



भारतीय वन्यजीव संस्थान
Wildlife Institute of India

**NMCG-WII GANGA
BIODIVERSITY
CONSERVATION
INITIATIVE PHASE II**

**PLANNING AND
MANAGEMENT
FOR AQUATIC SPECIES
CONSERVATION AND
MAINTENANCE OF
ECOSYSTEM SERVICES
IN THE GANGA RIVER
BASIN FOR A
CLEAN GANGA**

HALF YEARLY REPORT

**JANUARY
TO JUNE**

2025

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AND MAINTENANCE OF ECOSYSTEM
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Half Yearly Report

January – June 2025

Project Investigators

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Wildlife Institute of India, Dehradun

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SCIENCE-BASED AQUATIC
SPECIES CONSERVATION
AND MAINTENANCE OF
ECOSYSTEM SERVICES IN
THE GANGA RIVER BASIN



1 ECOLOGICAL ASSESSMENT

1. Status of Waterbirds

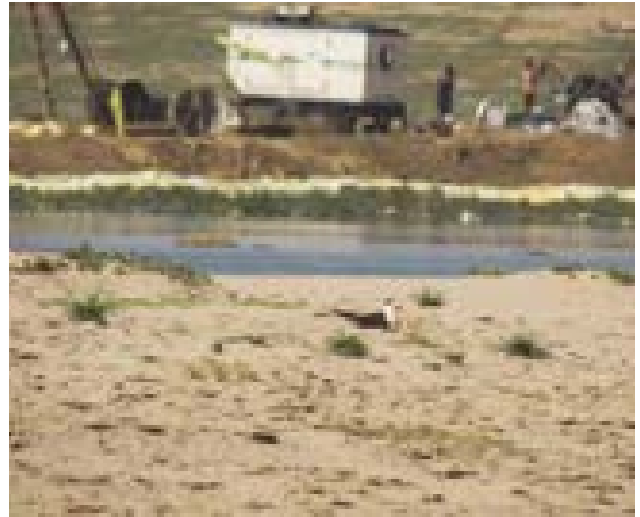
Island nesting birds

The riverine habitats of the Ganga River Basin (GRB) provide ideal nesting sites to island or sandbar waterbirds such as black-bellied tern, Indian skimmer, river tern, river lapwing, which breed during the spring and summer seasons. The assessment of the river islands nesting birds was conducted for two years (Table 1).

Table 1. Details of Island-nesting waterbird surveys in the Ganga River Basin (2023–2024)

Details	2023 Survey	2024 Survey
Survey Period	May - June	April - May
Rivers Surveyed	Ganga, Ghaghra, Yamuna, Gandak, Chambal, Son	Ganga, Ghaghra, Yamuna, Gandak, Chambal, Son
Nesting bird species recorded	11	12
Total Nesting Events	232	1,832
Unhatched Eggs	429	4,022
Hatchlings	61	214
Fledglings	1,249	356
Key Species observed	Indian skimmer, Little tern, Small pratincole, River lapwing	Indian skimmer, Black-bellied tern, Black-winged stilt

The survey highlighted the importance of rivers such as Chambal and Son for nesting waterbirds, particularly the endangered species like Indian skimmer and black-bellied tern. Stretches of the Yamuna and Ghaghra in Uttar Pradesh harboured the highest number of unhatched eggs. Interestingly, a few incidences of brood parasitism were observed in the Yamuna River, where little tern laid eggs in the nests of black-winged stilt.



Flooding and developmental activities in and around nesting habitats

Waterbirds in the mainstem Ganga River

Post-monsoon survey was conducted in November and December, 2024 in the mainstem of Ganga River from Bijnor, Uttar Pradesh to Haldia, West Bengal. During the survey, 66 species of water and water associated birds were recorded with 5,551 individuals. Of these, three species were classified as Endangered (EN), two as Vulnerable (VU), and six as Near Threatened (NT) under the IUCN Red List categories (Figure 1).

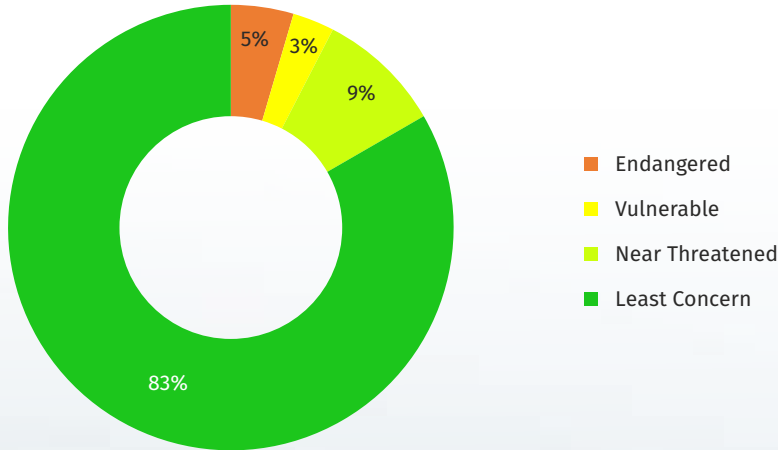


Figure 1. IUCN Red List of threatened waterbirds and water-associated bird species recorded from the Ganga River



Waterbirds in the select wetlands

Aquatic ecosystems are one of the most productive ecosystems on the earth, particularly wetlands. India almost 250 waterbirds (as per new updated indian checklist by birdinternational, there are 238), of which ~30% are categorized as winter migrants, which usually migrate from the central Asia. The wetlands of the Ganga River Basin are crucial not only for waterbirds but also for other taxa, including humans Various ecosystem services are being provided by the wetlands in the urban and rural set-ups. A comprehensive assessment of 20 representative wetlands across five Ganga Basin states—Uttarakhand, Uttar Pradesh, Bihar, Jharkhand, and West Bengal—was undertaken during winter seasons (December 2023 to early March 2025) using standard bird count methods Figure 2 is about IUCN categories. The study aimed to evaluate the status of water and water-associated bird species, identify key threats to wetland habitats, and document basic physio-chemical water parameters.

Altogether, 41,506 individuals of 90 water and water-associated bird species were recorded from the 20 select

wetlands of the GRB, belonging to 11 orders and 21 families. Charadriiformes and Anatidae were the most dominant order and family, respectively. Of the 90 recorded species, one was EN, four were VU and seven were NT under the IUCN Red List (Figure 2). Among the select wetlands, Haiderpur, Surajpur and Asan were found to be high in richness and abundance (Figure 4a & 4b).

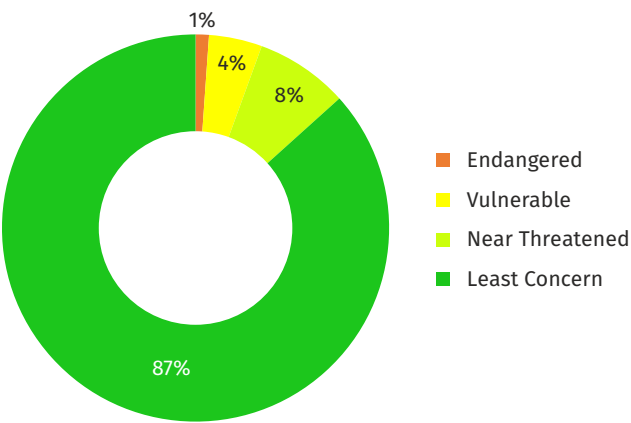


Figure 3. IUCN Red List Threatened category of waterbirds recorded from select wetlands

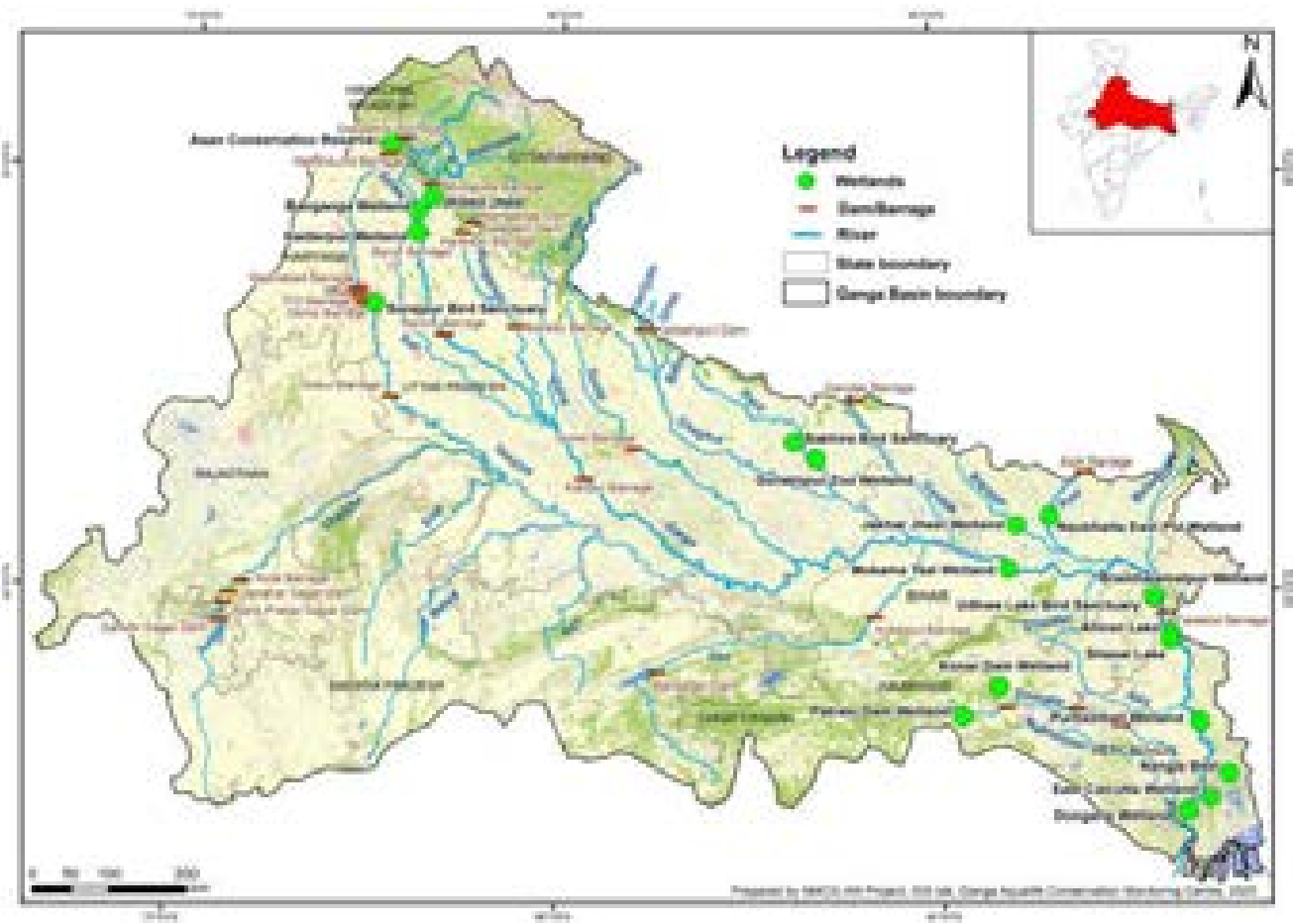


Figure 2. Distribution of the select wetlands in the Ganga River Basin



Figure 4. (a) Species richness and (b) diversity (H') of water and water-associated birds in the select wetlands of Ganga River Basin

2. Fish Survey

Son River

An intensive ecological survey was conducted along the entire course of the Son River, from Mirwahi in Chhattisgarh to Koilwar in Bihar, during January and February 2025. A total of 39 fish species, belonging to 35 genera, 14 families, and 8 orders, were recorded during the survey (Figure 6). *Pseudambassis lala* (Hamilton, 1822), a small ornamental fish species, was recorded for the first time from the Son River (Figure 5).



Figure 5. *Pseudambassis lala* (Hamilton, 1822)

The most diverse order was Cypriniformes (64.1%) followed by Mugiliformes (12.8%), Anabantiformes (5%), Siluriformes (5%), Synbranchiformes (5%). The least abundant orders were Gobiiformes (2.5%), Belontiiformes (2.5%), and Cyprinodontiformes (2.5%).

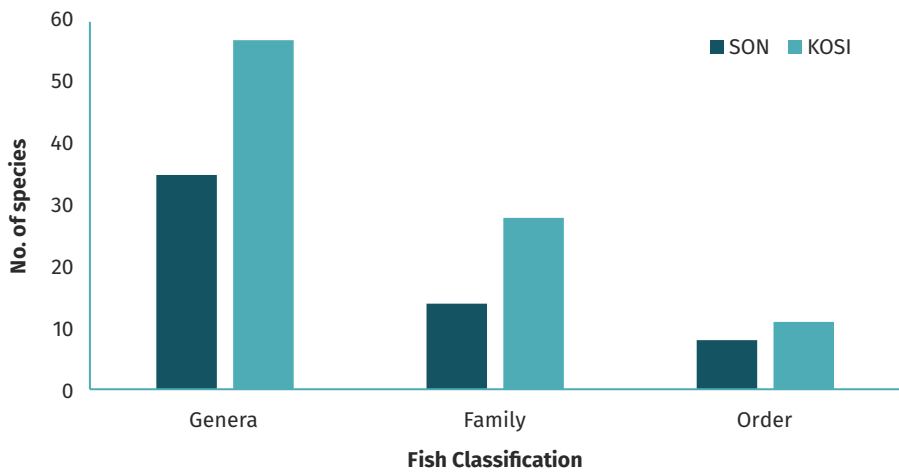


Figure 6. Taxonomic categories of fish recorded from the Son and Kosi River

Kosi River

A total of 83 species belonging to 57 genera, 28 families, and 11 orders were recorded from the Kosi River (Figure 6) during the pre-monsoon survey in April - May 2024. Cypriniformes was the most dominant order with 37 species (44.5%) followed by Siluriformes contributed 20 species (24.1%), Anabantiformes contributed 9 species (10.8%) and Synbranchiformes contributed 5 species (6.02%).



