually being taken up by waders and flamingos as part of their diet.

Polychaete diversity identified to the family level (~14-16 families), and detailed analysis is ongoing. Initiated study on understanding the population and distribution of invasive mussel species *Mytella strigata* on the mudflats of the Thane Creek and adjacent Areas. Surveys were conducted around key jetty areas such as Uran, Revas, and Alibaug, with plans to extend the study in the months of April and May to Mumbai shorelines to assess the spread of this invasive. Additionally, a morphometric analysis of the invasive mussel species *Mytella strigata* from Thane Creek will be carried out to understand its growth patterns.

**Publications:**

- The Annual Report for 2023–2024 was submitted to the Funding agency.
- Bhowmik, Moumita, Rahul Khot & Reshma Pitale (2024): First record of *Sigambra sundarbanensis* (Polychaeta: Pilargidae) from the Arabian Sea, West coast of India. *Journal of Bombay Natural History Society* 122(1): 66–71.

# Biodiversity Audit of the Indian Institute of Technology Mumbai Campus

**Team:** Neha Mujumdar, Dr. Reshma Pitale and Dr. Sathiya Selvam

**Team Members:** Kiran Dalvi, Pranay Khadanga, Shashank Sankpal, Atish Manna, Ravi Naidu and Anas Popatiya

**Botany Intern:** Priyanka Balkate, Vinay Sahani

**Location:** Mumbai

**Introduction:** A comprehensive biodiversity survey was carried out at the IIT Mumbai campus to document flora and fauna across diverse habitats including forest patches, lakesides, canals, landscaped zones, and urban areas. Standardised methods were applied for each taxonomic group. Surveys were conducted during the monsoon (August 2024) and winter (January 2025) seasons.

## Monsoon Survey:

- **Plants:** 151 species recorded, including native blooms *Crinum latifolium* and *Strobilanthes callosa*. While plant diversity is high, concerns included tree damage and waste dumping; recommendations include promotion of native species.
- **Insects:** 78 species, with rich butterfly diversity and seasonal dragonfly swarms.
- **Herpetofauna:** 12 species of reptiles and amphibians, concentrated in wetter, greener areas of the campus.
- **Birds:** 46 species, dominated by Black Kites.
- **Mammals:** 7 species, including mongooses and fruit bats. Scats and markings indicated occasional visits by leopards and civets.

## Winter Survey

- **Plants:** 61 tree species documented, along with 467 individuals of vines, herbs, shrubs, and climbers. Notable species included *Alternanthera philoxeroides*, *Rungia pectinata*, and *Lemna perpusilla*.
- **Birds:** 71 species, with 1,637 individuals counted. Black Kites, Rock Pigeons, and House Crows were dominant.
- **Herpetofauna:** 10 species, with Brook's Gecko most common, followed by Garden Calotes and Common House Gecko. Rat Snakes and Indian Tree Frogs were also recorded.
- **Insects:** 78 species, including butterflies, odonates, beetles, bugs, and grasshoppers, reflecting high invertebrate diversity.
- **Mammals:** 7 species, with Indian Flying Foxes most numerous. Indian Grey Mongooses, macaques, and langurs were also observed occasionally.

Overall, the IIT Mumbai campus supports remarkable biodiversity across multiple taxa, highlighting the ecological value of maintaining varied habitats within urban academic institutions. Continued monitoring, habitat restoration, and native species planting will strengthen ecological resilience and conservation outcomes.

**Publications:** A monsoon survey report was submitted to the funding agency.



## Achievements of the Bustard-Florican Program 2024-25

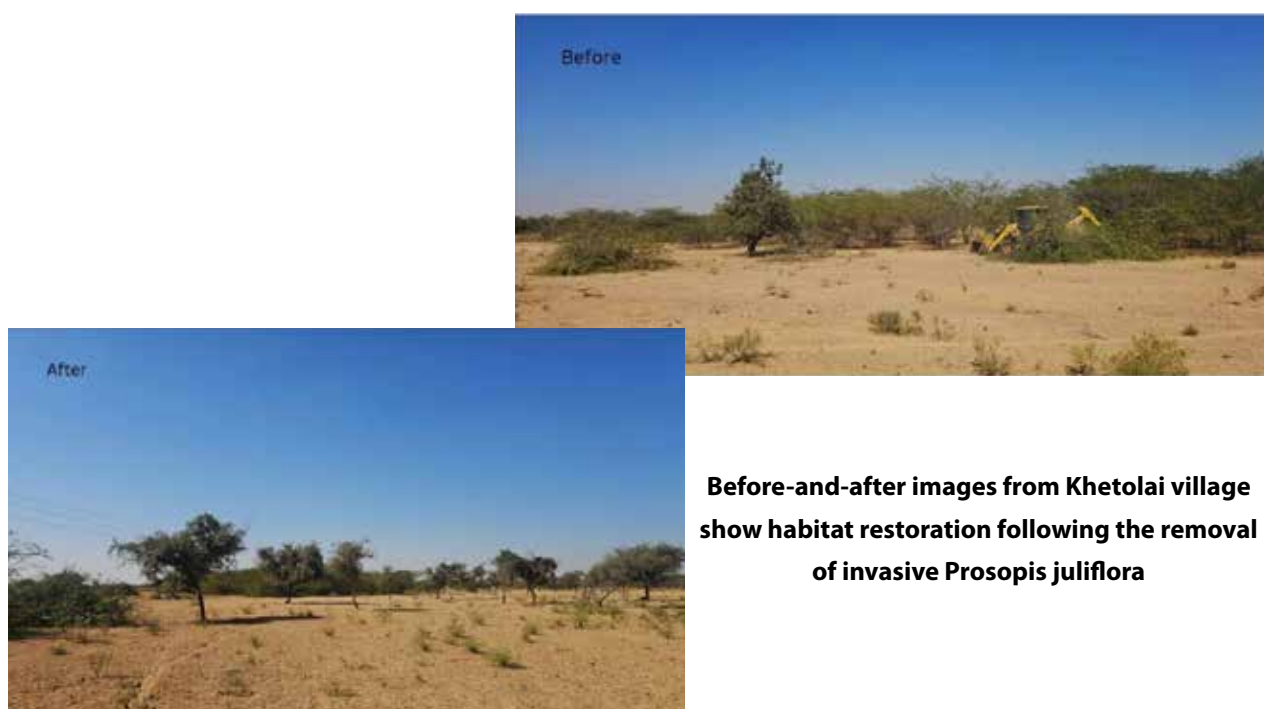
SUJIT NARWADE

1. We partnered with the Indian Army to implement a conservation programme for the critically endangered Great Indian Bustard across multiple range states. The primary focus has been the Pokhran Field Firing Range (PFFR) in Jaisalmer, under the 12 Corps of the Southern Command. Our activities included habitat restoration, creating safe spaces for birds, and sensitisation initiatives to ensure protection within the PFFR.



**A prominently positioned display board has been installed at the Pokhran Field Firing Range PFFR Headquarters, showcasing ongoing Great Indian Bustard conservation activities in collaboration with BNHS © Pankaj Bishnoi**

2. We coordinated with 12 Gram Panchayats in Pokhran Tehsil, engaging local communities in habitat restoration and wildlife conservation. With significant support from the ICICI Foundation, we combined resources and traditional knowledge to deliver effective outcomes.





**Great Indian Bustard using the open space after restoration of the habitat**

In collaboration with the Chief Conservator of Forests (CCF), Jodhpur, we reviewed and updated the Management Plans for newly declared conservation reserves across five districts. This review is vital for enhancing the protection and management of these reserves. We also initiated the development of a comprehensive management plan for the Kurjan Conservation Reserve at Khichan, Phalodi. As part of wetland conservation efforts, we organised a workshop involving the Phalodi district administration and Russian scientists. This initiative helped establish a collaborative network with the International Crane Foundation (ICF) and deepened understanding of



crane migration.

**A consultative meeting conducted for preparing management plan for Kurja conservation reserve**

3. We launched the Rajasthan Chapter of our bird awareness initiative, conducting birding trails at Anasagar (Ajmer) and Machiya Biological Park (Jodhpur). Conducted in partnership with local forest departments and





birdwatching groups, these events fostered interest in wildlife among local nature enthusiasts and researchers.

**BNHS, in collaboration with the office of DyCF-Jodhpur, organised a bird trail at a wetland behind Machia Zoological park, Jodhpur**

4. To assess the ecological health of the Sambhar wetlands, we conducted extensive landscape surveys to evaluate the distribution, status, and threats to migratory waterfowl. Findings were compiled into a report with recommendations to mitigate risks of mass mortality events. We also conducted a comprehensive bird census at the



Menar Wetlands Complex in Udaipur.

**The BNHS team conducted a bird census at Sambhar jheel after reports of botulism in a few birds**

5. We launched a new initiative at the Ankasamudra Bird Conservation Reserve and the Tungabhadra backwaters in Vijayanagar District, Karnataka. This project focuses on documenting bird populations, studying migration, and promoting community engagement in conservation.





**View of a bird roosting site at Ankasamudra Conservation Reserve, Vijaynagar, Karnataka**

6. Field surveys and site visits were conducted in Jorbeer, Bikaner, as part of our vulture conservation work. We also organised a “Wildlife Veterinary Training” workshop in collaboration with RAJUVAS, the Animal Husbandry Department, and the Bikaner Forest Department. The workshop raised awareness about vulture conservation and improved veterinary care for wild animals.



**Jatayu wildlife and veterinary training workshop**

7. With generous support from GIC, we initiated the development of a field research centre on BNHS land in Chanani, Pokhran (Jaisalmer). This centre will serve as a dedicated hub for conservation, fostering a safer and more sustainable environment for the diverse wildlife of this unique desert ecosystem. It will support vital research, wildlife monitoring, and the implementation of effective conservation strategies



**An underground storage tank has been constructed on BNHS land as part of the initial infrastructure development for the field research station**

8. In addition to our ongoing conservation efforts, we have proactively advocated for the establishment of a Grassland Authority. This initiative seeks to align grassland regulations with the Wetlands Rules of 2017. By promoting these guidelines, we aim to ensure the protection and sustainable management of grassland ecosystems, recognizing their crucial role in biodiversity, carbon storage, and overall environmental health. Establishing such regulations will not only safeguard these habitats but also support the livelihoods of the communities that depend on them



**Government agencies have begun recognising the importance of grassland restoration. In the photo above, the Bidar Forest Division has initiated the removal of exotic *Gliricidia* trees from grasslands, an approach that should be scaled nationwide**



9. A major success of the programme was the observation of two Great Indian Bustard chicks (one female and one male) thriving near the BNHS base camp at Khetolai, Rajasthan. These chicks benefited from a safe reserve created in collaboration with the Bishnoi community, demonstrating the power of community-led conservation. Additionally, two more chicks were successfully reared in the Ramdevra enclosure managed by the Forest Department. In total, four chicks were successfully recruited into the wild population during 2024–25.



**Great Indian Bustards (mother and daughter) in front of the BNHS base camp at Khetolai, Rajasthan**



**Great Indian Bustards (mother and son) near the BNHS base camp at Khetolai, Rajasthan**



## On a War Footing: Biodiversity Monitoring & Conservation with the Indian Army in Ladakh (2024-25)

**Project Investigator:** Mr Niazul H. Khan

### **Objectives:**

1. Integrate a module on environment, biodiversity and climate change in the army training curriculum
2. Revive the eco-cells in each command of Indian Army and Army Headquarters
3. Conduct awareness programmes for army personnel posted in border outposts
4. Monitor critically endangered wildlife
5. Address issues of feral dogs in Changthang region of Ladakh
6. Address the issue of human-brown bear conflict in Drass region of Ladakh

### **Activities undertaken during Quarter 1 (April–June 2024)**

During the first quarter, significant groundwork was undertaken across multiple objectives.

For Objective 3, the team began preparing outreach and educational materials, including pamphlets on Ladakh's emblematic species—Snow Leopard, Juniper, Black-necked Crane, and Himalayan Poppy. These materials were reviewed and finalized in collaboration with the Wildlife Protection Department.

For Objective 4, field surveys and camera trap deployments focused on critically endangered species such as the Black-necked Crane and Tibetan Gazelle. Preliminary data entry from these surveys was initiated to support future analyses.

Under Objective 5, planning for the Animal Birth Control (ABC) programme was initiated. Meetings were held with army and Animal Husbandry officials in Nyoma, Hanle, and Drass. Proposals for phase-II sterilization drives were drafted, and baseline population assessments of free-ranging dogs were developed using N-mixture modeling.

For Objective 2, installation of Organic Waste Compost (OWC) machines began in Drass and Nyoma army units. Technical planning, site inspections, and coordination with EnviCare and army engineers were completed, resulting in successful trial runs. This initiative contributed directly to reviving eco-cell functions in army formations.

Objective 6 was advanced through preliminary planning of human–brown bear conflict mitigation in Drass. Surveys, tools, and collaborative meetings with field officials helped schedule activities for the following quarter.

### **Activities Undertaken During Quarter 2 (July–September 2024)**

The second quarter focused on field execution and consolidation of progress.

For Objective 3, a joint awareness workshop was held in Leh, engaging multiple army units and conservation stakeholders. The workshop highlighted the ecological threat posed by free-ranging dogs and the importance of biodiversity protection. Pocket guides and IEC pamphlets were distributed to participants.

Under Objective 5, approvals were secured for phase-II sterilization drives in Changthang. However, execution was delayed due to election schedules and monsoon-related logistical challenges. Despite the postponement, groundwork – including proposal revisions, dog population estimates, and field coordination – was completed.

For Objective 2, the installation and operationalization of OWC machines were completed, enabling the practical revival of eco-cells at Drass and Nyoma. Standard Operating Procedures (SOPs) were developed and shared with army staff, contributing to better waste management and reduced wildlife attractants.

Objective 4 continued with data compilation from camera traps and field observations. Proposals for a Snow Leopard study and Tibetan Gazelle survey were submitted, laying the foundation for larger ecological assessments later in the year.

Preparatory discussions for Objective 1 began, focusing on integrating biodiversity modules into training frameworks. Inputs from awareness programmes were gathered to shape the educational content.

### **Activities Undertaken During Quarter 3 (October–December 2024)**

The third quarter saw accelerated field activity and coordination.

Under Objective 5, the ABC programme was scheduled for December 19–23 in Tsog Tsalu and Hot Spring areas. Veterinary teams were mobilized, logistics arranged with army formations, and permissions secured. Although postponed due to extreme weather and pending intelligence clearance, the planning represented a significant milestone.

For Objective 3, a large-scale awareness and training workshop was held in Drass in November. Activities included interactive presentations, wildlife identification sessions, field equipment demonstrations, and a film screening. Questionnaire-based feedback captured participants' perceptions and informed improvements for future workshops.

Progress under Objective 4 included data analysis of mammalian fauna in Changthang and Drass, with refined survey frameworks for the Tibetan Gazelle. Detailed planning for new deployments was initiated in coordination with Indian Army logistics.

In support of Objective 6, interviews and site assessments were conducted in Drass. Brown bear sightings – including a mother and cub emerging early from hibernation – were documented. Garbage management reviews, community interactions, and dog population counts provided evidence for targeted conflict mitigation.

For Objective 2, compost output from OWC machines was evaluated during follow-up visits and shared with army units for further integration into eco-cell operations.

### **Activities Undertaken During Quarter 4 (January–February 2025)**

The fourth quarter marked a period of tangible achievements.

For Objective 5, the long-awaited sterilization programme was implemented in Tsog Tsalu and Nag Lungpa in February 2025, where 133 dogs were sterilized. Detailed demographic profiling by age, weight, and sex was conducted. In January, an additional 127 dogs were sterilized in Durbuk, Tsog Tsalu, and Hot Spring formations. These interventions reduced the threat to ground-nesting birds and improved security within army camps.

Under Objective 3, World Wetland Day was celebrated on February 1, 2025 at Sindhu Ghat, Leh, in collaboration with the Wildlife Protection Department and Wetlands International. Activities included a quiz competition and the flag-off of the Asian Waterbird Census, raising awareness of wetland conservation among both army and civil participants.

The project also expanded its research capacity with three new recruits in February 2025: Marmagya Sharma as Research Fellow, and Arjumand Banoo and Prakruthi GM as Field Assistants. Training modules on wildlife laws, biodiversity treaties, climate policies, and community-based approaches were developed to align with project objectives.

Overall, the project achieved measurable progress across all six objectives, laying a strong foundation for scaled conservation action in 2025–26.

## Annexure I



Image 1: A breeding pair of BNC with a juvenile



Image 2: Free Ranging Dog near the BNC in Puga



Image 3: Field visit for ABC sterilization program at Hanle





Image 4: OWC installation and operation at pilot site

## BNHS – Conservation Education Centre, Mumbai

**Team:** Ms Aqsa Majgaonkar (Senior Education Officer), Ms Priyadarshini Supekar (Education Officer) and Mr Shardul Bajikar (Education Officer)

### 1. Visitor Footfall Summary

From April 2024 to March 2025, BNHS Conservation Education Centre (CEC), Mumbai recorded a total footfall of 5,902 visitors, comprising 4,566 non-members and 1,336 members. Visitors participated in activities such as nature trails, educational programmes, CSR events, field courses, and online webinars.

Month	Non-members	Members	Total Visitors
Apr-24	143	55	198
May-24	121	72	193
Jun-24	193	119	312
Jul-24	509	72	581
Aug-24	786	143	929
Sep-24	429	126	555
Oct-24	1197	92	1289
Nov-24	191	109	300
Dec-24	303	140	443
Jan-25	270	184	454
Feb-25	276	130	406
Mar-25	148	94	242
Total	4566	1336	5902

#### The highest attendance was seen in:

- October 2024: 1,289 visitors
- August 2024: 929 visitors
- July 2024: 581 visitors

This consistent engagement highlights growing awareness and enthusiasm for nature-based learning across Mumbai and beyond.

### 2. Programme and Outreach Summary

During 2024–25, CEC Mumbai organized more than 120 programmes including:

- General and theme-based nature trails
- Workshops and online courses
- CSR activities with corporate partners
- Educational visits for schools and colleges
- Announced events open to BNHS members and the public

<b>School/College/CSR/Private/Course/Announced Events/Visits 2024-25</b>				
<b>Sr. No.</b>	<b>Date of Visit</b>	<b>Name</b>	<b>Event Type + Nature Trail</b>	<b>Participants/ Footfall</b>
1	14-Apr-24	Summer Flower and Fruit Walk	Announce Prog	29
2	14-Apr-24	Ornithology Course field visit - Padle	Course	8
3	04-May-24	CAT Capacity Building Workshop (overnight)	CSR	12
4	11-May-2024	Wrap-up session - LeadBio at CEC	Course	11
5	5-June-2024	World Environment Day Trail at CEC	Announce Prog	38
6	5-June-2024	World Environment Day Trail at Nehru Science Centre	Private	25
7	08-Jun-24	Programmes Dept CSR Activity "Know Your Trees"	CSR	32
8	15-Jun-24	Tatarealty CSR Bapsy Patel	CSR	17
9	16-June-2024	Drizzle Mizzle	Announce Prog	15
10	22-June-2024	Monsoon Magic Trail (SD)	Announce Prog	25
11	23-June-2024	Dr. Salim Ali Point Trail (SD)	Announce Prog	30
12	23-June-2024	Wild Flower and Fungi Walk	Announce Prog	38
13	30-June 2024	SGNP Bird Count	Announce Prog	NA
14	06-July-24	Pooja Singhania Group visit at CEC	Private	60
15	7-July-2024	Inaugural Session LeadBio and Botany at CEC	Course	25
16	14-July-2024	Inaugural Session Herpetology Webinar (+LeadBio)	Course	20
17	15-Jul-24	Divine High School, Andheri (Titus)	School/College	36
18	16-July-2024	Naturalist Explorers (Auditorium Booking)	Private	46
19	26-July-24	Naturalist Training Workshop at CEC	Announce Prog	16
20	28-July-2024	Ms. Krishna Padia (Family and Friends)	Private	17
21	2nd-4th August 2024	Amboli Field Camp	Course	13
22	10-Aug-24	Geeta Ved (Family and Friends)	Private	37
23	10-Aug-24	Shrinivas Poojari	Private	8
24	11-Aug-24	Nature Immersion Walk by Vinay Jain	Private	14
25	11-Aug-24	Nitya Aggarwal (Discovery room booking)	Private	34
26	15-Aug-24	Averill Maben group	Private	6
27	17-Aug-24	St. Joseph's Convent High School visit at CEC	School/College	102
28	18-Aug-24	Mushroom Walk at CEC (Sashirekha S.)	Private	17
29	18-Aug-24	Catholic Medical Guild of St. Luke Bombay	School/College	15
30	23-Aug-24	Parle Tilak Vidyalaya, Parle East visit at CEC	School/College	47
31	25-Aug-24	Ornithology Inaugural Session at CEC	Course	25
32	25-Aug-24	Butterfly Inaugural session at CEC (Webinar)	Course	12
33	26-Aug-24	Infinity cars 2000 saplings plantation	CSR	NA