3. Study on Impact of Religious Activities on Aquatic Biodiversity

An ecological survey was conducted at selected sites along the mainstem of the Ganga and Yamuna rivers during the Maha Kumbh. The survey was undertaken across three phases: pre-Kumbh (December 2024), during Kumbh (January–February 2025), and post-Kumbh (March 2025).

Ganga River

Waterbirds

An intensive survey was conducted to monitor aquatic biodiversity across a 5 km stretch of the Ganga River at six sites—three upstream of the Sangam (BEU-177, BEU-192, BEU-207) and three downstream (BEU-222, BEU-237, BEU-252) covering both riverbanks in Prayagraj.

A total of 24,680 individuals representing 157 bird species from 50 families and 18 orders were recorded across the sites. Passeriformes (59 species) was the most dominant order, followed by Charadriiformes (25 sp.), Anseriformes (13 sp.), and Pelecaniformes (11 sp.). Among families, Anatidae (13 sp.) was the most dominant, followed by Muscicapidae (11 sp.) and Scolopacidae (8 sp.). The conservation status of recorded bird species is shown in Figure 7. EN species Egyptian vulture (*Neophron percnopterus*), VU species sarus crane (*Grus antigone*) and NT species includes river lapwing (*Vanellus duvaucelii*), Asian woolly-necked stork (*Ciconia epicopus*), dunlin (*Calidris alpina*) and great thick-knee (*Esacus recurvirostris*) were recorded during the survey.

The most abundant species observed was the grey-throated martin (relative abundance: 14.81%), followed by small pratincole (7.56%) and river lapwing (6.37%).

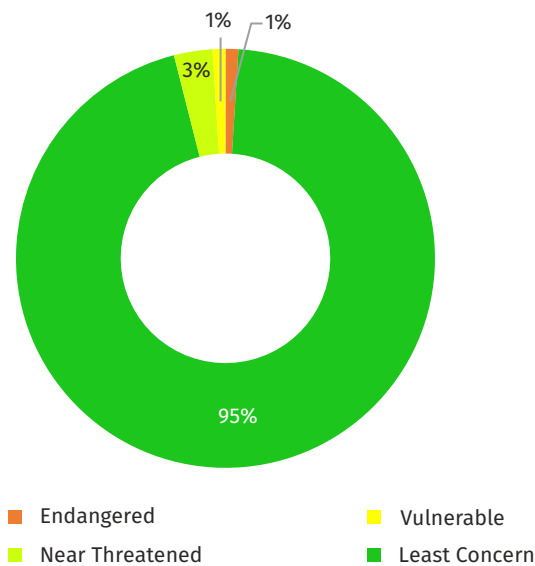
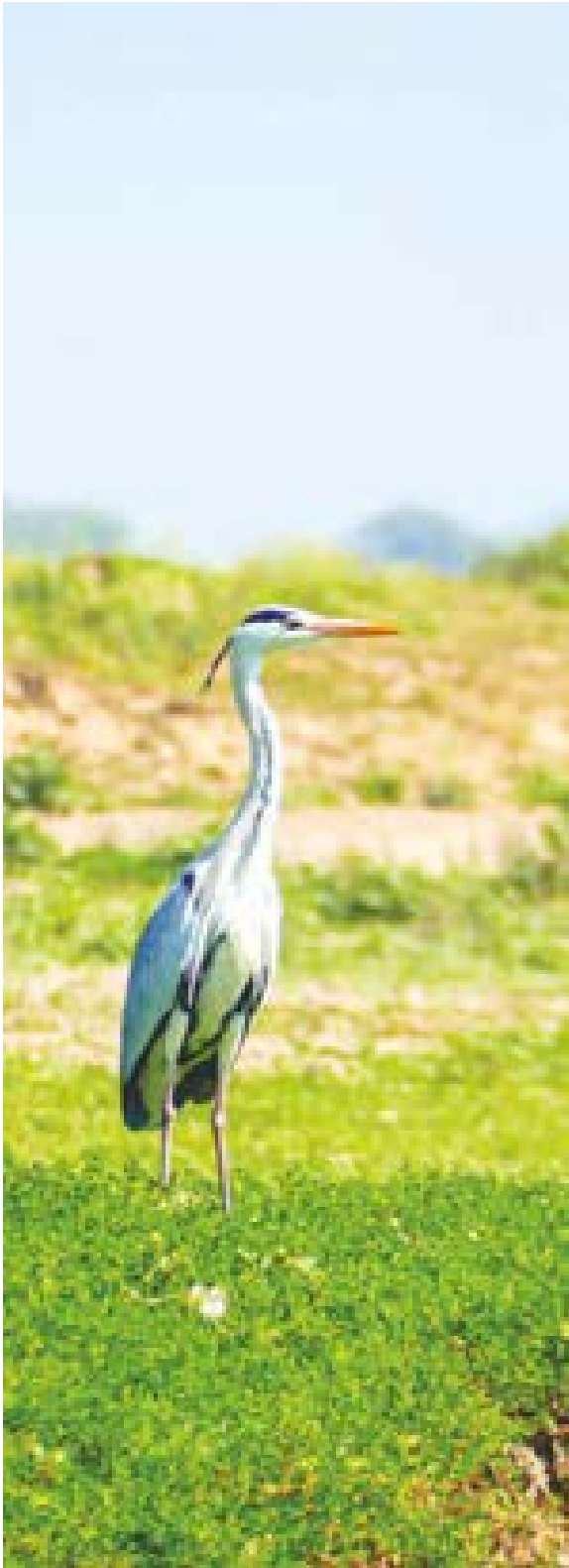


Figure 7. IUCN Red list of Threatened birds recorded from Ganga River



Species composition and abundance patterns varied across the six BEU sites; however, bird taxa dominated the observations, with no significant presence of other faunal groups reported. Species richness was higher in month of March in all the selected BEUs (Figure 8).

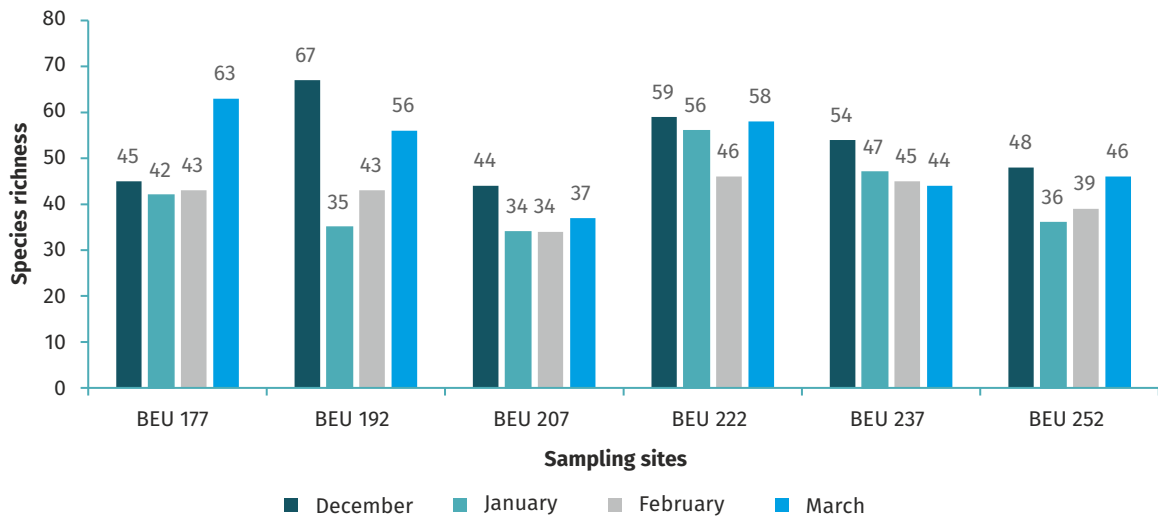


Figure 8. Month-wise bird species richness recorded at six sites of the lower Ganga River, during the study period

Gangetic dolphin

Gangetic dolphin presence at these sites varied across months and locations. The maximum number of sightings was recorded in February at BEU 177 (9 sightings) (Figure 9). At most sites, sightings were generally low in January, increased in February, and then stabilized in March.

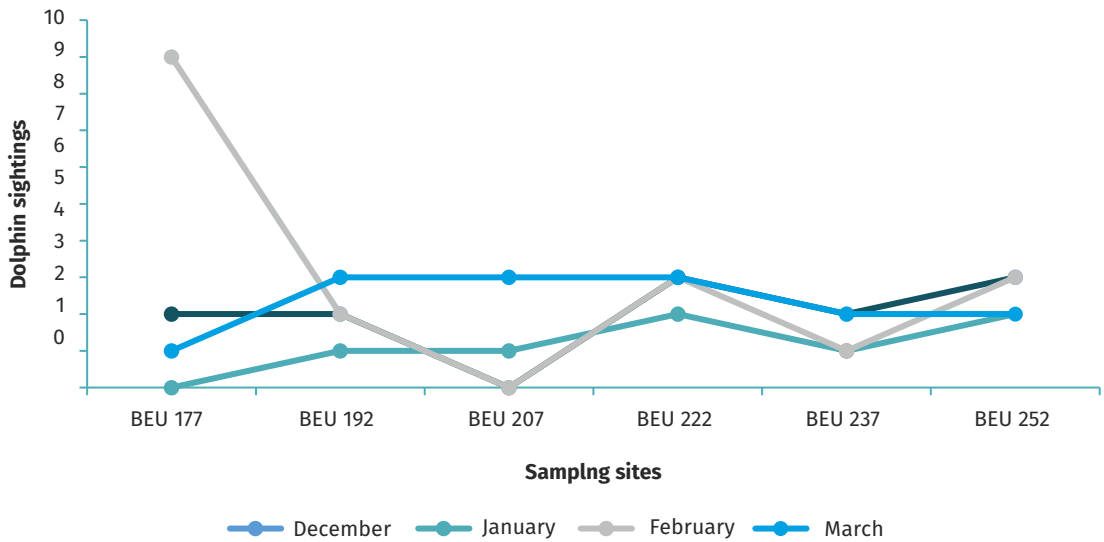


Figure 9. Gangetic dolphin sightings across the selected sites of the Ganga River during the survey of 2025



Yamuna River

During Kumbh 2025 (December-March), point count surveys were conducted to monitor faunal elements (reptiles, birds and mammals) in every 1 km segment along the 5 km stretch of the Yamuna River at three sites (BEU-259, BEU-269 and BEU-282) on both banks of the river between Ekdala (Fatehpur) and Palpur (Prayagraj). A total of 79 bird species were recorded at the select monitoring sites of the lower Yamuna River.

Overall, 8,412 individuals representing 14 orders, 29 families, 59 genera and 79 sp., were recorded across the three sites (BEU-259, BEU-269 and BEU-282) of Yamuna River. Passeriformes (22 sp.) was the most abundant order followed by Charadriiformes (19 sp.), Anseriformes (9 sp.) and Pelecaniformes (9 sp.). Anatidae (9 sp.) was the most

abundant family followed by Scolopacidae (8 sp.), Ardeidae (6 sp.) and Motacillidae (6 sp.). Of the 79, species 56 were water and water-dependent bird species and 23 were terrestrial birds. The highest number of waterbirds species was observed at BEU-259 during January, February and March. At this site, species richness peaked in February 2025 (during the Kumbh) with 37 species, followed by January 2025 (33 sp.), March 2025 (31 sp.), and December 2024 (25 sp.) (Figure 9). At BEU-269, the highest count was in February 2025 (35 sp.), followed by March 2025 (30 sp.), January 2025 (29 sp.) and December 2024 (28 sp.). At BEU-282, species richness was highest in January 2025 (33 sp.), followed by December 2024 (29 sp.), March 2025 (29 sp.) and February 2025 (22 sp.) (Figure 10).

Besides avifauna, no other taxa were recorded at the monitoring sites.

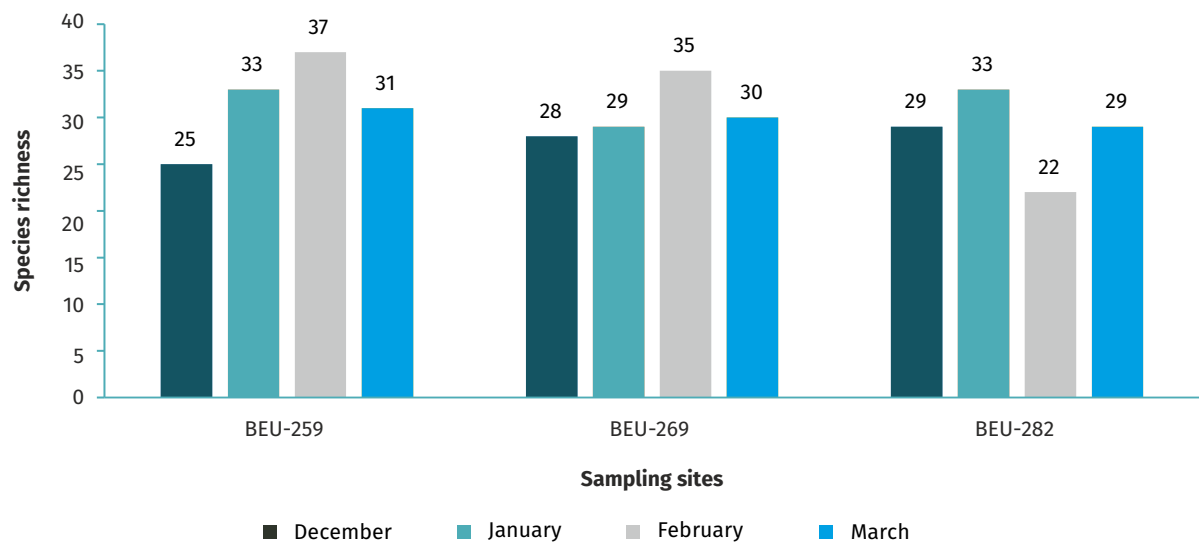


Figure 10. Month-wise bird species richness recorded at three sites of the lower Yamuna River, 2025

The conservation status of the recorded bird species includes EN Egyptian vulture (*Neophron percnopterus*), VU sarus crane (*Antigone antigone*), common pochard (*Aythya ferina*), and river tern (*Sterna aurantia*), as well as NT river lapwing (*Vanellus duvaucelii*) and Asian woolly-necked stork (*Ciconia episcopus*), all of which were observed during the survey (Figure 11).



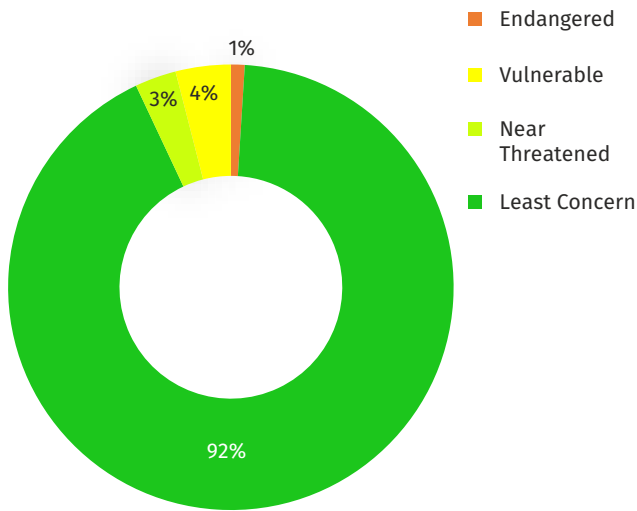


Figure 11. IUCN Red list of Threatened birds recorded from the lower Yamuna River

A detailed multivariate analysis is in progress to examine how ecological parameters and large-scale religious activities during the Kumbh period influence species assemblage in both the rivers.

4. Vegetation Survey

From January to June 2025, vegetation surveys were carried out in the in Yamuna, Kosi, Mahananda and the upper stretch of the Ganga River (Harsil to Devprayag). In addition, data were compiled for other rivers, including the Ramganga, Gomti, Son and Damodar. The taxonomic classification of recorded species from the major tributaries and sub-tributaries of the Ganga River is presented in Figures 12 and 13. Overall, Poaceae was the most dominant family followed by Fabaceae, Asteraceae, Cyperaceae and Lamiaceae. A comprehensive analysis for all surveyed river is currently in progress.

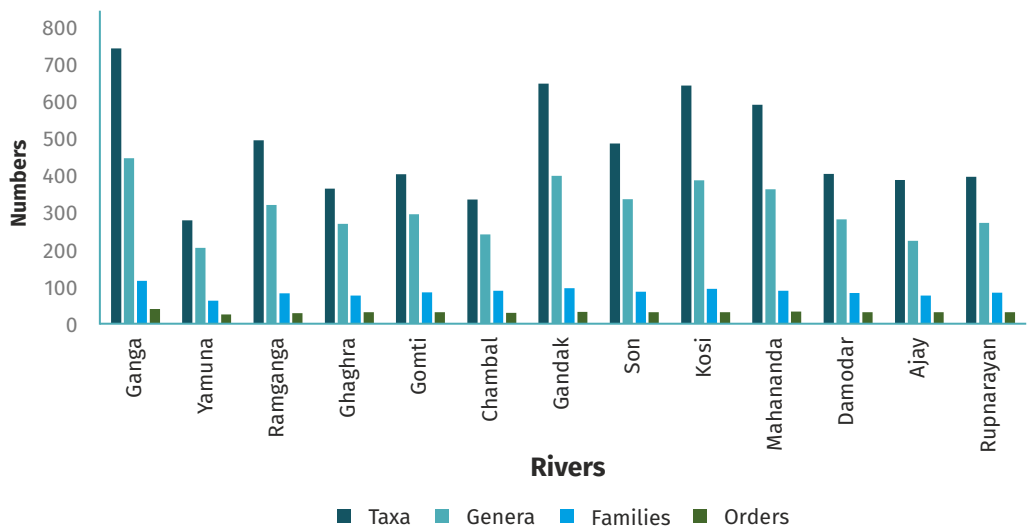


Figure 12. Taxonomic classification of riparian vegetation recorded from the Ganga River Basin



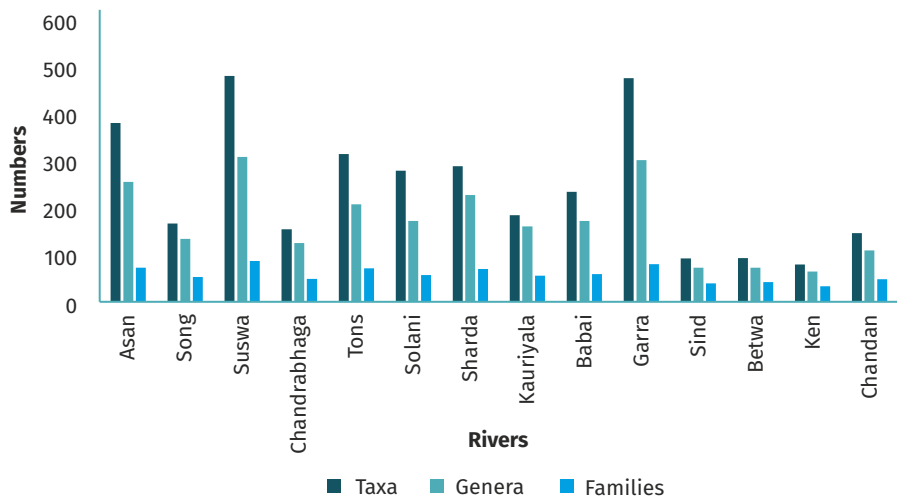


Figure 13. Taxonomic classification of riparian vegetation recorded from the sub-tributaries of Ganga River

5. Web Based Biodiversity Information Repository

An information dashboard (www.rivres.in) was developed to showcase the freshwater biodiversity conservation efforts undertaken by the projects sponsored by the NMCG and NRCD at the WII, Dehradun. The dashboard was inaugurated by Shri C. R. Patil, Hon'ble Minister, Ministry of Jal Shakti on 16th April 2025. The dashboard provides

information on the rivers and their freshwater biodiversity. It also provides information on the conservation efforts in terms of community engagement, capacity development, rescue and rehabilitation and conservation education carried out across the GRB and the other seven rivers of India.



6. Socio-Ecological Status of Yamuna River for Conservation Planning

Ecological assessments were conducted in the Yamuna River between the post-monsoon seasons of 2020 and 2024 to ascertain the occurrence and distribution of key aquatic species. A comprehensive literature review and multiple biodiversity assessments revealed that, although key aquatic fauna such as the Gangetic dolphin, mugger and gharial continue to exist in the Yamuna River, their distribution range has declined significantly over the past few decades. A total of 282 species of plants were recorded along the Yamuna River including 79% native species. Along with these, 90 fish species including the threatened golden mahseer and snow trout were also present in the river. Altogether, eight species of amphibians and five species of turtles were found during the field surveys. The occurrence of gharial was confirmed

from various stretches of the lower Yamuna River, whereas the mugger was found to be a rarely sighted reptile in the river. Among aquatic avifauna, a total of 109 water and water-associated bird species were recorded during three assessments, including globally threatened species such as black-bellied tern, Indian skimmer and steppe eagle. High species richness and abundance of waterbirds were observed in the middle and lower zones of the Yamuna River. The lower zone is also important for 11 island-nesting bird species, including the Indian skimmer, river tern and river lapwing. In addition, 41 terrestrial bird species were recorded in the riparian zone (<1 km). Among mammals, only the Gangetic dolphin was recorded from the lower Yamuna River, restricted to deep-water pools and broad river channels. Based on the presence of this key indicator species, three Conservation Priority Stretches (CPSs) were identified in the Yamuna River: CPS 1 – 20 km, CPS 2 – 50 km and CPS 3 – 45 km (Figure 14). A draft report on the socio-ecological status of the Yamuna River was submitted to NMCG on 30th June 2025.

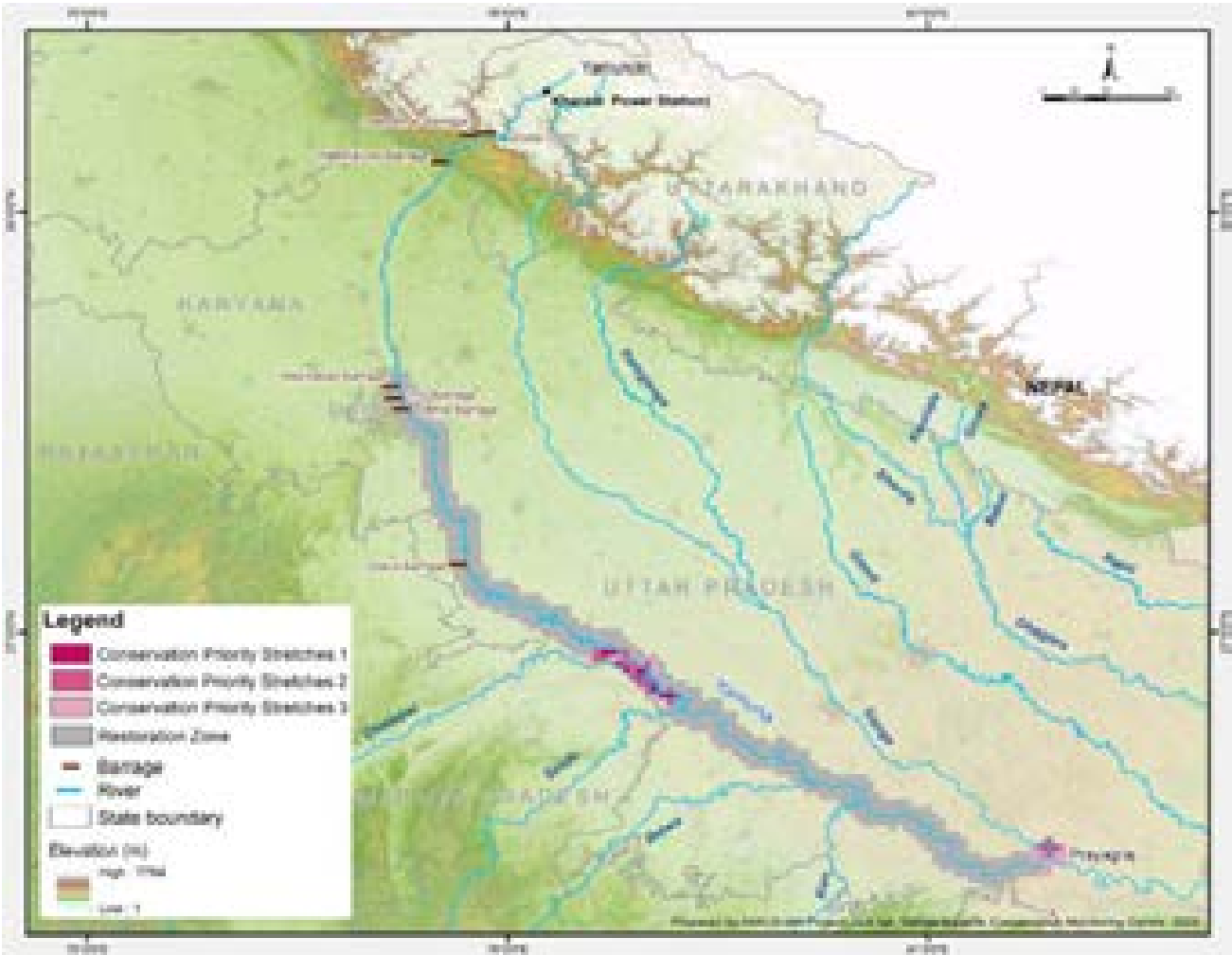


Figure 14. Conservation Priority Stretches in the Yamuna River



7. Prioritization of River Stretches for Conservation of Gangetic Dolphin in the Ganga Basin

The Gangetic dolphin (*Platanista gangetica*), an endemic freshwater cetacean and vital indicator of river health, has declined from 4,000-5,000 individuals in the 1980s to about 3,526 in 2014. In the Ganga River Basin (GRB), it survives in several rivers but has become locally extinct in others due to threats such as habitat degradation, pollution, altered flows, sand mining, and fishing net entanglement—the leading cause of reported mortalities since 2018.