Sr. No.	Date of Visit	Name	Event Type + Nature Trail	Participants/ Footfall
34	28-Aug-24	Covent Girls High school, Dadar	School/College	52
35	30-Aug-24	Dosibai Jeejeebhoy school nature trail	School/College	51
36	31-Aug-24	Ajmera Global school	School/College	108
37	31-Aug-24	Worley Forest clean-up activity	CSR	50
38	01-Sep-24	Worley Kitchen garden	CSR	34
39	01-Sep-24	Herpetology course webinar	Course	12
40	01-Sep-24	Botany course webinar	Course	12
41	01-Sep-24	Avinash Khule group	Private	8
42	05-Sep-24	Kitchen garden workshop online for L&T	CSR	25
43	06-Sep-24	SIES school visit	School/College	90
44	9-11-Sept-2024	IIT Bombay Survey	Survey	NA
45	14-Sept-2024	Karvi Trail	Announce Prog	42
46	15-Sept-2024	Karvi Trail	Announce Prog	25
47	15-Sep-24	Butterfly course field visit - Neha Mujumdar	Course	6
48	20-22-Sept-2024	Field Camp to Goa	Course	15
49	21-Sep-24	Rufuna Fernando KPGM CSR Trail	CSR	97
50	22-Sept-2024	Karvi Trail	Announce Prog	62
51	22-Sept-2024	Botany Course Visit	Course	6
52	22-Sept-2024	Deepti Danait (Private group)	Private	21
53	22-Sept-2024	Hetal Barot	Private	19
54	25-Sep-24	Adarsha Vidyalaya	School/College	99
55	27-Sept-2024	Nitya Aggarwal (School)	Private	49
56	28-Sept-2024	Katie Bagli Book release and Nature Trail	Announce Prog	27
57	29-Sep-24	Ornithology Webinar	Course	40
58	29-Sep-24	Dr. Kothari's Karvi trail on 29th September 2024	Private	75
59	01-Oct-24	Nitya Aggarwal - Discover room	Private	45
60	02-Oct-2024	Nitya Aggarwal - Discover room	Private	34
61	03-Oct-2024	Nitya Aggarwal - Discover room	Private	48
62	05-Oct-2025	Karvi Trail	Announce Prog	23
63	06-Oct-2025	Karvi Trail	Announce Prog	62
64	06-Oct-2025	Botany and Leadbio Field Visit at BPS	Course	9
65	13-Oct-24	Thakur College (Teachers group)	School/College	37
66	13-Oct-24	Programmes Dept Butterfly Trail	Announce Prog	14
67	17-Oct-24	Atul Garg Private Group	Private	19
68	17-Oct-24	The Golden Spiral School	School/College	41
69	19-Oct-2024	Butterfly Festival	Announce Prog	61

Sr. No.	Date of Visit	Name	Event Type + Nature Trail	Participants/ Footfall
70	20-Oct-2024	Butterfly Festival	Announce Prog	21
71	20-Oct-2024	Sunder Notani (Family and Friends)	Private	12
72	20-Oct-2024	Ornithology Webinar	Course	40
73	20-Oct-2024	Butterfly Webinar	Course	12
74	26-Oct-2024	Teacher Training Workshop	Announce Prog	7
75	09-Nov-24	Ornithology Wrap-up session	Course	12
76	13-Nov-24	Sane Guruji English Medium School (Dadar)	School/College	160
77	14-Nov-24	Shree BAK Swadhyay Bhavan School (Matunga)	School/College	179
78	15-Nov-24	Shree BAK Swadhyay Bhavan School (Matunga)	School/College	282
79	16-Nov-24	Nitya Aggarwal (Discovery room booking)	Private	48
80	16-Nov-24	Roots Nature Club (Amphitheatre Booking)	Private	10
81	17th Nov 2024	Walk in the Woods (Scaly Tales)	Announce Prog	34
82	22-Nov-2024	Naturalist Explorers (Discovery Room Booking)	Private	40
83	23-Nov-2024	Roots Nature Club (Amphitheatre Booking)	Private	8
84	24-Nov-2024	Bijal Ashar Matani (Eco-birthday celebrations)	Private	16
85	29-Nov-2024	Sr. Mary's School, ICSE, Mazgaon	School/College	32
86	30-Nov-2024	Roots Nature Club (Amphitheatre Booking)	Private	10
87	07-Dec-2024	Santacruz (West) Edu. Soc. Trust School	School/College	41
88	07-Dec-2024	Roots Nature Club (Amphitheatre Booking)	Private	13
89	07-Dec-2024	Worley India Pvt. Ltd. CSR	CSR	13
90	08-Dec-2024	Ruchita Kadam (Eco-day/Birthday)	Private	29
91	08-Dec-2024	Webinar Ornithology and LeadBio	Course	45
92	13-Dec-2024	Comini Microschool	School/College	11
93	14-Dec-2024	Worley India Pvt. Ltd. CSR	CSR	37
94	14-Dec-2024	Ruia college lifescience	School/College	38
95	17-Dec-2024	Deepak Shah	Private	5
96	19-Dec-2024	Golden Spiral School	School/College	42
97	21-Dec-2024	Nitya Aggarwal (Discovery room booking)	Private	14
98	21-Dec-2024	Gandhi Shikshan Bhavan (Shri I J Patel High School)	School/College	30
99	22-Dec-2024	Naturalist Explorers (Discovery room booking)	Private	34
100	22-Dec-2024	Field Visit to Byculla Zoo (LeadBio and Botany)	Course	6
101	22-Dec-2024	Field Visit to T. S. Chanakya (Ornithology)	Course	16
102	27-Dec-2024	Mohua Sen (Entry fees)	Private	2
103	25-Dec-2024	Laura Lewis	Private	13
104	27-Dec-2024	Kanakalata Narayanan	Private	3

Sr. No.	Date of Visit	Name	Event Type + Nature Trail	Participants/ Footfall
105	29-Dec-2024	Angel's Xpress Foundation Nature Trail	CSR	45
106	4-Jan-2025	Ms. Archana Tiwari (Next Services) CSR Workshop	CSR	21
107	4-Jan-2025	Dhaval Shah (payment by Rahul Mehta)	Private	8
108	10-Jan-2025	Ruchika Lall (IIHS UFP student visit) Auditorium charges - Nikit Survey	Private	24
109	10-12-Jan-2025	Goa Field Camp (Ornithology and LeadBio Courses)	Course	15
110	12-Jan-2025	Shruti Agrawal (Juhu Walk/Nature Walk at Juhu)	Private	14
111	11-Jan-2025	Roots Forest School (Pooja Hemdev Lalwani)	Private	8
112	18-Jan-2025	Roots Forest School (Pooja Hemdev Lalwani)	Private	8
113	26-Jan-2025	Kritika Matolia	Private	15
114	16-Jan-2025	Ashish Tour (School Visit)	School/College	149
115	19-Jan-2025	Aaditya Samant.(Know Your Surroundings)	Private	12
116	29-Jan-2025	Adarsh Vidyalaya, Chembur (Kishor Jadhav)	School/College	150
117	30-Jan-2025	Ashish Tour (School Visit) Children's Academy	School/College	218
118	31-Jan-2025	Ashish Tour (School Visit) Children's Academy	School/College	199
119	07-Feb-2025	SP Jain School of Global Management (BBA = Bachelors of Business Administration)	School/College	87
120	08-Feb 2025	Manoj Chaudhari (CSMV) Museum Staff and Family	Private	10
121	15-Feb-2025	Wrap-up Session - Herp, Butterfly and Botany	Course	10
122	28-Feb-2nd March 2025	Bharatpur-Chambal Field Camp LeadBio and Ornithology	Course	23
123	01-March-2025	Nandita Desai (Eco-day with Naturalist F)	Private	38
124	02-March-2025	Programmes Dept Nature Trail	Announce Prog	28
125	08-March-2025	Roots Nature Club (Amphitheatre Booking)	Private	10
126	23-March-2025	Walk in the woods	Announce Prog	12
127	29-March-2025	Credible Engg Construction Projects (Donation)	Donation	NA
<b>Total</b>				<b>4667</b>

Signature events included Drizzle Mizzle, Karvi Bloom Trail, Butterfly Festival, Children's Day Week, Wildlife Week, and Walk in the Woods. These made environmental education more engaging and accessible for a wide audience.

### **Educational Courses and Capacity Building**

#### **BNHS CEC offered five hybrid certificate courses:**

- Leadership in Biodiversity Conservation
- Basic Course in Ornithology
- Basic Course in Herpetology
- Basic Course in Butterfly Studies
- Basic Course in Botany



**115 participants from across India enrolled. Each course included:**

- Live webinars with experts
- On-ground field visits and camps
- Practical identification and research skills
- Peer presentations and wrap-up sessions

Participation was strong from Mumbai, West Bengal, Karnataka, and other regions.

**Field Camps: Immersive Learning**

Field camps provided hands-on exposure in biodiversity-rich regions:

**a. Amboli (August 2024) – Herpetology****Participants observed species such as:**

- Malabar Gliding Frog
- Amboli Toad
- Banded Gecko
- Pit Vipers and Vine Snakes

**b. Goa (September 2024 & January 2025) – Ornithology & Herpetology****Field sites included:**

- Bhagwan Mahavir Wildlife Sanctuary
- Bondla Sanctuary and Tambdi Surla

**Highlights:**

- 95+ bird species including Malabar Hornbill, Hill Myna
- Luna Moth, Skittering Frogs, and 5 Pit Vipers

**c. Bharatpur–Chambal (Feb–Mar 2025) – Avifauna & Wetland Ecology****Field sites included:**

- Bharatpur Bird Sanctuary
- Chambal River

**Highlights:**

- Indian Skimmers, Painted Storks, Gharials
- Interacted with BNHS scientists working on conservation projects

**CSR Initiatives****a. Tree Plantation Drives**

- Performance Cars Pvt. Ltd.: 500 native saplings planted in Navi Mumbai
- Infinity Cars Pvt. Ltd.: 2,000 saplings across Maharashtra

Species planted included:

- Jamun (*Syzygium cumini*), Jackfruit, Amla, Arjun, Karanj, Jarul, among others

**b. Engagement-Based Activities****Corporate teams participated in:**

- Bund-building (Tata Realty)
- Fireline maintenance (Worley India)
- Kitchen garden creation (L&T)

These activities encouraged sustainable engagement and ecological responsibility among employees and volunteers.