Between 2020 and 2023, the Wildlife Institute of India, under the National Mission for Clean Ganga (NMCG), conducted boat-based surveys across 7,680 km of 22 rivers in the Ganga River Basin. A total of 2,510 dolphin sightings were recorded, showing their presence in about 40% of surveyed stretches, with major populations in the Ganga, Ghaghra, Kosi, and Gandak rivers. High densities were noted in Ghazipur-Sitabdiara, Prayagraj-Mirzapur, and Baishistangar-Revelganj. Using species distribution models (SDMs) and the MaxEnt approach, about 6,150 km of potential distribution was predicted, of which 2,850 km (46.34%) were identified as suitable habitats.

These habitats were classified into conservation priority stretches (CPS): 1,040 km (16.9%) as High Priority (CPS-1), 1,015 km (16.5%) as Moderate Priority (CPS-2), and 795 km (12.93%) as Low Priority (CPS-3) (Table 2). Smaller rivers were found to support more than 15% of the population, highlighting their role as important biodiversity refuges.

However, the study also revealed serious threats, including pollution, dams and barrages, sand mining, dredging, and fishing net entanglement. Since 2018, 95 incidents of dolphin mortality and rescue have been reported, with entanglement responsible for nearly one-third of deaths. Only 10% of suitable habitats currently fall within protected areas, leaving large stretches unprotected. The report stresses the need to expand conservation measures beyond existing sanctuaries, including community reserves, eco-sensitive zones, alongside the implementation of more stringent regulations governing river flows and pollution control.

By combining survey data, habitat modeling, and ecological assessments, the study offers a scientific basis for prioritizing conservation actions. It identifies stretches requiring urgent protection and provides a framework for targeted interventions. Based on these findings, the draft report "*Prioritization of River Stretches for Conservation of Gangetic Dolphin in the Ganga Basin*" was submitted to NMCG in June 2025, offering a roadmap to secure the species' future and safeguard the ecological integrity of the basin.



Table 2. River-wise identified conservation priority stretches (CPS) in Ganga River Basin

River	Predicted Length in MaxEnt (km)	No. of BEU			km			
		CPS-1	CPS-2	CPS-3	CPS-1	CPS-2	CPS-3	Total
Ajay	0	0	0	0	0	0	0	0
Babai	75	2	0	0	10	0	0	10
Bagmati	60	10	12	1	50	60	5	115
Betwa	0	0	0	0	0	0	0	0
Chambal	405	17	30	10	85	150	50	285
Damodar	0	0	0	0	0	0	0	0
Gandak	295	1	7	15	5	35	75	115
Ganga	2,070	65	87	62	325	435	310	1,070
Ghaghra	615	17	11	30	85	55	150	290
Girwa	20	1	1	0	5	5	0	10
Gomti	0	0	0	0	0	0	0	0
Kauriala	15	2	0	0	10	0	0	10
Ken	0	0	0	0	0	0	0	0
Kosi	235	14	9	9	70	45	45	160
Mahananda	250	30	10	4	150	50	20	220
Ramganga	0	0	0	0	0	0	0	0
Rapti	510	35	14	11	175	70	55	300
Rupnarayan	80	3	6	4	15	30	20	65
Sharda	220	6	5	0	30	25	0	55
Sind	0	0	0	0	0	0	0	0
Son	500	1	1	4	5	5	20	30
Yamuna	800	4	10	9	20	50	45	115
GRB	6,150	208	203	159	1,040	1,015	795	2,850

8. Population Status and Conservation Action Plan for Critically Endangered Gharial (*Gavialis gangeticus*) in the Ganga River Basin

This report, developed under the Wildlife Institute of India and National Mission for Clean Ganga, provides a comprehensive assessment of the population status, distribution, and conservation strategy for the critically endangered gharial in the Ganga River Basin (GRB). The gharial, once widespread across South Asia, now survives in fragmented populations primarily in India and Nepal, with local extinctions in Pakistan, Bhutan, Bangladesh, and Myanmar. The study aimed to (i) assess global and current status, (ii) examine the impacts of climate-induced temperature rise, (iii) evaluate genetic diversity and (iv) identify conservation priority stretches based on habitat suitability. Extensive boat-based surveys (2020–2023) covered 7,680 km across 22 rivers, recording a minimum population size (MPS) of 3,037 individuals, with the highest numbers in Chambal (2,097), Ghaghra (463),

and Girwa (158) rivers. However, most rivers had fewer than 100 individuals, and evidence of breeding was limited.

Key findings include low genetic diversity, female-biased sex ratios, and limited recolonization despite restocking efforts. Habitat modelling revealed that only 5.6% of river stretches were highly suitable, mainly in Chambal, Yamuna, Gandak, and Girwa rivers.

The report calls for targeted conservation actions such as:

- Protecting and restoring key habitats.
- Promoting regulated river flow and pollution control.
- Strengthening grow-and-release programs in viable habitats.
- Conducting regular population and genetic monitoring.
- Adopting adaptive, evidence-based conservation planning.

The plan emphasizes that without sustained and integrated conservation actions, long-term gharial survival in the Ganga Basin remains uncertain.



9. Action Plan for the Conservation of Priority Stretch Number 1 of the Ganga River, Uttar Pradesh

This report presents a comprehensive conservation action plan for CPS-1, a 25 km ecologically critical stretch of the Ganga River in Prayagraj district, Uttar Pradesh, located upstream of the Kachhua Wildlife Sanctuary. The area is rich in biodiversity, supporting species like the Gangetic dolphin, 22 waterbird species, and over 25 fish species, but faces threats from sand mining, agricultural encroachment, pollution, and climate change. Despite water quality being within acceptable limits, high levels of endocrine-disrupting chemicals (EDCs) and agrochemical runoff pose a risk to aquatic life. Socio-economically, around 60,000 people live in 20 surrounding Gram Panchayats, with livelihoods largely dependent on agriculture, fishing, and religious tourism. Key conservation issues include habitat degradation, fragmentation, illegal poaching, and unsustainable land and water use. A multi-stakeholder approach was adopted, identifying 35 stakeholder groups from local to national level, including government bodies, NGOs, and local communities.

Objectives of the Action Plan

1. To protect the habitat and monitor changes
2. To reduce pollution level in the CPS
3. To control the aquatic species mortality due to poaching and net entanglement
4. To engage and empower the local communities and other stakeholders for promoting sustainable resource use in the rivers and associated water bodies
5. To develop supportive institutional mechanisms

Recommendations

1. Establishment of buffer and eco-sensitive zones around the stretch
2. Community-based conservation through *Ganga Praharis*
3. Awareness and education campaigns
4. Restoration activities like plantation and sustainable agriculture
5. Livelihood diversification and promotion of renewable energy use

② ECOTOXICOLOGICAL ASSESSMENT

1. Sample Collection

Three different river ecotoxicological field surveys were conducted between January and June 2025. The first survey focused on assessing the occurrence, distribution, and potential sources of microplastic pollution in the GRB. The second survey was carried out in seven lakes in Nainital district and the third focused on investigating the pollution dynamics of emerging and legacy pollutants; while assessing the risks they pose to the biodiversity of the GRB for the pre-monsoon season 2025.

A total of 165 sampling sites across the Ganga (57), Yamuna (17), Gomti (14), Ghaghra (10), Gandak (5), Kosi (5), Son (3), Chambal (7), Ramganga (10), Ajay (4), Damodar (3), Rupnarayan (6), Sharda (6), Rapti (10), and Mahananda (8) were surveyed. As part of the M.Sc. Freshwater Ecology module, over 50 samples were collected from the six lakes in Nainital district. Surface water and sediment were collected for ecotoxicological assessment, with water quality parameters quantified on-site. The analysis and quantification of target analytes are currently in progress.



Additionally, a comprehensive assessment report evaluating the ecotoxicological status of the Yamuna River was submitted. It identifies hotspots of contamination and provides targeted recommendations for mitigation.

2. Pollution and Threat Hotspots in Yamuna River

Yamuna River, a critical water source for over 60 million people and habitat for endangered aquatic life like the Gangetic dolphin and Gharial, faces alarming levels of pollution from multiple sources. This study offers a detailed spatio-temporal ecotoxicological assessment of the river, focusing on endocrine disrupting chemicals (EDCs) and heavy metals. Using data from 2021, 2022, and 2024 across 22 sampling locations, the river was divided into five zones for targeted analysis: Upper Zone, Upper Middle Zone (Dakpathar-Hathnikund), Upper Middle Zone (Delhi), Lower Middle Zone (Okhla-Chambal confluence, Bhareh) and Lower Zone (Chambal confluence, Bhareh-Sangam, Prayagraj).

The results reveal widespread contamination across all zones, with particularly high concentrations in the Delhi stretch. Surface water and sediments contain a variety of pollutants including heavy metals, phthalates, bisphenol A (BPA), pesticides, pharmaceuticals, personal care products, and hormones. Sediments, especially in Delhi and downstream areas, act as pollutant reservoirs, storing even banned legacy chemicals like PCBs and DDT, indicating persistent failures in sediment and chemical management.

The Delhi-Agra corridor emerges as the most contaminated stretch, accounting for the majority of EDCs detected-over 85% of pharmaceuticals, pesticides, and hormones. Four pollution hotspots were identified: Wazirabad-Okhla Barrage (Delhi), Vrindavan (Mathura), D/S Taj Mahal (Agra), and Hindon Confluence (Gautam Buddha Nagar) (Figure 15). Inadequate wastewater treatment, industrial effluents, and massive tourism inflows worsen the pollution load, especially through single-use plastics and cosmetic waste.

Bioaccumulation data confirm high pollutant concentrations in fish tissue, especially in Delhi, posing direct human health risks via consumption. These toxins also threaten apex species through bioaccumulation and endocrine disruption, increasing the risk of reproductive failure and population declines.

The ecological risk assessment finds that over 90% of the Yamuna is at moderate to high risk due to EDC contamination. Particularly, the Upper Middle (Delhi) and Lower Middle Zones are most affected, with the former showing 100% high-risk categorization. Only 5% of sites show low ecological risk, emphasizing limited ecological resilience (Figure 16).

Key pollution drivers include agricultural runoff from Haryana and Western Uttar Pradesh, untreated industrial discharges, urban waste, and poor sewage infrastructure. The results strongly advocates for targeted remediation, especially in the Delhi-Agra corridor, involving improved effluent treatment, decentralized waste management, sediment remediation, and tourism-integrated wastewater governance to safeguard the river's future.





Figure 15. Identification and characterization of recurrently non-compliant (repeated offender) sites along the Yamuna River.

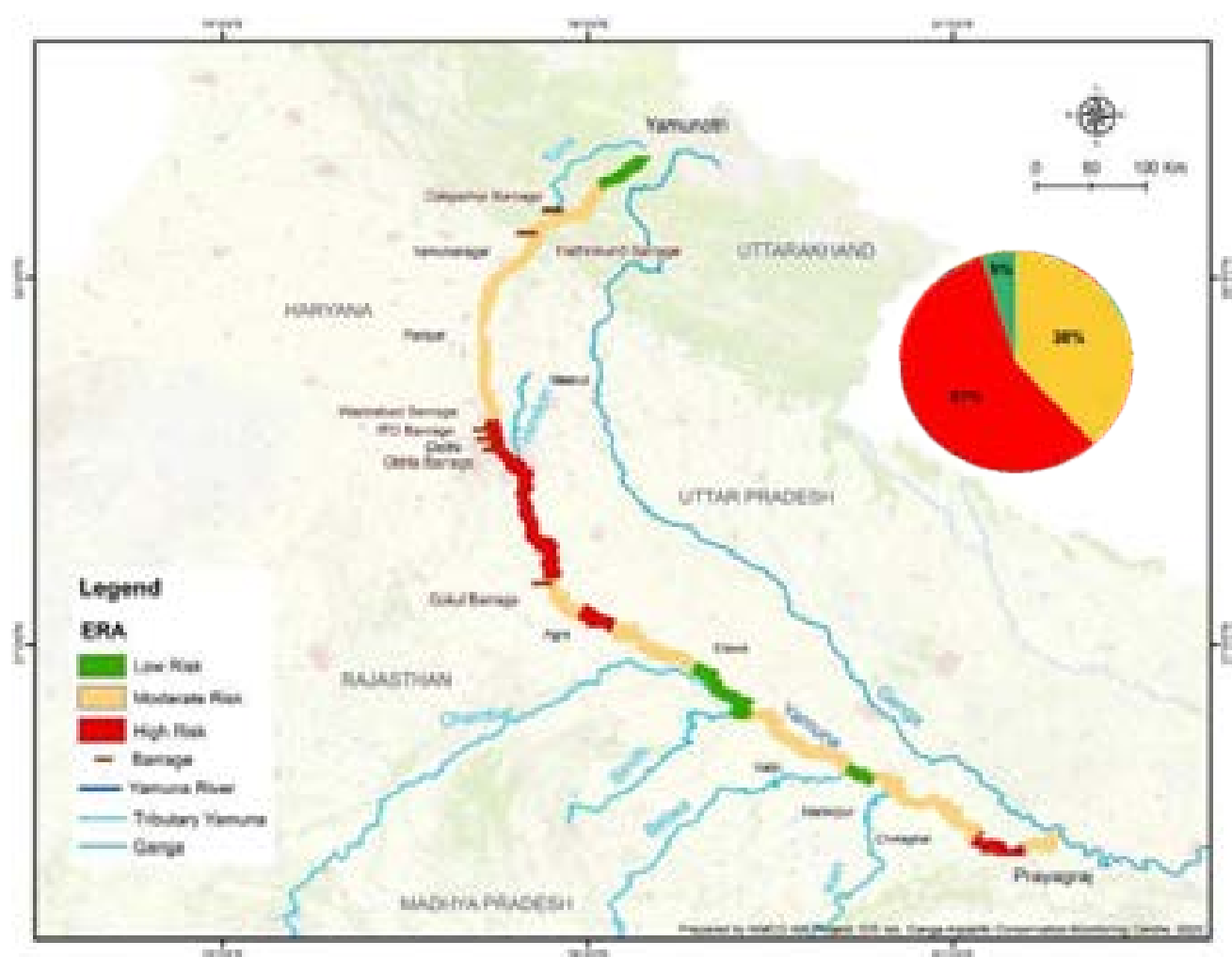


Figure 16: Yamuna River Pollution Hotspots with Risk Assessment. Color codes indicate: Red: high risk ($RQ \geq 1$), Yellow: moderate risk ($0.1 \leq RQ < 1$), Green: insignificant risk ($RQ < 0.1$),

These findings underline the urgent need for state-specific interventions across Haryana, Delhi, and Uttar Pradesh, including tighter regulation of plastic and industrial waste, strengthening of wastewater treatment infrastructure, and implementation of real-time

monitoring. Coordinated action between these states, and local administrative boundaries, with clearly defined responsibilities based on pollution burden distribution, will ensure more effective enforcement and equitable accountability across the Yamuna basin.

③ GENETIC ASSESSMENT

Genetic analysis of *Cabdio morar* was performed using 57 samples obtained from four river systems: the Ganga, Chambal, Son and Kosi rivers. A 660 bp fragment of the mitochondrial cytochrome oxidase subunit I (COI) gene was used for this analysis. The species exhibited moderate to high levels of genetic diversity, with a haplotype diversity (Hd) of 0.734 ± 0.048 and a nucleotide diversity (π) of 0.00618. A star-like haplotype network

revealed 14 haplotypes distributed across 20 polymorphic sites, suggesting recent population expansion. Haplotype 1 was found as the common haplotype shared among all the rivers. Meanwhile, eight haplotypes were found to be unique to the Ganga River (Hap_6, Hap_7, Hap_8, Hap_9, Hap_10, Hap_11, Hap_12, and Hap_13), two were unique to the Chambal River (Hap_4 and Hap_5), and one was from the Kosi River (Hap_14) (Figure 17).

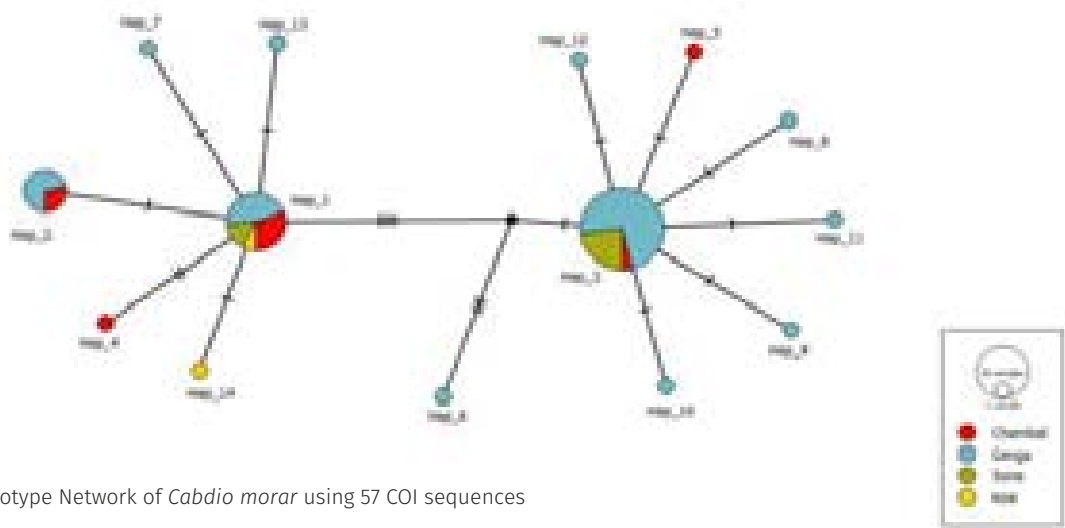


Figure 17. Haplotype Network of *Cabdio morar* using 57 COI sequences

In addition, a total of 50 tissue samples of dwarf goonch (*Bagarius bagarius*) were collected from the middle and lower stretches of the Ganga River. Partial fragments of mitochondrial DNA, specifically the cytochrome b (cytb) gene (~700 bp), are being generated to assess the genetic diversity of this species. Furthermore, genetic analysis of *Batagur dhongoka* samples collected from the Sarnath Turtle Rescue and Rehabilitation Centre, is under progress using genotyping at ten polymorphic nuclear microsatellite loci to evaluate genetic variation and population structure.



4 RESCUE AND REHABILITATION

The "Rescue to Revival" reports, prepared by the Wildlife Institute of India under the National Mission for Clean Ganga (NMCG), outline a strategic approach to conserving aquatic fauna in the GRB, through the establishment of rescue and rehabilitation centres.

Volume I identifies 20 potential sites across seven states—Uttarakhand, Uttar Pradesh, Rajasthan, Madhya Pradesh, Bihar, Jharkhand, and West Bengal—for future rescue and rehabilitation facilities targeting critically endangered and endangered species such as freshwater turtles, Gangetic dolphins, gharials, and otters. Site selection was based on species distribution, past rescue and mortality data, proximity to protected areas, and feasibility of implementation. Heat maps derived from two decades of data helped pinpoint high-risk zones requiring intervention. These centres are intended to support rescue, rehabilitation, translocation, and awareness programs aligned with India's *Namami Gange* biodiversity conservation goals.

Volume II documents on-ground implementation, highlighting the establishment or upgrading of six centres in Narora, Sarnath, Bhagalpur, Barhi, Rudrapur, and Barrackpore. These centres were equipped with veterinary labs, quarantine and filtration systems, and species-specific enclosures. Over 9,000 freshwater turtles were rescued, with more than 6,000 successfully rehabilitated. The initiative also extended to Gangetic dolphins and mugger crocodiles. Standardised protocols for care and pre-release were developed, alongside extensive capacity building of over 4,500 stakeholders, including forest staff and local communities. The project emphasizes collaborative governance and concludes that integrating scientific care with community engagement is key to conserving aquatic biodiversity and restoring ecological health in densely populated river systems.

Sarnath Turtle Rescue and Rehabilitation Centre

1. Renovation Activities

1.1. Renovation of the Existing infrastructure for an Improved Turtle Rescue and Rehabilitation Facility, Sarnath, Uttar Pradesh

Sarnath Turtle Rescue and Rehabilitation Centre is one of the most crucial turtle rescue and rehabilitation centres, as well as a turtle rearing centre, in Uttar Pradesh. It plays



a vital role in conserving freshwater turtles, especially in the Ganga River and its tributaries. This centre has three enclosures (Enclosures I, II, and III), one hatchery, and one medical care room. This infrastructure requires renovation and improvements to meet the evolving needs of the centre. This aims to improve the living conditions of turtles and facilitate their rehabilitation before eventual release back into the wild.

Encloser Renovation

All three ponds in this rescue centre are currently functional. Pond I is designated for yearling turtles, Pond II for hatchlings, and Pond III for rescued turtles. In Pond I, one of the filtration units was modified, replacing its temporary water outlet with a concrete structure. In Pond II, minor modifications were made to the dividing wall that separates the pond into four sections.



Before

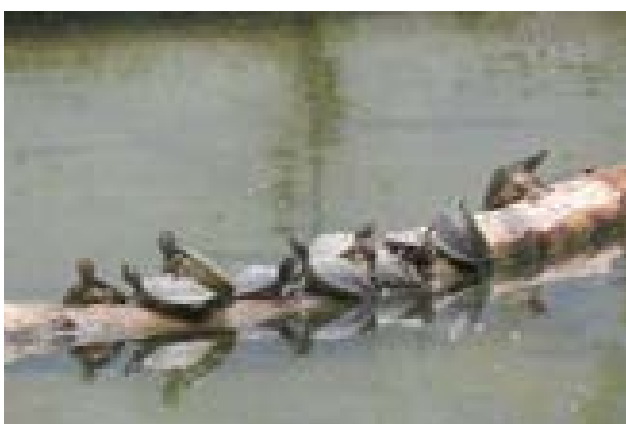


After

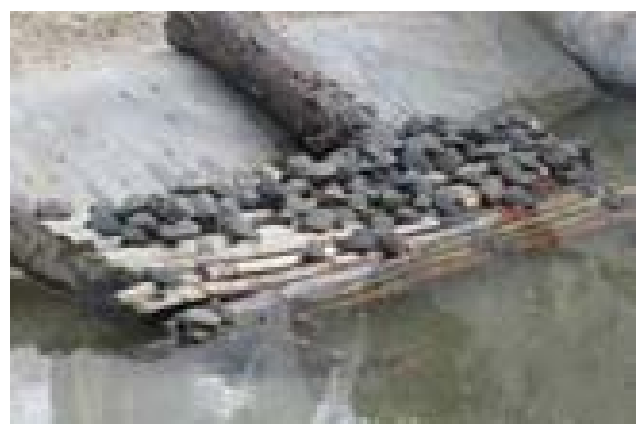
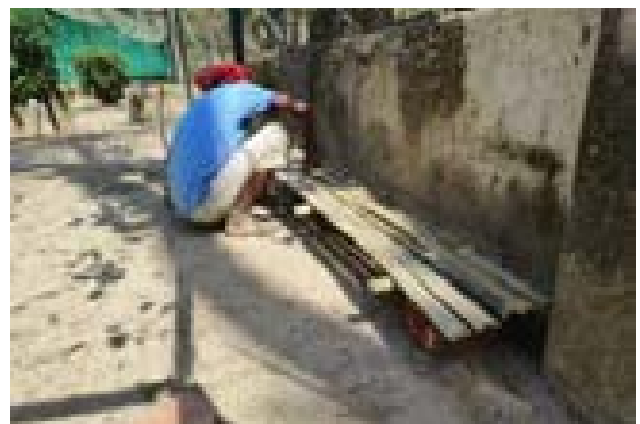
Encloser Enrichment

Enclosure enrichment is a crucial aspect of animal husbandry. It provides the environmental stimuli necessary for optimal psychological and physiological well-being. To enhance the well-being of the turtles, the enclosures were upgraded with some enrichments.

- A. Sand is one of the necessary enrichments for riverine turtles. To mimic the natural environment, it is necessary to enrich the enclosure with sand. Therefore, new sand has been added to Enclosures I and II.



- B. Wooden logs are used for basking and are potential hiding places where turtles feel secure. Additional wooden logs have been strategically placed in the enclosures.
- C. Bamboo thatch serves as an important shading platform preferred by captive turtles and is also utilized for basking and hiding. Since the old bamboo thatches were damaged, new ones have been installed in the enclosures. These shades were primarily positioned in areas habitually/commonly used by the animals.



- D. Water hyacinth (*Eichhornia crassipes*) has been added to the turtle ponds. It provides shade and a hiding place for turtles while also keeping the water temperature cool.



- E. Live fish and worms were used to feed the turtles. This helps enhance and maintain their ability to capture prey, providing a good source of nutrients for them.



1.2. Renovation of the existing infrastructure at Barhi Turtle Rescue and Rehabilitation Centre, Bhind, Madhya Pradesh

This centre currently comprises three enclosures, a hatchery, three indoor pools, and an office space. To maintain the centre's efficient operation and ensure a clean, safe, and enriched environment for both resident and rescued turtles, minor repairs and upgrades were necessary. Various infrastructural improvements have been implemented to enhance the facility's functionality and overall appearance.



Before

Enclosure renovation

All three enclosures are currently functional in this centre. To reduce thermal exposure and visual disturbance, green shade nets were installed on the side walls and roof of enclosures. These nets help regulate temperature during summer and act as barriers to human interference.

Enclosure enrichment

Sand is one of the necessary enrichments for riverine turtles. To mimic the natural environment and maintain hygiene, the sand in all three pools was replaced with fresh, filtered sand.



After

1.3. Renovation of the existing infrastructure at Deori Gharial Rearing Centre

Enclosure renovation

Renovation work is currently underway for two turtle rearing pools at the Deori Gharial Rearing Centre. The upgrades include the construction of protective partitions and the installation of overhead roofing to ensure a safer and more suitable environment for turtle hatchlings.

Protective partitions have been successfully installed in two pools. The third pool could not be renovated at this stage as it is currently being used to house mugger crocodiles. Once the muggers are shifted, similar renovation will be carried out in the remaining pool to maintain uniform standards.