**School and College Engagement****CEC-Mumbai welcomed over 40 academic institutions. Key events included:**

- Children's Day Week (Nov 2024)

601 students from three schools explored CEC trails, biodiversity videos, and participated in interactive sessions.

- Ramnarain Ruia College (Life Sciences Dept)  
Explored butterfly and plant interactions.
- S. P. Jain College (Feb 2025)  
Sustainable CSR-focused nature trail and biodiversity session.

**Children's Academy, Matunga**

500+ students in multiple batches explored BNHS Nature Reserve.

All visits included biodiversity presentations and conservation discussions, with participants appreciating the experiential learning and naturalist-led sessions.

**Signature Events**

- World Environment Day (June 5, 2024)

Theme: Know Your Trees

Trails conducted at BNHS CEC Mumbai and Nehru Science Centre, focusing on tree identification and ecology.

- Wildlife Week (October 4–6, 2024)

Karvi Trail with flowering observations, screening of BNHS conservation work on the MTHL project, interactive sessions on butterflies, birding, and flora.

- Butterfly Festival (October 19–20, 2024)

Activities included an egg-to-butterfly life cycle walk, forest trails, butterfly spotting, and children's drawing sessions.

- ["Walk in the Woods" Trails](#)

Monthly forest walks led by naturalists for BNHS members with seasonal biodiversity interpretation and birding.

**9. Webinars and Virtual Engagement**

Experts conducted webinars with over 100 participants. Notable topics:

- Conservation Breeding (Dr. Kazveen Umrigar) – vulture breeding and endangered species recovery
- Avian Crisis & Rescue – identifying, reporting, and assisting bird rescues
- Grassland Bird Conservation (Dr. Sujit Narwade) – Great Indian Bustard and Lesser Florican protection

These sessions were part of hybrid courses but also open to the public.

The year 2024–25 was marked by increased public engagement, and collaborative field efforts.

**BNHS CEC-Mumbai continues to strengthen its mission through:**

- Experiential learning
- Community-based conservation
- Online–offline hybrid approaches

Together, we move toward an informed and ecologically responsible society.

## PUBLICATIONS

**Team:** Vibhuti Dedhia, Assistant Director, Publications

Sonali Vadhavkar, Publications Officer

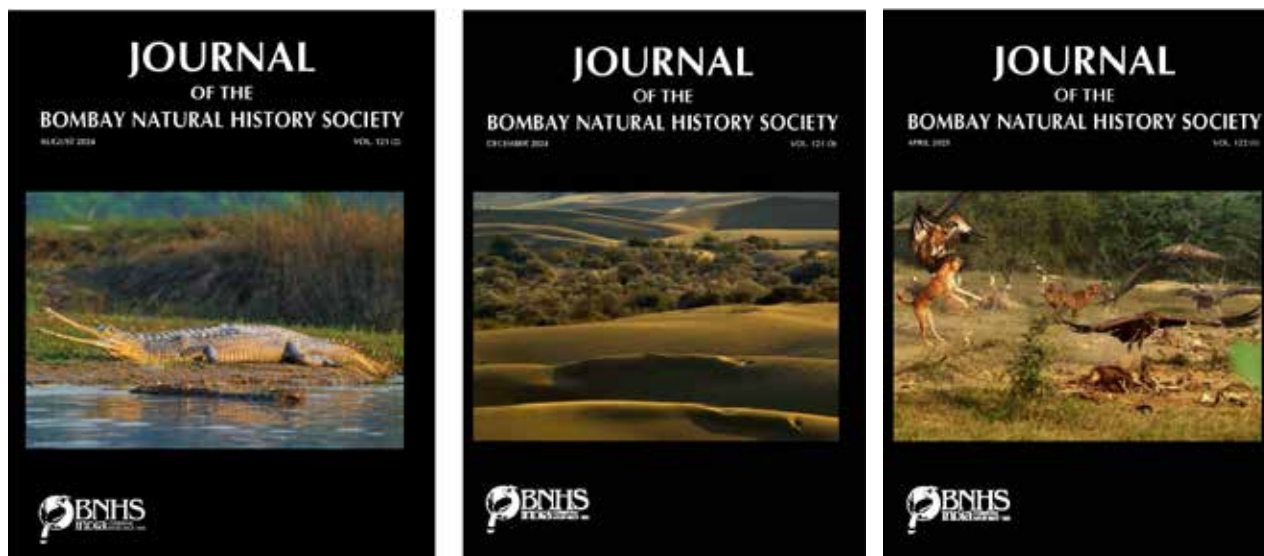
Gopi Naidu, Consultant Designer

Sanchita Kadge, Assistant Designer

The Department continued its commitment to the dissemination of scientific knowledge and the promotion of biodiversity conservation in India. Throughout the reporting period, the Publications team actively developed and published new content, provided editorial and design support across the Society's other Departments.

*Journal of the Bombay Natural History Society:*

Published since 1886 the Journal of the Bombay Natural History Society (JBNHS) is the earliest publication of the Society. It remains one of the most respected and long-standing repository of knowledge in the domains of natural history, biodiversity, and conservation science. It serves as an essential resource for students, researchers, and conservationists across the Indian subcontinent and adjoining countries.



- During the period April 2024-March 2025, A total of 58 contributions – 14 Main, 2 New Description and 42 Miscellaneous Notes – for Vol. 121(1–3) and Vol 122(1), were edited, designed and first published online on the JBNHS website.
- A total of 65 papers were later redesigned, proof read and published in the print copy of Vol 121 (1), (2), & (3) (between January and December 2024 of which 11 are main articles, 1 New Description 54 miscellaneous notes, and 2 book reviews.
- Print copy of Vol 121(1), (2), & (3) were sent to press, printed, and delivered to the Membership Department for dispatch to subscribers.
- 13 papers and of Vol. 122 were first published online between January and March 2024.
- The Department continued to coordinate peer reviews, update databases, and manage technical queries with the support of Informatics Publishing Pvt. Ltd. The integration of modern payment options – including UPI via Razorpay – now facilitates seamless online transactions on the JBNHS portal.

*Hornbill:*

Launched in 1976 to commemorate Dr Sálim Ali's 80th birthday, Hornbill remains a key communication tool for BNHS members. It presents conservation and natural history stories in accessible, non-technical language, and serves as a platform for members to share their observations and insights.





- a. During the period April 2024–March 2025, four issues of the Hornbill – April-June, Jul-Sep & Oct-Dec 2024, and Jan-Mar 2025 were published.
- b. The print and digital copy of the issues for 2024 were delivered to the Membership Dept for distribution to members.

#### **Books:**

##### **Digitization:**

The Department has undertaken the task of digitizing select titles of the Society that cannot be reprinted through contemporary methods. In the reporting year, we have undertaken the digitization of the 'Handbook of the Birds of India and Pakistan'.

##### **Existing Titles Reprinted:**

- a. 'The Book of Indian Birds' by Sálím Ali
- b. 'Bharat ke Pakshi' by Gayatri Ugra (Hindi translation of 'The Book of Indian Birds' in)

##### **Titles under preparation:**

- a. Mammals of India by A.J.T. Johnsingh and P.O. Nameer

##### **Others**

Besides developing educational material for academicians and nature enthusiasts the Publications Department lends editorial and design support (including three regional languages) to the other Departments (Research, Administration, Accounts, Programmes, CMD, Director Office) of the BNHS for their publications (scientific, popular, and others).

## **CENTRAL MARKETING DEPARTMENT**

**Team:** Sandesh Kadam, Sales Manager

Anushree Gurav Accounts Assistant, Amzad Hussain Office Attendant

**Funding sources:** Corporates and Individual contributions

**Objective:** New Products, Publications, Membership, Donations and Exhibitions

**Duration of the project:** April 24 to March 25





#### New Products:

- Wildlife Jewellery (Earring and Necklace),
- Magnet and Clips,
- Big Cats – Wall Calendar 2025,
- Coffee Mugs.

#### Product sales and Outreach:

- CMD celebrated World Environment Day WED (June 3–21, 2024) by setting up stalls at 14 corporates, raising awareness and selling products/memberships.
- Secured sponsorship for the Product Catalogue 2024–2025.
- Enrolled new corporate members (TVS Motors Co. Ltd. and Tata Power Co. Ltd.).
- Received advertisements for Hornbill magazine.
- Sold BNHS publications and other nature-related books.

CMD also received generous donations from both members and non-members. A total of 28 exhibitions were organized in and outside Mumbai.

## BNHS-EIACP CENTRE

**Team :** Dr Sujit Narwade Dy. Director & Co-ordinator EIACP  
 Mr Nandkishor Dudhe Programme Officer  
 Ms Natasha Girkar Information Officer  
 Mr Niraj Patel IT Officer  
 Mr Yogesh Dhamnaskar Data Entry Operator

#### The EIACP Resource Partner on Avian Ecology at BNHS engaged in:

- Publishing newsletters
- Organizing awareness and outreach activities (online & offline)
- Maintaining and updating the open-access avian database
- Celebrating environmental days with events and competitions
- Releasing knowledge products on avian ecology and conservation

Date of establishment of EIACP Centre: June 18, 1996

Name and designation of EIACP coordinator: Dr. Sujit Narwade, Dy. Director, BNHS

Grants received by the EIACP Centre during the Financial Year 2024–2025

Sr. No.	Type of Grants received	Total Amount received	Total Amount utilized	Unspent balance
1	Recurring Grants	24,02,000/-	22,93,000/-	1,09,000/-

### BUCEROS Newsletters published by the BNHS-EIACP Centre

In the financial year 2024-25, BNHS-EIACP published three issues of the BUCEROS newsletter (Vol. 29. No. 1–3). These included:

- ENVIS news, organizational updates, national and international highlights
- Articles such as:
  - Release of tagged vultures into the wild
  - GPS-tagged Whimbrel sighted in Chhattisgarh
  - The Crane Festival at Khichan, Rajasthan
  - Erythrism in House Sparrow (*Passer domesticus*)
  - Aberrant Coloration in Common Coot,
  - Leucistic Scaly-breasted Munia (*Lonchura punctulata*) in Ghansoli grasslands
  - Rare Long-toed Stint (*Calidris subminuta*) in suburban Mumbai
  - Falcated Duck (*Mareca falcata*) at Nangal Wetland in Punjab
  - Indian Cormorants feeding on Bullfrogs in Junagadh, Gujarat

Each issue also featured **bird posters** designed to raise awareness about bird conservation.

### Capacity Building Programme

#### *Workshop on Bird Identification and Basic Ornithology at Alibaug, Raigad, Maharashtra*

To mark *Bird Week* (November 5–12, 2024), BNHS-EIACP, in collaboration with the Vidyasan Educational Foundation, Alibaug, organized a two-day '*Bird Identification and Basic Ornithology Workshop*' under the Mission LiFE initiative at Akshi, Alibaug, Maharashtra, on November 9–10, 2024. The workshop welcomed sixteen participants from diverse age groups and backgrounds, including locals, students, and birdwatchers, all eager to enhance their birdwatching skills, learn about avian ecology, and practice responsible birdwatching. Resource materials – such as a bird brochure on the birds of Maharashtra and a copy of the *BUCEROS* newsletter featuring an article on Akshi Beach – were provided to all participants. Led by Programme Officer Mr. Nandkishor Dudhe, sessions covered basic bird identification tools, migratory bird patterns, wader species recognition, and the use of eBird for recording sightings. Participants also took part in interactive activities, including a lively 'Know Your Birds' quiz that reinforced key concepts. On the second day, a hands-on birdwatching session was held at Akshi Beach, where participants practiced using eBird to document sightings. Highlights included tagged shorebirds such as Sand Plovers and Ruddy Turnstones, along with other species including Great Knots, Terek Sandpipers, Gulls, and Terns. Information Officer Ms. Natasha Girkar and IT Officer Mr. Niraj Patel provided support throughout the event. The workshop was well received, with many participants expressing enthusiasm to further engage in bird conservation efforts. This initiative not only strengthened bird identification skills but also empowered participants to contribute to local biodiversity records, supporting conservation at both regional and national levels.

#### *Training Programme for Frontline Staff of Nashik Forest Division, Maharashtra*

On December 12–13, 2024, the BNHS Wetland Project, in collaboration with the EIACP Resource Partner on Avian Ecology, conducted a Training Programme at Gangapur Forest Nursery, Nashik. The event trained 27 frontline staff of the Nashik Forest Division in bird identification and migration study techniques, with a focus on the Central Asian Flyway (CAF). Sessions included bird monitoring, handling, and ringing techniques, complemented by field activities such as birdwatching trails and the Block Count method. Participants documented 27 bird species and gained practical experience in avian conservation methods. Supported by senior forest officials, the workshop emphasized the importance of migratory bird monitoring and highlighted the CAF National Action Plan as a framework for conservation action.



### *Citizen Science Initiative: Bird Survey in Bundi district, Rajasthan*

On World Wildlife Day, March 03, 2025, a Citizen Science Program focusing on a bird survey was launched in the Bundi district of Rajasthan. This initiative was organized by the BNHS-EIACP centre, in collaboration with the Ramgarh Vishdhari Tiger Reserve (RVTR).

The two-day event aimed to engage local communities in conservation and raise awareness about the birdlife of Bundi. On the first day, BNHS-EIACP presentations introduced participants to bird ecology and counting methods. Dr. Sujit Narwade, EIACP Coordinator and Deputy Director of BNHS, discussed bird ecology and census techniques. The frontline staff of RVTR and local citizens were introduced to *eBird*, a widely used bird-recording platform. Ms. Natasha Girkar, Information Officer at BNHS-EIACP, delivered a step-by-step guide on using *eBird*. Shri Arbind Jha, Deputy Conservator of Forests (DyCF), RVTR, welcomed participants and provided background on the event. Both sessions were also accessible online.

On March 4, 2025, participants received hands-on training in birdwatching within the RVTR core area, which covered counting methodology, birdwatching ethics, and *eBird* usage. The group recorded 33 bird species across Jarbanda Lake and Bherupura Antri. Key observations included Comb Duck (*Sarkidiornis sylvicola*), Gadwall (*Mareca strepera*), Northern Pintail (*Anas acuta*), Ruddy Shelduck (*Tadorna ferruginea*), and Northern Shoveler (*Spatula clypeata*). Other species recorded included Indian Thick-knee (*Burhinus indicus*), Grey Francolin (*Ortygornis pondicerianus*), Indian Grey Hornbill (*Ocyrceros birostris*), and White-bellied Drongo (*Dicrurus caeruleus*). Additionally, two Marsh Crocodiles (*Crocodylus palustris*) were spotted basking on the banks.

Participants described the experience as highly rewarding and were encouraged to continue using *eBird*. Many successfully uploaded their sightings, contributing to citizen science efforts and long-term avian monitoring in the region.

### *Celebration of World Migratory Bird Day*

On World Migratory Bird Day, May 11, 2024, the BNHS-EIACP released a poster titled “Ducks, Geese & Swans of Maharashtra – Part 1”.

The poster showcases 14 species inhabiting Maharashtra’s wetlands, while emphasizing:

- The importance of conserving migratory birds and their habitats
- Threats these birds face
- The need for global cooperation in bird conservation

### *Celebration of World Environment Day*

BNHS-EIACP actively participated in World Environment Day (WED)-2024 (June 5, 2024), themed ‘Land Restoration, Desertification, and Drought Resilience’.

### **Key Activities:**

**1. Online Infographic Posters** (May 15–25, 2024): A series of posters addressing the WED 2024 theme.

**2. Competitions & Campaigns:**

- *Online Drawing Competition*: 32 students (Classes 5–7 and 8–10) submitted entries on the theme *Birds Around Us*.
- *Online Photography Competition*: 13 entries received on *Geotagged photos of land degradation/restoration sites*, including 5 from students.
- *Online Quiz Competition (Monsoon Breeding Birds)*: 169 participants, including 84 students, joined nationwide.
- *Online Slogan Competition*: 37 entries submitted by students on the theme *Stop Deforestation*.
- *Tree Plantation Drive*: 69 entries with geotagged plantation photos submitted online.
- *Online Quiz on Bird Conservation*: 31 participants, including 18 students.

### 3. Monsoon Birdwatching Trail (June 8, 2024):

Conducted at Bhandup Pumping Station, Mulund, a well-known birding hotspot adjoining salt pans and mangroves. Eight participants joined, observing 25 bird species. Programme Officer Mr Nandkishor Dudhe led the trail, supported by Ms Natasha Girkar.

### 4. Online Webinar (June 4, 2024)

*Role of Butterflies in Ecology and Climate Awareness* by Mrs Ruchi Dave (Range Forest Officer, Vyara Division, Gujarat Forest Department).

- Attended by 117 participants.
- Covered butterfly diversity, rearing techniques, host plants, pollination, ecotourism, and their role as indicator species.
- The recorded session is available on the BNHS-EIACP YouTube Channel: [https://youtu.be/ZTyKiviS22Q?si=6AtuJLt7In0a\\_1jW](https://youtu.be/ZTyKiviS22Q?si=6AtuJLt7In0a_1jW)

## Celebration of Hariyali Saptah

BNHS-EIACP celebrated Hariyali Saptah (July 1–7, 2024) by organizing a series of engaging activities.

### Key Activities:

- *Poster on 'Woodpeckers of Maharashtra':* A poster titled *Woodpeckers of Maharashtra* was released, highlighting 13 woodpecker species found in the state's forests and showcasing Maharashtra's rich avian diversity.
- *Online Quiz Competition:* An online quiz on *Monsoon Birds* was conducted, encouraging participants to test their knowledge and learn about bird species associated with the monsoon season. The event received enthusiastic participation across age groups, promoting awareness of avian biodiversity.
- *Monsoon Birdwatching Trail:* Held on July 6, 2024, at the wetlands near T.S. Chanakya, Nerul, Navi Mumbai, this trail offered participants the chance to observe 29 bird species, including Greater and Lesser Flamingos, Whimbrel, Purple Swamphen, Yellow-eyed Babbler, Jacobin's Cuckoo, and White-breasted Waterhen. The highlight was the sighting of a nesting Oriental Magpie-robin.
- *Short Video Making Competition:* Students were invited to create short videos emphasizing the importance of planting and conserving native trees. Two videos were submitted, providing a creative platform for students to showcase their understanding of environmental conservation.
- *Plantation Drive ("एक पेड़ माँ के नाम" अभियान):* A tree plantation drive was organized, inviting participants to submit geotagged photographs of their plantations through a Google form. Three entries were received.

## Wildlife Week celebrations

BNHS-EIACP organized several activities to celebrate **Wildlife Week-2024 (October 2 to 8, 2024):**

1. **Online Quiz Competition:** A quiz on *Know Your Birds* was conducted, engaging 679 participants and fostering bird conservation awareness.
2. **Photography Competition:** An online contest was held in four categories: (a) Bird Portraits, (b) Birds of Prey, (c) Birds in Forest Habitat, and (d) Bird–Plant Relationships. A total of 100 participants submitted entries, and winners received prizes.
3. **Webinar – The Story of the Vanishing Vultures:** On October 2, 2024, Dr. Kazveen Umrigar, Conservation Breeding Specialist at BNHS, delivered an insightful session attended by around 90 participants, focusing on the threats faced by vultures and ongoing conservation efforts.
4. **Poster Release – Bee-eaters of India:** A poster highlighting six striking species of bee-eaters was launched, showcasing their vibrant plumage and impressive aerial acrobatics.

### *Wildlife Week celebration in Karnataka*

During Wildlife Week (October 2–8th, 2024), activities were conducted at two locations in Karnataka:

- **Kalaburgi:** On October 6, 2024, Dr. Sujit Narwade (Dy. Director, BNHS & EIACP Coordinator) delivered a session on the significance, threats, and avifauna of grasslands at Sharanbasaveshwar College of Science. He was supported by IT Officer Niraj Patel and members of the BNHS Lesser Florican Team, Mr. Rushikesh Pawar and Ms. Meenal Pawar.
- **Bidar:** On October 7, 2024, a poster competition on *Threats to the Grassland Ecosystem* and a quiz on *Wildlife of India* were organized at Karnataka Degree College. Three winners were awarded prizes. After the session, students, faculty, and BNHS representatives – Dy. Director BNHS & EIACP coordinator Dr Sujit Narwade and IT Officer Mr Niraj Patel along with BNHS Lesser Florican Team - Rushikesh Pawar and Meenal Pawar – visited a habitat restoration site at Sisri-Aurad.