Before



Work in progress

The previous plastic roofing, which had become damaged over time and was obstructing natural sunlight, was removed entirely. In its place, a more durable and functional iron mesh roof has been installed. This new roof provides protection from predators and falling debris while allowing adequate sunlight exposure, which is essential for basking and maintaining turtle health.

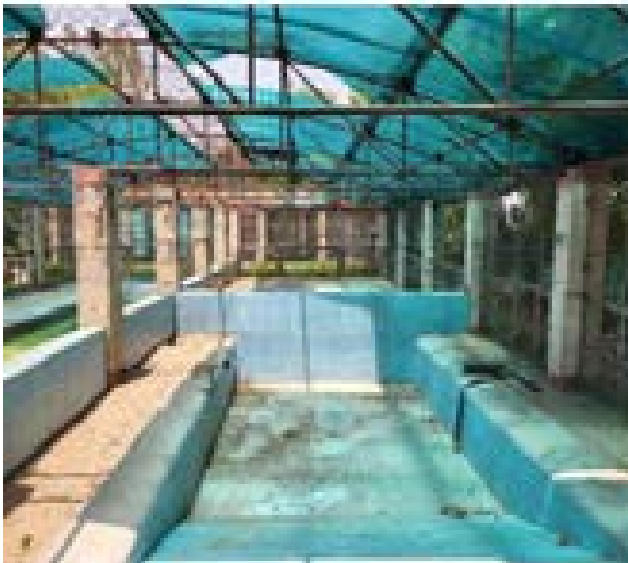


Before



Work in progress





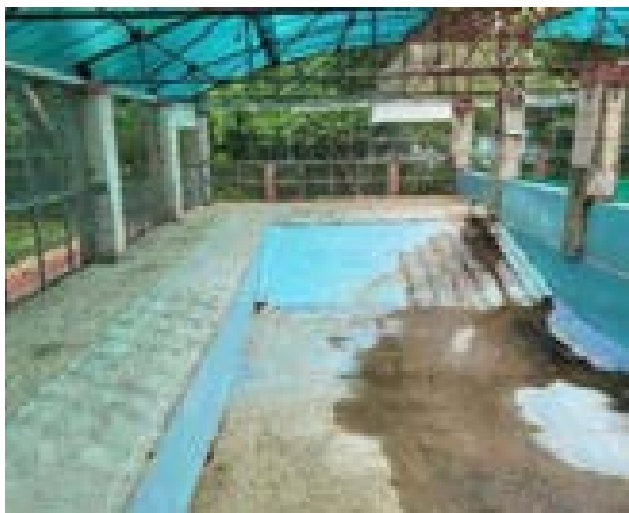
Before

Work in progress



Enclosure renovation

To reduce direct human interaction and minimise environmental stress on hatchlings, green shade nets have been installed around the temporary rearing enclosures. These nets provide partial shade and visual barriers, helping to reduce disturbance from human activity. Additionally, the green nets contribute to temperature regulation by diffusing direct sunlight, thus creating a more stable and comfortable microhabitat for the hatchlings.



Before



After

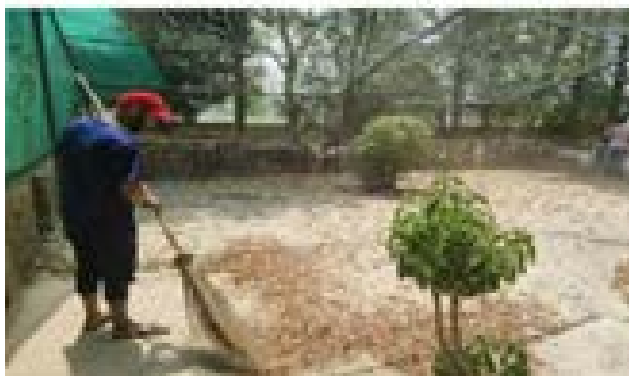
2. Daily management and maintenance

2.1. Daily management and maintenance at Sarnath Turtle Rescue and Rehabilitation Centre

At the Turtle Rescue and Rehabilitation Centre in Sarnath, daily activities are meticulously planned to ensure the welfare of the in-house turtles. These activities include regular cleaning of the three ponds, involving water changes, algae removal, and sweeping to maintain a clean and conducive environment for the turtles. Each day, the turtles are fed at a specific time under the guidance of

veterinary doctors. To support their overall health, the staff implements proper enclosure enrichment methods.

A crucial aspect of the centre's work involves morphometric assessments, focusing on *Batagur kachuga*, *Batagur dhongoka* and *Nilssonina gangetica*. This detailed assessment, conducted between the 1st and 5th dates of each month, starts with careful algae removal and thorough cleaning of each turtle. Measurements taken include carapace length and width, plastron length, weight, and a photograph captured on graph paper. This systematic approach to morphometry allows the centre to monitor the physical characteristics of the turtles, thereby contributing to their overall health and well-being.



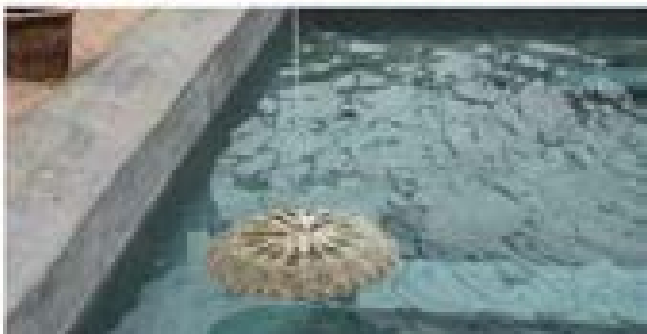
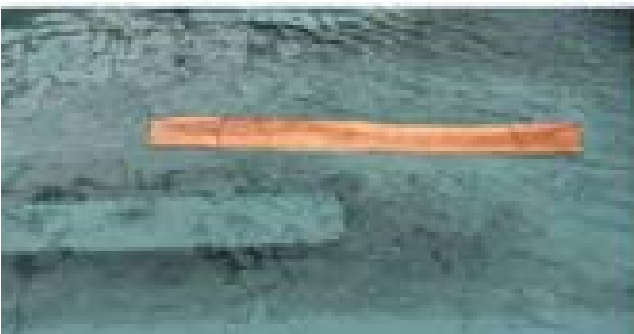
2.2. Daily management and maintenance at Barhi Turtle Rescue and Rehabilitation Centre

At the Barhi Rescue and Rehabilitation Centre, specific practices are followed to provide an enriched habitat and maintain a clean environment for both resident and rescued turtles. The turtles receive a proper diet daily, followed by routine pond cleaning, removal of leftover food, and regular water changes to ensure optimal water quality. Since water quality is critical for housing turtles in captivity, on-site personnel have been instructed to change 20% of the pond water daily. Additionally, full pond cleanings are carried out every 10 days to maintain a healthy aquatic environment.

Morphometric assessments at the Barhi Centre focus on *Batagur kachuga* and *Batagur dhongoka*, following the same systematic approach as in Sarnath. Conducted between the 1st and 5th of each month, these assessments begin with the removal of algae and a thorough cleaning of each turtle. The recorded measurements include

carapace length and width, plastron length, head width, body weight, and a photograph taken on graph paper. This process helps monitor the turtles' physical development and overall well-being.

For captive chelonians, the ideal diet should closely resemble their natural food sources and include a variety of options. Feeding charts were prepared based on the number and weight of the turtles, explained to the centre staff, and adjusted according to species, life history stage, and seasonal changes. The diet for *Batagur dhongoka* and *Batagur kachuga* consists of a combination of seasonal vegetables, fruits, and commercial turtle feed, which is scheduled on alternating days. For rescued turtles (*Lissemys punctata*), a diet primarily consisting of carnivorous food, including chicken meat, has been provided.



3. Health care and management of the turtles

One of the primary objectives of this component is to treat and maintain the health of the animals at the rescue centre. When rescued turtles are brought in, their health conditions are assessed through a triage process. The rescued animals are categorised as either live or dead (if any), with deceased individuals undergoing post-mortem examination to determine the probable cause of death. Live turtles undergo a thorough physical examination, and the treatment plan for injured individuals is determined based on the depth and severity of their injuries.

3.1. Health care and management of the turtles at Sarnath Turtle Rescue and Rehabilitation Centre

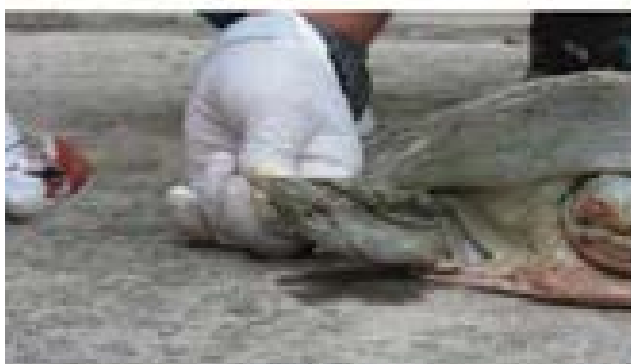
The rescued turtles (*Nilssonia gangetica*, *Nilssonia hurum*, and *Lissemys punctata*) were brought to the Sarnath turtle rescue centre. All rescued individuals of turtles were injured (abrasion, puncture wound), dehydrated and stressed. Primary treatment, e.g., an antiseptic dressing with betadine solution diluted with normal saline and antiseptic ointment, was applied topically. To reduce dehydration, they were provided with a suitable habitat to acclimatise to the surrounding environment. The next day, they stabilised with rehydrating fluids (DNS, NS, and RL) at 15 ml/kg body weight via s/c administration. Broad-spectrum antibiotic

enrofloxacin @ 5 mg/kg s/c q48 hours mixed with normal saline solution to prevent tissue necrosis. Injection Meloxicam administered @ 0.5 mg/kg, s/c q48 hours as an analgesic agent. Injection Dexamethasone @0.15 mg/kg body weight i/m for traumatic shock. According to their feeding behaviour, a carnivore diet (live or dead fish, or chicken meat) is offered to them and maintained detailed records of treatments, observations, and any changes in condition. Some animals were presented as dead on arrival (DOA). All the carcasses were necropsied with the permission of the Forest Department.

Alongside this, health assessments of in-house turtles were also conducted monthly, along with routine morphometric analysis. Any individual suspected of being infected is isolated and provided with symptomatic treatment. In addition to these, monthly check-ups, daily observations are carried out to monitor for any abnormal behaviour. Turtles displaying unusual behaviour or symptoms are immediately isolated and treated accordingly.

During winter, turtles often experience respiratory distress and hypovitaminosis, characterised by symptoms such as conjunctivitis, inflamed eyelids, nasal discharge, and nasal blockage. Affected individuals are treated symptomatically until recovery. Among the *Nilssonia gangetica* of the 2023 batch, some exhibited decaying lesions on the plastron, the posterior end of the eye orbit, and limbs. These lesions indicated a mixed infection, and they were treated accordingly, resulting in recovery.

Health care and management



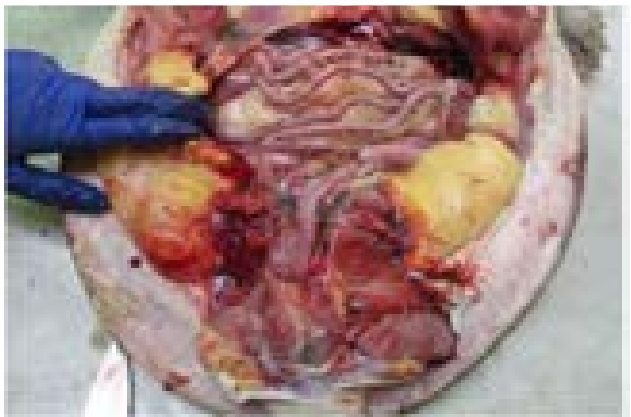
Necropsy examination of turtles: Necropsy examinations of deceased turtles were carried out with the help of supporting staff. A total of 7 dead animals, 03 *Nilssoniana gangetica*, 02 *Nilssoniana hurum*, 02 *Lissemys punctata*, were examined for necropsy. During necropsy examination, we followed standard operating protocol (SOP) for each species. To determine the cause(s) of death, a thorough post-mortem evaluation has been performed. The details of the necropsy examination are given below:

a. Indian softshell turtle (*Nilssoniana gangetica*) and Indian peacock softshell turtle (*Nilssoniana hurum*)

We performed necropsy examination of rescued turtles, and most of the carcasses were observed with lacerated

and perforated wounds on the phalangeal regions and dislocation of joints in the phalangeal regions. Blood was oozing out from the nostrils, indicative of severe trauma to the animal during capturing and transportation. Emphysematous lungs and clotted blood were observed in the ventricle, which may be due to the struggling of animal and difficult breathing. Mucus with no ingesta was found in the digestive tract, and abrasion marks were seen over the carapace and plastron, which may be due to dehydration and off-feed. Ruptures and Petechial haemorrhages with small foci observed on the liver lead to injury and internal haemorrhages. Lesions were suggestive of death due to traumatic and hypovolemic shock and respiratory failure. However, samples have been collected for further laboratory examination.

Necropsy examination of turtles



**b. Indian flapshell turtle
(*Lissemys punctata*)**

There was no obvious sign of disease except hemothorax because of rupture of visceral organs and excessive congestion of liver and lungs, dehydration, multiple organ failure and damaged plastron suggestive of death due to trauma and hypovolemic shock.