### **Forest Owlet Conservation Day**

To mark **Forest Owlet Conservation Day** (October 24, 2024), BNHS-EIACP engaged with 130 students from Z.P. School, Mahuli village (near Tansa Wildlife Sanctuary, Thane district, Maharashtra). The Forest Owlet (*Athene blewitti*), first detected in this region in 2014, is listed as *Endangered* on the IUCN Red List. A special documentary about the species was screened, followed by an interactive session on bird ecology and identification, led by Programme Officer Mr. Nandkishor Dudhe. Brochures and posters about Maharashtra's birds were also distributed. The event was supported by Ms. Natasha Girkar (Information Officer) and Mr. Niraj Patel (IT Officer). Participants expressed hope for the conservation of the Forest Owlet's in Tansa's forests and across its range in Central India and the northern Western Ghats.

### **Exhibition stall at Parvati Arga Wildlife Sanctuary, Gonda District, Uttar Pradesh**

On World Wetlands Day (February 2, 2025), BNHS-EIACP set up an informative and interactive exhibition stall at Parvati Arga Wildlife Sanctuary, Gonda District, Uttar Pradesh. The stall showcased posters and knowledge products on wetland ecosystems and bird diversity, aiming to raise awareness about the importance of wetlands in biodiversity conservation. The stall was visited by Shri Yogi Adityanath, Chief Minister of Uttar Pradesh, and Shri Kirti Vardhan Singh, Union Minister of State for Environment, Forest and Climate Change. Programme Officer Mr. Nandkishor Dudhe briefed them about BNHS-EIACP's activities. The exhibition received an overwhelming response, reflecting growing interest in wetland conservation. Such initiatives play a crucial role in fostering environmental consciousness and inspiring collective action to safeguard wetlands for a sustainable future.

### **Commemoration at Karmaveer Bhaurao Patil College, Navi Mumbai**

On February 1, 2025, the BNHS was invited by the Navi Mumbai Environment Preservation Society (NMEPS) to participate in the commemoration of World Wetlands Day at Karmaveer Bhaurao Patil College, Navi Mumbai. As part of this meaningful event, Ms Natasha Girkar from BNHS delivered an insightful session on Wetland Ecosystems, emphasizing their vital role in biodiversity conservation and the urgent need for their protection to support global environmental health. The event also featured engaging competitions, including elocution and short-video contests, with participation from students representing eight colleges across Navi Mumbai. A distinguished panel of activists and legal experts shared valuable perspectives on environmental protection. The event was graced by the presence of Shri Deepak Khade, Divisional Forest Officer, Government of Maharashtra, as the Chief Guest. Reaffirming our commitment to Protecting Wetlands for Our Common Future, BNHS continues to contribute actively to this important cause.

### **Poster released on theme 'Storks of India'**

The EIACP-RP on Avian Ecology at the Bombay Natural History Society released a poster on the "Storks of India". The poster highlights eight species of storks found in India – large, long-legged, and long-necked wading birds with long, stout bills – showcasing their ecological importance.



**World Sparrow Day**

On the occasion of World Sparrow Day (March 20, 2025), the BNHS-EIACP released a knowledge product in the form of a poster on Sparrows of India, aiming to raise awareness about the species and their conservation.

**Mass Awareness Programme****Eco Clubs for Mission LiFE Project at School Level:**

The National Education Policy 2020 emphasizes that all students should acquire knowledge and skills in areas such as environmental awareness, water and resource conservation, sanitation, and hygiene. Under the Eco Clubs for Mission LiFE initiative, we resolve to practice mindful and responsible resource use to reduce our carbon footprint, guided by experiential learning as part of Education for Sustainable Development (ESD). We also commit to informing peers and communities about eco-friendly practices and to adopting environmentally responsible behaviour.

**South Indian Education Society (SIES) High School, Matunga (East), Mumbai, Maharashtra**

On August 9, 2024, the BNHS-EIACP organized a session on Monsoon Breeding Birds for students of classes 6 to 9 at SIES High School, Matunga, Mumbai. The session, part of Mission LiFE, was attended by 60 students. Programme Officer Mr Nandkishor Dudhe delivered an engaging presentation on general bird ecology, monsoon breeding species, and brood parasitism in cuckoos.

Students actively participated and were rewarded with the BUCEROS newsletter and a Hindi booklet titled Wildlife in the Thar Desert. An Eco-Club will be formed from among the participating students. Coordinator Mrs Raji Nair and two teachers were present. Students were also encouraged to photograph local birds as a follow-up activity to foster appreciation for the natural world. Ms. Natasha Girkar, Information Officer, assisted in organizing the event.

**Dhanaji Nanaji Choudhary (DNC) Multipurpose High School, Dombivli (East), Thane, Maharashtra**

On August 10, 2024, BNHS-EIACP conducted a workshop on Plastic-Free School Campus at DNC Multipurpose High School, Dombivli. The event, part of the campaign “एक पेड़ माँ के नाम” अभियान and Mission LiFE, engaged 25 students from classes 6 to 10.

Programme Officer Mr Nandkishor Dudhe explained the environmental hazards of single-use plastics, particularly their effects on oceans, marine life, and human health, and highlighted sustainable alternatives. The workshop featured interactive activities, with students receiving the BUCEROS newsletter and a Hindi booklet titled Wildlife in the Thar Desert as rewards. An Eco-Club was established, and the school trustee and principal also addressed the students. The event concluded with a tree-planting drive, where students planted five saplings, including Bauhinia racemosa and Cassia fistula. Ms Natasha Girkar, Information Officer, provided organizational support.

**SIES (Dr A.P.J. Abdul Kalam) Memorial High School, Ghatkopar (West), Mumbai, Maharashtra**

On August 12, 2024, BNHS-EIACP organized a session on Monsoon Breeding Birds for students of classes 6 to 9 at SIES Dr. A.P.J. Abdul Kalam Memorial High School, Ghatkopar. The event, part of Mission LiFE, was attended by 50 students. Programme Officer Mr Nandkishor Dudhe delivered an informative and interactive presentation covering general bird ecology, monsoon breeding species, and brood parasitism in cuckoos. Students were highly engaged and received the BUCEROS newsletter and a Hindi booklet titled Wildlife in the Thar Desert as rewards. An Eco-Club will be established with these students. Coordinator Mrs Raji Nair and four teachers also participated. Ms Natasha Girkar, Information Officer, assisted in organizing the session.

**Birdwatching Trail at Bhandup Pumping Station, Mulund**

On August 31, 2024, BNHS-EIACP organized a Monsoon Birdwatching Trail at the Bhandup Pumping Station (BPS), a renowned birding hotspot in Mumbai located near salt pans and mangroves. Six participants joined the trail, which highlighted the site's rich avifauna. Programme Officer Mr Nandkishor Dudhe shared insights on the bird diversity of the area. The group observed 30 species of birds, making it an enriching experience. BNHS-EIACP staff members Ms Natasha Girkar, Mr Niraj Patel, and Mr Yogesh Dhamnaskar played key roles in organizing the event.

### **Birdwatching Trail at T.S. Chanakya, Nerul**

The Birdwatching Event, held on December 7, 2024, at the wetlands near T.S. Chanakya in Nerul, Navi Mumbai, offered an excellent opportunity to explore the region's rich avian biodiversity during the monsoon season. A total of 54 bird species were recorded, including notable sightings of the Lesser Flamingo (*Phoeniconaias minor*), Purple Swampphen (*Porphyrio porphyrio*), Painted Stork (*Mycteria leucocephala*), Jacobin Cuckoo (*Clamator jacobinus*), and White-breasted Waterhen (*Amaurornis phoenicurus*). The highlight of the trail was the rare and exciting sighting of the Baillon's Crake (*Zapornia pusilla*), which made the event particularly memorable for participants.

### **Bird Post Cards Released by Indian Post**

As part of the mass awareness program, photographs provided by BNHS-EIACP were published by India Post on January 23, 2025, during Mahapex 2025, the State-Level Philatelic Exhibition. A total of 500 postcards were printed and distributed across India Post offices for wide circulation.

### **Representation of EIACP Centres in various thematic events organized by other Ministries/State Govt./Institutes**

*Meeting with MoEF&CC: In-person meeting on innovative ideas, concepts, and solutions under the principles of sustainable production and consumption for Mission LiFE*

A meeting was held on July 5, 2024, in the presence of MoEF&CC Secretary Ms. Leena Nandan, MoEF&CC officials, representatives from government and private institutes, and EIACP centres. The meeting was attended by 56 online and over 30 in-person participants. An MoEF&CC official presented a PPT on Mission LiFE, highlighting its achievements and challenges in implementation across India. The presentation also included campaign videos and showcased market-driven solutions adopted by various institutes. The Plant4Mother ("एक पेड़ माँ के नाम") campaign was also featured. Theme-based assignments were given to groups of centres, who were tasked with submitting their ideas collectively. MoEF&CC Secretary Ms Leena Nandan addressed the gathering on sustainable lifestyles and promoted the Mission LiFE initiative at COP. BNHS-EIACP, along with ten other institutes, was assigned the theme "Say No to Single-Use Plastic" and was asked to identify challenges and problem statements related to the theme and submit findings by July 12, 2024. (Nodal Officer: Dr Amit Love, Scientist E, MoEF&CC).

#### *All India Coordinator's Meet at New Delhi*

The BNHS-EIACP team attended the All India Coordinator's Meet on September 7, 2024, for the Environmental Information, Awareness, Capacity Building and Livelihood Programme (EIACP) under the MoEF&CC in New Delhi. The meeting was chaired by Smt. Nameeta Prasad (Joint Secretary, MoEF&CC) and Shri Unmana Sarangi (Director, MoEF&CC) and facilitated the exchange of strategies to enhance environmental awareness and livelihood opportunities. BNHS-EIACP was represented by Dr. Sujit Narwade (EIACP Coordinator & Deputy Director, BNHS), Mr. Nandkishor Dudhe (Programme Officer), and Ms. Natasha Girkar (Information Officer). Each EIACP centre presented a PPT showcasing milestone achievements, with Mr. Dudhe presenting BNHS-EIACP's work. With 54 EIACP centres nationwide, the Ministry discussed initiatives such as training for remote communities, tree plantation drives, and sustainability practices under Mission LiFE, which promotes eco-friendly choices like minimizing waste, conserving water, and adopting healthy lifestyles. The agenda emphasized engaging youth in mass awareness campaigns under Mission LiFE. The Green Skill Development Programme (GSDP) was also addressed, focusing on training youth in environmental, forestry, and wildlife fields to create sustainable livelihood opportunities.

#### *Symposium on India 2047 - Building a Climate Resilient Future*

Mr Nandkishor Dudhe, Programme Officer, BNHS-EIACP, attended the inaugural session of the symposium India 2047 – Building a Climate Resilient Future on March 19, 2025, at Bharat Mandapam, New Delhi. The event was organized by the Lakshmi Mittal and Family South Asia Institute and the Salata Institute for Climate and Sustainability at Harvard University, in collaboration with MoEF&CC and NITI Aayog. The symposium aimed to foster

interdisciplinary dialogue and develop actionable strategies for strengthening climate resilience as India approaches its 100th year of independence in 2047.

#### *National Workshop on Wildlife Management in India-Visioning Ahead at New Delhi*

The National Workshop on Wildlife Management in India was held on March 22, 2025, at Indira Paryavaran Bhawan, Ministry of Environment, Forest and Climate Change (MoEF&CC), Jor Bagh Road, New Delhi. The workshop was inaugurated and addressed by senior MoEF&CC officials, including Secretary Shri Tanmay Kumar, Director General of Forests & Special Secretary, Additional Director General of Forests (Wildlife), and Inspector General of Forests (Wildlife). During breakout sessions, Inspector General of Forests (Wildlife) Shri Raghu Prasad divided participants into seven thematic groups, each comprising three to four experts. Mr Nandkishor Dudhe, Programme Officer, BNHS-EIACP, contributed to the group discussion on youth involvement in wildlife conservation. He emphasized integrating wildlife conservation into school curricula, strengthening the national network of birdwatching and nature clubs, and engaging local youth in ecological surveys and monitoring to enhance conservation efforts. The workshop concluded with a summary of key takeaways and proposed action plans, reaffirming the commitment to effective wildlife management.

#### **Database Development & Updation**

- Webpage updation frequency with details: The Webpage is regularly updated with all activities.
- Database maintenance: A Total of 14,354 references have been updated
- Development of mobile apps: Led the development of a comprehensive Vulture Data Collection Application comprising four core modules. Two modules – Vulture Road Transect Survey and Nesting Colony Survey – have been completed and are currently undergoing testing, while the remaining two – Carcass Dump Survey and Covert Pharmacy Survey – are actively under development. Additionally, ongoing maintenance and enhancement are being carried out for several existing applications, including the Data Collection App, AviEcoBase App, and Bird Identification App.

#### **Quiz Competition Data:**

On the occasion of various Environmental Day, BNHS-EIACP organised Quiz Competition on following theme:

<b>Theme Name (Environmental Days)</b>	<b>States</b>	<b>Union Territories</b>	<b>Total Participants</b>	<b>Students</b>	<b>Others</b>
Bird Conservation (World Earth Day – 22 April, 2024)	24	4	253	165	88
Ducks, Geese, and Swans of Maharashtra (World Migratory Bird Day – 11 May, 2024)	20	4	175	100	75
Monsoon Breeding Birds (World Environment Day – 05 June, 2024)	21	2	168	84	84
Bird Conservation (World Environment Day – 05 June, 2024)	12	1	30	18	12
Monsoon Birds (Hariyali Saptah – 01 to 07 July, 2024)	19	3	178	63	115
Birds & Plants Relationship	13	2	53	32	21
Know Your Birds (Wildlife Week – 02 to 08 October, 2024)	25	2	678	600	78
Know Your Biodiversity (Bird Week – 05 to 12 November, 2024)	13	1	36	19	17
Wader Identification	17	1	80	38	42
Summer Breeding Birds	13	3	54	29	25



On the occasion of various Environmental Day, BNHS-EIACP organised Photography Competition on following theme:

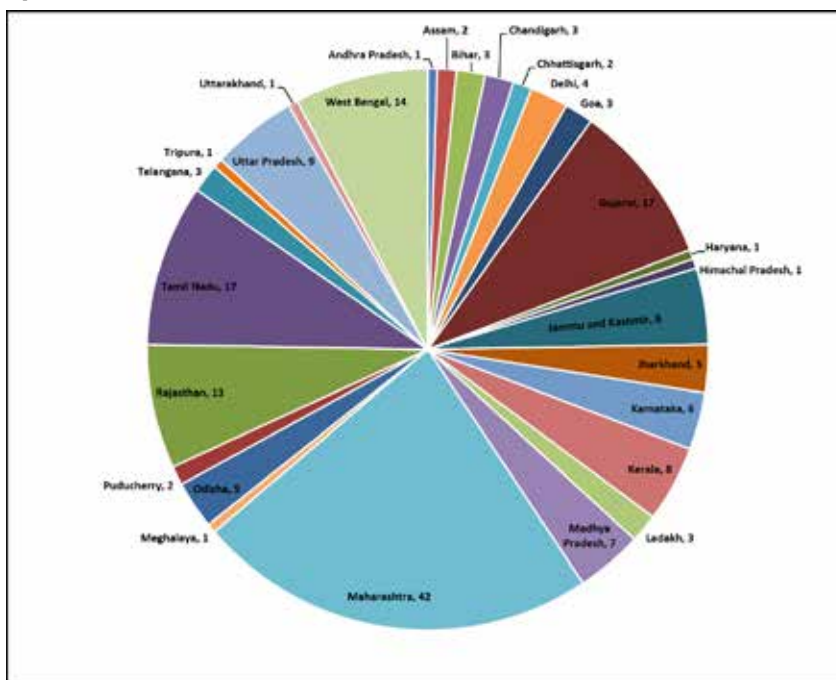
Theme Name (Environmental Days)	States	Union Territories	Total Participants	Students	Others
Geotagged photos of Land degradation sites and/or Land restoration sites (World Environment Day – 05 June, 2024)	8	1	12	5	7
Eco-friendly Ganesh Idol & Decoration (Ganesh Chaturthi – 07 September, 2024)	10	0	29	0	29
Bird Portraits, Birds in Forest Habitat, Bind-Plant Relationship, Birds of Prey (Wildlife Week – 02 to 08 October, 2024)	20	4	100	9	91
Waterbird and Associated Species (World Wetlands Day – 02 February, 2025)	14	3	41	3	38



On the occasion of various Environmental Day, BNHS-EIACP organised Drawing Competition on following themes:

Theme Name	States	Union Territories	Total Participants (Students)
Birds Around Us (World Environment Day - June 5, 2024)	8	2	23
Clean Air for Healthy Kids (International Day of Clean Air for Blue Skies - September 7, 2024 & World Ozone Day - September 16, 2024)	9	2	24

#### Poem Writing Competition Data:



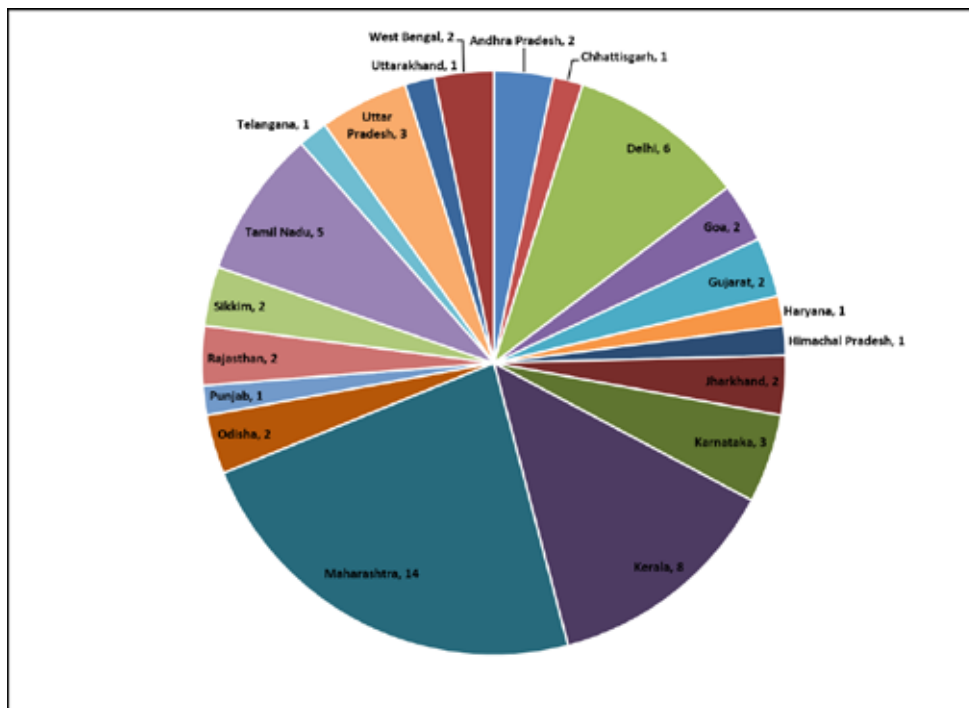
#### Responses to Online Photography Competition Across States & Union Territories



#### Responses to Online Drawing Competition Across States & Union Territories

On the occasion of Environmental Day, BNHS-EIACP organised  
Poem Writing Competition on the following theme:

Theme Name	States	Union Territories	Total Participants (Students)
Save Earth, Save Nature (World Earth Day - 22 April, 2024)	19	1	61

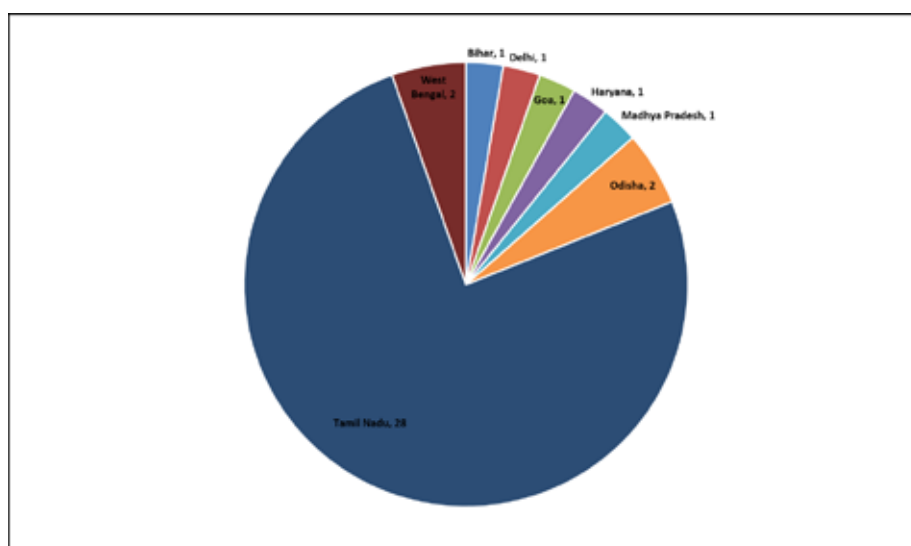


**Responses to Online Poem Writing Competition Across States & Union Territories**

• **Slogan Writing Competition Data:**

On the occasion of Environmental Day, BNHS-EIACP organised Slogan Writing Competition on the following theme:

Theme Name	States	Union Territories	Total Participants (Students)
Stop Deforestation (World Environment Day - 05 June, 2024)	7	1	37



**Responses to Online Poem Writing Competition Across States & Union Territories**



**Announcement Poster: Slogan Writing Competition**

## UNIVERSITY STUDY DEPARTMENT WORK UPDATE:

### 1. Ph.D. Admission Process:

- Prepared and released the advertisement for Ph.D. admissions.
- Organized and participated in the interview process.
- Assisted in shortlisting candidates and ensured submission of all shortlisted students' documents to Mumbai University for the issuance of Eligibility Certificates.
- The registration process will commence upon confirmation of eligibility.