3.2. Health care and management of the turtles at Barhi Turtle Rescue and Rehabilitation Centre

At the Barhi Rescue and Rehabilitation Centre, juvenile turtles of *Batagur dhongoka*, *Batagur kachuga*, and *Lissemys punctata* from the 2023 batch were routinely examined for any abnormalities. Their health and body condition scores were assessed, with healthy individuals released into the pond, while sick turtles were isolated for monitoring and treatment.

To ensure their overall well-being, the turtles were provided with suitable habitats and balanced diets. Their growth was monitored through monthly morphometric analysis, which included body weight measurements. Juvenile turtles require a diet rich in protein and calcium to support proper shell development and overall growth. At the center, they were fed commercial pellets, seasonal

vegetables, a mixed diet, occasional live or dead fish, and dried super worms to meet their nutritional requirements.

To encourage natural behaviours and reduce stress, environmental enrichment was introduced, including sieved sand, and wooden and bamboo platforms for swimming, basking, and exploration. The turtles' behaviour, eating habits, and general health were closely monitored, and detailed records of treatments, observations, and any changes in condition were maintained.

3.2.1. Necropsy examination of turtles

During the winter season, a juvenile *Batagur dhongoka* was found dead, and a post-mortem was conducted. No external injuries were seen on examination, but on internal examination, petechial haemorrhages along with gas-filled GIT were observed, indicative of gastroenteritis and secondary bacterial infection.



4. Temperature maintenance

4.1. Temperature maintenance of enclosures at Sarnath Turtle Rescue and Rehabilitation Centre

Maintaining optimal temperature in captivity posed a challenge. During winter, temperatures in the Sarnath area dropped as low as 4°C to 10°C, while in summer, they soared to highs of 40°C to 48°C. To combat the winter chill, we insulated the entire enclosures with thick

transparent plastic sheets and installed heating lights to maintain an ambient temperature of around 29-30°C. In summer, we employed bamboo thatch, aquatic macrophytes, and shrubs to shield the turtles from excessive heat. Additionally, we partially covered the enclosure roofs with green netting to mitigate direct sunlight. Twice daily, we changed the water in each pond with submersible pump water and utilised water filters to cool it down.



4.2. Temperature maintenance of enclosure at Barhi Turtle Rescue and Rehabilitation Centre

Optimal temperature maintenance in captivity posed a challenge. During winter, temperatures in the Barhi area dropped as low as 4-10°C, while in summer, they soared to highs of 40-48°C. To combat the winter chill, we insulated the entire enclosures with thick transparent

plastic sheets and installed heating lights to maintain an ambient temperature of around 29-30°C. In summer, we employed bamboo thatch, aquatic macrophytes, and shrubs to shield the turtles from excessive heat. Additionally, we partially covered the enclosure roofs with green netting to mitigate direct sunlight.



5. PIT microchip tagging of the turtles at Barhi Turtle Rescue and Rehabilitation Centre

For identification and long-term tracking of individuals, PIT (Passive Integrated Transponder) microchip was implanted in rescued (*Lissemys punctata*) and in-house (*Batagur dhongoka* and *Batagur kachuga*) turtles at the Barhi turtle rescue centre. Health assessment of all the

individuals was carried out before tagging to ensure optimal health conditions of the animals. The functionality of the chip to be tagged has been checked before tagging. All the microchips were tagged subcutaneously into the left hind limb parallel with the femur bone and transverse to the calipee. After injection, the wound was treated with an antiseptic solution. Animals were observed after the PIT tag was injected, to ensure that it is not pushed out immediately, bleeding and any sign of injury.



The tags were scanned again after post-tagging to verify the position and functioning of the microchips. All the individual animals' data (body weight, morphometry, time of tagging, handling time, vital signs and clinical signs of the individual) along with the microchip number have been recorded for future reference. All the animals have been observed for 2-3 hours post tagging, and after ensuring the health of the animal, they were released back to their respective ponds. The animals were observed for a few more days post-tagging to ensure proper wound healing at the insertion site.



6. Rescue and rehabilitation of turtles at Sarnath Turtle Rescue and Rehabilitation Centre

Sarnath is an important rescue and rehabilitation centre for turtles in the Varanasi Circle. Frequent cases of poaching and confiscation occur here. Many of the rescued turtles are handed over to this centre for rehabilitation. The rescue events that have occurred in the last six months are as follows:



- On 14th January 2025, the Government Railway Police (GRP) and Forest Department successfully rescued 30 *Lissemys punctata* from Mughalsarai railway station and transferred them to the Sarnath Rescue Center.



- On 22nd March 2025, the Government Railway Police (GRP) and Forest Department successfully rescued 35 *Lissemys punctata* from Mughalsarai railway station and transferred them to the Sarnath Rescue Center.



- On 4th April 2025, the Government Railway Police (GRP) and Forest Department successfully rescued 72 *Lissemys punctata* from Mughalsarai railway station and transferred them to the Sarnath Rescue Centre.

7. Biological samples collection and Laboratory examination

Different biological samples were collected during post-mortem examination of rescued turtles at the Sarnath rescue and rehabilitation centre. Pieces of tissue of all the visceral organs for histopathological examination in 10% formalin, muscle pieces in ethanol for genetic study and cloacal and oral swabs for disease diagnosis. All the collected samples were preserved at -20 °C, except for the histopathological samples, until analysis.

Biological samples (urine, blood, oral, and cloacal swabs) were collected from in-house individuals of *Batagur dhongoka* and *Batagur kachuga* at the Barhi Turtle Centre. The samples were collected to assess the health condition of animals while also developing a treatment protocol and understanding the physiological processes in freshwater chelonians.

Tissue samples for histopathology examination, blood samples for haematology, cell morphology, haemoprotozoans, and biochemistry, as well as urine samples and swabs for disease diagnosis, are in process.

8. Release site identification for turtles of Barhi Turtle Centre

As part of ongoing efforts to ensure the successful rehabilitation of rescued freshwater turtles, a field survey was conducted to identify suitable release sites within the National Chambal Sanctuary. After thorough ecological and logistical evaluations, three sites were selected based on habitat suitability, water quality, human disturbance, and accessibility. These locations will support the release and long-term survival of turtles currently held in *ex-situ* conservation centres.



Habitat Type: Slow-moving, moderately deep river stretch with sandy banks.

Objectives of Site Selection

- To identify natural and riverine habitats ideal for the release of head-started turtles.
- To ensure the selected sites have sufficient basking, feeding, and nesting conditions to support turtle populations.
- To establish long-term monitoring of released individuals for post-release survival.

Site Details

Site 1: Barhi Bridge (Near Barhi Village, Bhind District, Madhya Pradesh)

- Coordinates: Longitude = 26.69788, Latitude = 78.93423
- Distance from Bhind = 22 km approx.
- Distance from Barhi = 2 km approx.

- Moderate human activity and moderate fishing pressure.
- Natural basking sites and shallow sandy areas are ideal for nesting.
- Proximity to Barhi Turtle Rescue and Rehabilitation Centre (logistical advantage).
- Regular turtle sightings by local communities and field teams.

Site 2: Ater Ghat (Under Ater Bridge, Ater Block, Bhind District, Madhya Pradesh)

- Coordinates: Longitude = 26.76563, Latitude = 78.64819
- Distance from Bhind: approximately 32 km.
- Distance from Barhi = 22 km approx.



Habitat Type: Deep, braided channel with adjacent sandbanks

Key Features

- Far from Bhind and Barhi.
- Remote location with low anthropogenic disturbance.
- Adequate water quality and depth throughout the year.
- Moderately Dense riparian vegetation and undisturbed riverine corridor.
- Good potential for long-term population support.

Site 3: Sakri Ghat [Near Kankpura and Gyanpura Village]

- Coordinates: Longitude = 26.66016, Latitude = 78.00121
- Distance from Bhind = 30 km approx.
- Distance from Barhi = 24 km approx.

Key Features

- Site fertility
- Eggs are collected for Skari only.
- No human disturbance on site, only livestock see.



Habitat Type: Deep, braided channel with adjacent sandbanks

9. Egg incubation and post-hatching care at Sarnath Turtle Rescue and Rehabilitation Centre

This endeavour provides an overview of the egg rescue, hatchling care, and post-hatchling care operations carried out at the Turtle Rescue and Rehabilitation Centre in Sarnath, Uttar Pradesh. The two turtle species that were the focus of the efforts were *Batagur kachuga* and *Batagur dhongoka*. Ensuring the successful hatching and subsequent maintenance of the turtles was the primary goal to support the conservation and population recovery of these species.

Methodology

- **Egg Collection and Incubation:** The eggs of *Batagur dhongoka* and *Batagur kachuga* were collected from wild nests and confiscation cases in collaboration with local communities and forest departments. These eggs were carefully transported to the Rescue and Rehabilitation Centre for incubation.
- **Incubation Conditions:** The eggs were placed in artificial incubators set to replicate the natural incubation conditions required by each species. Factors such as temperature, humidity, and incubation duration were monitored and adjusted accordingly.
- **Hatchling Management:** Upon hatching, the newly emerged hatchlings were closely monitored and provided with appropriate care to ensure their survival and well-being. This included monitoring their behaviour, feeding patterns, and health status.
- **Post-Hatchling Care:** After hatching, the post-hatchlings were placed in suitable enclosures with optimal environmental conditions, including temperature, humidity, lighting, and access to water and basking areas. Their diet was carefully planned and adjusted to meet their specific nutritional requirements.

Findings

- **Successful Egg Hatching:** The egg rescue efforts resulted in the successful hatching of over 750 animals, including *Batagur dhongoka*, *Batagur kachuga* and *Nilssonina gangetica* hatchlings.
- **Hatchling Health and Survival:** Through close monitoring and appropriate care, the hatchlings exhibited healthy growth and survival rates, contributing to the population recovery of these endangered turtle species.
- **Nutritional Requirements:** The post-hatchling diets were carefully planned and adjusted to meet the specific nutritional needs of each species. Regular monitoring ensured optimal growth and development.
- **Environmental Factors:** The enclosures provided suitable environmental conditions, including temperature, humidity, lighting, and access to water and basking areas, promoting the overall well-being and natural behaviour of the post-hatchlings.

The successful egg rescue, hatchling management, and post-hatchling care efforts at the Rescue and Rehabilitation Centre in Sarnath have significantly contributed to the conservation and population recovery of *Batagur dhongoka*, *Batagur kachuga*, and *Nilssonina gangetica*. Through careful incubation, appropriate care, and optimal environmental conditions, 750 hatchlings

have benefited, supporting their growth, survival, and eventual release into the wild. Continued monitoring, research, and public awareness initiatives will contribute to the long-term conservation of these endangered turtle species.





10. Collection and rearing of hatchlings at Deori Gharial Rearing Centre

A total of 160 hatchlings of *Batagur kachuga* and *Batagur dhongoka* were collected from three riverside hatcheries. These hatchlings are currently being reared at the Deori Gharial Rearing Centre. Regular feeding, water management, and primary health check-ups are ongoing.





CAPACITY BUILDING OF THE FOREST DEAPRTMENT AND OTHER STAKEHOLDERS



Under this component, two trainings for spearhead teams and four trainings for other stakeholders were conducted from January to June 2025. Through these trainings and workshops, capacity building was strengthened, awareness was raised and skills were developed to engage them in the conservation of the Ganga River Basin.

1 SPEARHEAD TRAINING

From January to June 2025, two targeted capacity-building trainings were conducted under the Spearhead Training initiative. The first was a State Level Training Workshop for Trainee Teachers from Uttarakhand, Uttar Pradesh, and Himachal Pradesh, held from 7th to 9th January 2025 at the Wildlife Institute of India (WII), Dehradun. The second was a National Level Training Workshop for University Professors on ‘Conservation of Macro Fauna of Riverine Ecosystem’, conducted from 11th to 14th February 2025 at Wildlife Institute of India, Dehradun. These sessions aimed to enhance knowledge on aquatic biodiversity and integrate conservation themes into academic frameworks. A total of 124 participants were trained through these structured, interactive engagements (Table 3).



Table 3. Spearhead trainings conducted between January and June 2025

Date	Name of training	Location	No. of participants
7 th to 9 th January 2025	State Level Training Workshop for Trainee Teachers on 'Conserving Aquatic Wildlife of Ganga River' of Uttarakhand, Uttar Pradesh and Himachal Pradesh	Wildlife Institute of India, Dehradun, Uttarakhand	72
11 th to 14 th February 2025	National level training workshop on 'Conservation of Macrofauna of Riverine Ecosystem' for University Professors	Wildlife Institute of India, Dehradun, Uttarakhand	52
	Total		124



Glimpses of State Level Training Workshop for Trainee Teachers on Conserving Aquatic Wildlife of Ganga River



Glimpses of National Level Training Workshop on Conservation of Macrofauna of Riverine Ecosystem for University Professors

② TRAINING WITH OTHER STAKEHOLDERS



Multiple capacity-building trainings were conducted for diverse stakeholder groups, including zookeepers, forest staff, postgraduate students, and visually impaired trainees. Total six training workshops were conducted between January and June 2025, with 320 participants (Table 4). These trainings focused on key aspects of river conservation, biodiversity, and rescue and handling of aquatic species, aiming to enhance knowledge, practical skills, and inclusive participation in conservation efforts.