### 2. BNHS Internship Programme

- Coordinated the BNHS Internship Programme by assigning students to various BNHS departments based on specific requirements.

### 3. On-the-Job Training Programme (BNHS–ElACP)

- Facilitated the submission of reports from M.A. History students of Mumbai University.
- Coordinated with the BNHS team and managed administrative tasks, including drafting letters, maintaining attendance records, and related duties.

### 4. Ph.D. Thesis Assistance

- Supported Ph.D. students **Ms. Ruchi Dave** and **Mr. Sachin Ranade** in the submission of their theses.
- Assisted both students with the preparation and submission of their progress reports.

### 5. RAC Committee Meetings

- Conducted RAC committee meetings for Ph.D. students **Ms. Pragati Kamble** and **Mr. Rushikesh Pawar**.
- Submitted their progress reports to Mumbai University and MAHE.

### 6. Fellowship Disbursement

- The BNHS–ElACP team updated the UGC Canara Bank portal to facilitate the fellowship disbursement for **Ms. Pragati Kamble**.

## RENOVATION OF HORNBILL HOUSE MUSEUM IN PROGRESS

### 1. MEZANNINE FLOOR FOR STORING COLLECTIONS:

- Terrace repair and flooring has been completed.
- Putti work has been completed and colouring to be initiated.
- Wooden wall partition work has been completed and colour work to be initiated.
- Window framing and installation work has been completed.



**Tiles Work, Putti Work, Wooden Partition and Window Frame Installation completed on the mezzanine Floor**



**Wooden partition for corners and stairs have been installed on the mezzanine floor**



2. **TOILET WORK - I FLOOR (CONVERSION OF A ROOM into Extra Toilet)**

- First floor lavatory work completed and currently in use.



3. **LIBRARY SECTION WORK - SECOND FLOOR:**

- Library renovation and colour work completed and library has resumed its operations



**Library arrangements in progress**



**Library arrangements being made**

**4. DIGITIZATION & GIS ROOM – ADJACENT TO LIBRARY - II FLOOR**



**Second Floor meeting room getting ready**

**5. Internal wall colour work and exterior renovation in progress**



**GIS & Digitization Room work at final stage**





**First Floor interior work completed**



**First Floor interior work completed**

## NPCI Education and Conservation Research Centre- 2024-2025

### Project brief

BNHS envisioned the establishment of a dedicated facility for conceptualizing and conducting ecological research, designing effective conservation methodologies, and strengthening the capacities of its staff and other stakeholders involved in wildlife conservation. This initiative aims to contribute significantly to India's ecological security and economic development.

The primary goal of this Centre is to enable BNHS to effectively implement its research strategy, support wildlife conservation through rigorous science and policy advocacy, and foster long-term ecological and economic resilience across India.

A key objective of the training programmes is to equip researchers, scientists, and government officers with the skills and knowledge required to develop appropriate mitigation strategies for infrastructure projects. This will help reduce project delays, minimize cost overruns, and prevent economic losses.

In line with this vision, BNHS acquired a 19-acre site in the village of Navegaon Brahman, Chimur Taluka, Chandrapur District, Maharashtra, in July 2018 using its own resources.

This facility is part of a larger conservation initiative that began receiving support from the National Payments Corporation of India (NPCI) in 2018. Although initial progress was hindered by the COVID-19 pandemic, BNHS is now actively reviving the project with renewed energy and commitment.

Centrally located in India, the site lies within a critical conservation zone and is surrounded by several key tiger habitats. It is in close proximity to five major tiger reserves – Melghat, Tadoba-Andhari, Pench, Navegaon-Nagzira, and Bor – as well as other important wildlife sanctuaries such as Umred-Paoni-Karhandla, Chaprala, and Ghodazari, all of which support breeding tiger populations.

This makes the location strategically significant for advancing research, strengthening conservation practices, and promoting regional collaboration – particularly within Maharashtra and its neighbouring states. The facility is poised to play a pivotal role in reinforcing ecological initiatives and contributing meaningfully to the preservation of India's biodiversity.

### OBJECTIVES

To develop the NPCI Education and Conservation Research Centre as a globally recognised for nature conservation

### KEY ACTIVITIES CONDUCTED DURING 2024-25

- a. MoU was signed between NPCI and BNHS on 4 October 2024, and the first installment was received on 25 October 2024 (Zero Date).
- b. BNHS floated an Expression of Interest (EOI) on 23.10.2024 for finalizing the project architect.
- c. After extensive discussions and evaluations, BNHS appointed Ar. Rahul Khode from M/s Earth Foundation Centre for Architecture, Nagpur as the local architect, and M/s Vector Designs, Pune as the consultant architect. This followed detailed discussions, a site visit, and interviews.
- d. Simultaneously, manpower was recruited for the site – a site supervisor joined on 16.12.24, a watchman joined on 01.01.2025, and a Community officer, based in Nagpur, supported by a three-member team at the site, is overseeing community-related activities.
- e. Overgrown grass was cleared and basic infrastructure repaired to make the site operational.
- f. Road Repairs – The main approach road and two internal roads (Pandan to well and transformer to construction site) were repaired using both labour and machinery.
- g. Repairing Existing Structures – The old shed and gates, which were in a dilapidated condition, were repaired and reinforced



- h. Grass Cutting – A total of 43,000 sq. ft. of overgrown grass covering internal roads and the construction site was cleared.
- i. Working drawings and final layout were received from the consultant architect
- j. Following a transparent bidding process, the construction contract was awarded to a selected contractor. Installation of a new 5 HP solar pump was completed at the site
- k. Construction of the centre initiated has been initiated and BNHS is closely monitoring the progress.
- a. The existing road and existing structures at the project site have been repaired.
- b. A total of 43,000 square feet of grass has been cleared.
- c. New 5 HP solar pump installed at the site

### **WORK PROGRESS CAN BE SEEN IN THE PICTURES**

#### **OCTOBER 2024 (Up – Grass cutting, Down – Approach Road repair)**



#### **NOVEMBER 2024 (Up – Lavatory block construction started, Down – Grass Cutting)**



**DECEMBER 2024 (Up – Strengthening of existing structure, Down – Completion of septic tank for lavatory)**





**JANUARY 2025 (Up – Completion of strengthening of existing structure, Down – Completion lavatory block)**

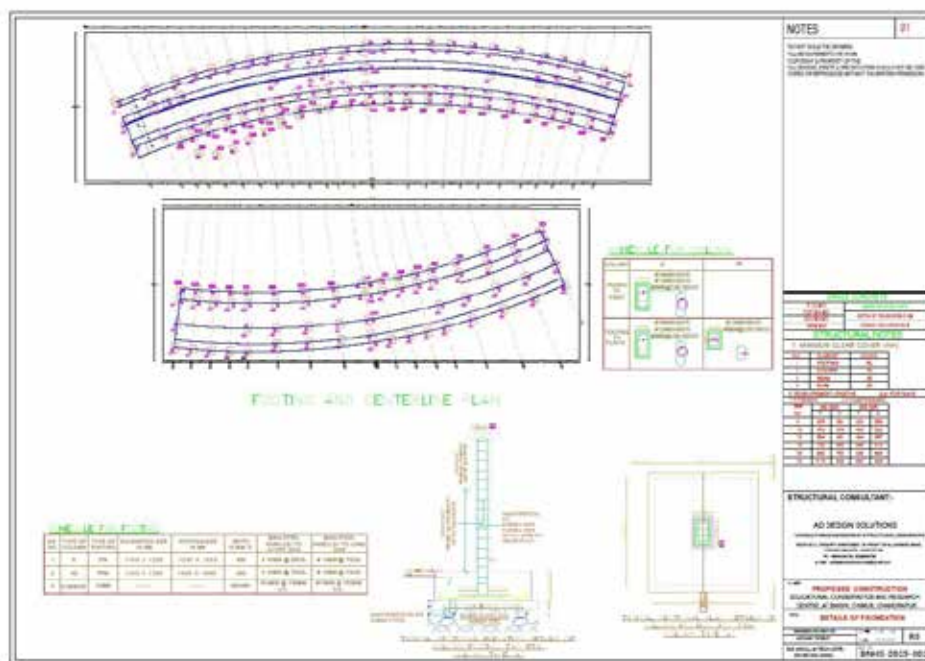




**FEBRUARY 2025 (Up – Foundation Plan Design, Down – Completion lavatory block)**







The land at Kedarpur was purchased for the construction of a laboratory-cum-staff accommodation facility, with funding support for land cost provided by the Darwin Initiative through ZSL. The land area of 1 Bigha 13 Biswa divided in two plots was purchased on 15.01.2008 in the presence of Dr Vibhu Prakash, Dy. Director, Principal Scientist and In-charge of VCBC, Pinjore and Mr M.G. Mathew, Administrative Officer, BNHS, Head Office.

Construction of the building commenced in 2009. Initially, the ground floor was completed, including plumbing, electrical wiring, plastering, tiling, installation of doors and windows, and electricity supply. Subsequently, work on the first floor began after the completion of brickwork and concrete. However, construction was halted in 2012 due to a shortage of funds. The total constructed area is 1,800 sq. ft.

Construction work was resumed in December 2024, with the plastering of the first floor completed. Work on the remaining portions of the first floor is currently in progress.





**Completed plastering work at Kedarpur near Pinjore**



**Plastering of the 1st floor of BNHS Land at Kedarpur near Pinjore**