Table 4. Capacity-building training carried out for stakeholders between January and June 2025

Date	Name of training	Location	Stakeholders	No. of participants
13 th January 2025	Fundamental aspects of turtle biology, species identification and proper handling techniques	Sarnath Rescue and Rehabilitation Centre, Varanasi	Forest Range Officers, Uttar Pradesh Forest Department	16
21 st to 22 nd February 2025	Ganga Biodiversity Conservation for NSS volunteers	HNB Garhwal University, SRT campus, Chamba, Uttarakhand	NSS volunteers	160
23 rd May 2025	Fundamental aspects of turtle biology, species identification and proper handling techniques for	Sarnath Rescue and Rehabilitation Centre, Varanasi	Forest Range Officers, Uttar Pradesh Forest Department	92
30 th to 31 st May 2025	Two days Training workshop on fresh water biodiversity conservation of mainstream Ganga River and its tributary Yamuna	Daulat Ram College, University of Delhi, Delhi	NSS volunteers	52
Total				320



NSS volunteers at HNB Garhwal University, SRT campus, Chamba



COMMUNITY BASED AQUATIC SPECIES CONSERVATION AND OUTREACH PROGRAMMES FOR THE GANGA RIVER BASIN

COMPONENT

3

1 COMMUNITY BASED CONSERVATION

Conservation through a growing Ganga Prahari network

A total of 6,578 Ganga Praharis have been registered, of which 4,468 are female and 2,110 are male. 200 Ganga Praharis (192 females and 08 males) were inducted to the cadre during January - June 2025, from various regions within the Ganga River and its tributaries, including Alaknanda, Ghaghra, Hooghly, Mahananda, Ramganga, Rapti, Sarayu, Sharda, Son, Surya and Yamuna (Figure 17).



Figure 17. Distribution of Ganga Prahari in Ganga River Basin

A cumulative total of 510 activities, encompassing awareness and sensitization programmes, cleanliness drives, plantation initiatives, consultative meetings, livelihood trainings, participatory mapping, socio-economic survey, river walks, rescue and rehabilitation and ecological surveys were diligently carried out across 44 districts of 8 states including Uttarakhand, Uttar

Pradesh, Bihar, Jharkhand, West Bengal, Delhi, Haryana and Himachal Pradesh across the Ganga River basin by the Wildlife Institute of India (WII). Approximately, 16,979 participants, predominantly comprised of different stakeholder categories, including local communities, Ganga Praharis, State Forest Departments, district administration, Fisheries Department, livelihood development organizations, Krishi Vigyan Kendra, NGOs and other line agencies, participated in these events (Table 5).

Activities	No. of activities	No. of participants
Awareness and Sensitization Activities	190	9,509
Cleanliness Drives	12	444
Consultative Meetings	152	1974
Field Visits / River Walks	1	18
Livelihood Development Activities	62	1,837
Orientation and Training Workshops	3	663
Participatory Mapping Activities	12	110
Plantation Drive	3	186
Rescue & Rehabilitation	1	2
Sensitization Workshops	15	476
Socio-economic Survey	29	278
Special Occasions and Days celebration	22	1,298
Others	8	184
Total	510	16,979

A total of 14 livelihood trainings were conducted in 15 districts of three states (Uttar Pradesh, Bihar and Jharkhand) in the Ganga River basin, each functioning as a specialized platform for skill development. During the trainings more than 400 participants underwent comprehensive training in various green livelihood activities, including bag making, basket weaving, incense stick and candle making, natural farming and sewing and stitching (Table 6). Furthermore, Ganga Prahari's active participation in Jalaj initiatives was pivotal in establishing additional opportunities geared towards promoting self-sufficient livelihood practices and socio-economic mobility, aligning with the goals of Ganga conservation and Arth Ganga initiative. Ganga Prahari Ms. Amita opened her boutique named 'Amita Sewing and Training Centre', in Old Jhusi, District Prayagraj, Uttar Pradesh.



Table 6. Livelihood skill development trainings

Trainings	No. of trainings	No. of participants
Bag Making	1	3
Basket Weaving Training	1	17
Incense Stick and Candle Making	1	40
Natural Farming	1	23
Sewing & Stitching	10	332
Total	14	415



To ensuring sustainability of livelihood development and conservation efforts

To institutionalize the livelihood development and conservation efforts, Ganga Prahari groups are being registered under Societies Registration Act, 1860. From January to June 2025, one Ganga Prahari group in Vaishali district of Bihar has been registered named as *Ganga Prahari Baraila Jheel Jeev Raksha Shodh Sansthan*.



Ganga Praharis taking lead in conservation actions

From January to June 2025, trained Ganga Praharis, conducted a total of 291 conservation related activities in their respective sites. These activities encompassed initiatives such as awareness and sensitization of stakeholders especially local communities, cleanliness drives, plantation, livelihood development, assistance in ecological monitoring, socio-economic and ecological surveys, and microplan data collection, rescue and rehabilitation of species in distress (Table 7).



Table 7. Activities initiated by Ganga Praharis

Activities	No. of activities	No. of participants
Awareness & Sensitization	174	4,908
Celebration of Special Days and Events	62	1,753
Cleanliness Drive	21	280
Consultative Meetings	6	46
Ecological Monitoring	7	32
Participation in activities by other organisations	4	210
Plantation Programme	1	5
Rescue & Rehabilitation	16	109
Total	291	7,343

Participatory mapping of river resources

Participatory mapping of ecosystem services was carried out to assess the grassroots level perceived dependency on the ecosystem services provided by rivers such as the biotic and abiotic resources, cultural and religious services, and dependence of agriculture, livestock and other village-level economic constituents upon the riverine resources. Focus group discussions and ground truthing were conducted in five villages in the districts of Dehradun, Uttarkashi and Tehri Garhwal in Uttarakhand; three villages in Agra and Mathura in Uttar Pradesh; three villages in Faridabad and Sonipat in Haryana; one village in North Delhi in National Capital Territory of Delhi; and 12 villages in Murshidabad, Purba Bardhaman, Nadia, Kolkata, South 24 Parganas, Howrah and Purba Medinipur

in West Bengal. Overall, 24 villages were surveyed in four Ganga Basin states and one union territory across 15 districts, along Yamuna (n=12), Hooghly (n=6), Hooghly-Ajay confluence (n=1), Hooghly-Damodar confluence (n=1), Hooghly-Haldi confluence (n=1), Hooghly-Rupnarayan confluence (n=1), Damodar (n=1), and East Calcutta Wetlands (n=1) (Table 8). Participants were asked about the ecosystem services they receive from the riverine ecosystems in the vicinity of their village, identify the areas they receive these ecosystem services from on a Google Earth map of their village, the change in the supply of these ecosystem services over the years, and the consequent change in livelihood. Participants were also asked about any disservices provided by the river.

Table 8. Details of participatory mapping of ecosystem services in various Ganga basin states

State/Union Territory	Districts	No. of villages	Rivers/Wetlands
Uttarakhand	Dehradun, Uttarkashi, Tehri Garhwal	5	Yamuna
Uttar Pradesh	Agra, Mathura	3	Yamuna, Sur Sarovar Bird Sanctuary (Keetham Lake)
Haryana	Faridabad, Sonipat	3	Yamuna
National Capital Territory of Delhi	North Delhi	1	Yamuna
West Bengal	Murshidabad, Purba Bardhaman, Nadia, Kolkata, South 24 Parganas, Howrah, Purba Medinipur	12	Hooghly, Ajay, Damodar, Rupnarayan, Haldi, East Calcutta Wetlands

Kumbh as platform for reviving nature-people connect

During Mahakumbh 2025 at Prayagraj, Uttar Pradesh, the NMCG-WII team and Ganga Praharis organised awareness programmes, street plays, cleanliness drives at the *Namami Gange* pavilion and Mela ground. A stall has also been set in collaboration with the Kalash Initiative to sensitise visitors and pilgrims regarding plastic waste management. The NMCG-WII team and Ganga Praharis also conducted regular cleanliness drives. During the event 3,482 single-use plastic bottles were collected by Ganga Praharis and sent for recycling, promoting responsible waste management.



Getting recognized for conserving rivers

The HCL Foundation felicitated the Ganga Praharis in recognition of their relentless efforts for river and biodiversity conservation at Mahakumbh 2025, through regular sensitization programmes and cleanliness drives.



'Building bridges: Ganga Prahari Conclave'

Two state level Ganga Prahari conclaves were organised in Sahibganj, Jharkhand and Bhagalpur, Bihar, respectively. The conclave featured sessions by various key stakeholders, covering a range of topics pertaining to fostering community-based conservation of freshwater ecosystems and their associated biodiversity. A key focus of the discussions was fostering community-based conservation of freshwater ecosystems and their associated biodiversity, millets for nutritional and ecological security, fundamentals of bird and snake rescue and rehabilitation, pollution abatement through sustainable waste management at the grassroots, promoting sustainable farming viz., natural, organic and millet cultivation, as a nature-based solution that supports the economic wellbeing of the local communities and aids the conservation of rivers and wetlands and their biodiversity. A total of 550 Ganga Prahari participated in these two events.



Mainstreaming conservation in village level planning

Memorandum of Agreement was signed with four village panchayats in Himachal Pradesh (n= 1), Bihar (n= 2) and Uttar Pradesh (n=1) to ensure biodiversity sensitive village level development. Three village level microplans were developed in Bihar (n= 1) and West Bengal (n=2) that identify the conservation and development related issues and suggest potential strategies to address them.

Assessing linkages between river and local socio-economic systems

Socio-economic surveys were conducted with river dependent communities in Uttarakhand, Uttar Pradesh, Haryana, Delhi and West Bengal to understand the contribution of river resources to socio-cultural-economic setup.

② BAL GANGA PRAHARI PROGRAMME

Bal Ganga Prahari Programmes

Bal Ganga Prahari (BGP) Programme remained active in enhancing environmental consciousness among school children through a series of sensitization workshops and thematic campaigns. These activities were conducted in both rural and urban schools, as well as in public platforms such as the World Book Fair. Each engagement aimed to deepen students' understanding of river systems, biodiversity and the impacts of pollution, with a particular emphasis on plastic waste and the value of freshwater resources.

Special campaigns like "Amrit Dhara - A Festival of Rivers" and "End Plastic Pollution" were introduced to encourage experiential learning and interactive participation. Students took part in group activities, discussions, and community outreach sessions that helped connect ecological awareness with everyday practices. The programme also addressed regional ecological issues through locally contextualized sessions. Overall, these efforts reached more than 2,271 students, building a

foundation of awareness and responsibility toward conserving the Ganga River and its tributaries (Table 9).



Table 9. Sensitization workshops carried out in the Ganga River Basin for Bal Ganga Praharis

Date	Name of school	Name of workshop	Location	No. of BGP
6 th February	Composite School, Sarnath, Uttar Pradesh	Sensitization Workshop	Onsite	355
6 th February	Seven schools from Delhi	Sensitization Workshop during World Book Fair	Onsite	200
27 th February	Seventeen schools from Uttarakhand, UP, Bihar, Jharkhand, WB, Haryana, MP, Rajasthan, Chhattisgarh	'Amrit Dhara - A Festival of Rivers' Campaign	Onsite	1417
2 nd - 3 rd April -	Govt. Abhinav Inter College & Govt. Inter College, Umarda, Kannauj, Uttar Pradesh	Sensitization Programme	WII	49
26 th June	Fulia Shantiniketan, Nadia, West Bengal	'End Plastic Pollution' Sensitization Campaign	Onsite	250
Total				2,271



Ganga Aqualife Knowledge Center at Janki Children's Academy, Dehradun, Uttarakhand



Ganga Aqualife Knowledge Center at Govt. Sr. Sec. School, Nawach, Kaithal, Haryana



Ganga Aqualife Knowledge Center at Govt. High School, Jajanpur, Kaithal, Haryana



Bal Ganga Prahari Corners (Ganga Aqualife Knowledge Centre)

During January to June 2025, three new Bal Ganga Prahari Corners, also known as Ganga Aqualife Knowledge Centres were established in educational institutions to strengthen awareness and education about river biodiversity (Table 10). These centres serve as localized hubs for interactive learning, sensitization, and student engagement on topics

related to freshwater ecosystems and conservation efforts. The centres were inaugurated at Janki Children's Academy, Dehradun on 26th March; Government Senior Secondary School, Nawach on 26th May; and Government High School, Jajanpur on 27th May. These additions mark a continued effort to integrate ecological learning into formal education settings and encourage long-term student involvement in river conservation.

Table 10. Bal Ganga Prahari corner established in the Ganga River Basin

Date of Inauguration	Name of School
26 th March	Janki Children's Academy, Dehradun, Uttarakhand
26 th May	Govt. Senior Secondary School, Nawach, Kaithal, Haryana
27 th May	Govt. High School, Jajanpur, Kaithal, Haryana



Sensitization workshop at Composite School, Sarnath, West Bengal



Sensitization workshop with Govt. Abhinav Inter College and Govt. Inter College, Umarda, Kannauj



Glimpses of Amrit Dhara- A festival of Rivers at various schools of Ganga River Basin

3 RIVER CONSERVATION THROUGH INTERPRETATION CENTRE AND AWARENESS

Jalmala Samvaad

Established 9 additional *Jalmala Samvaad*, low cost interpretation corners. A total of 1,897 students and 72 teachers were sensitized through these low cost interpretation corners (Table 11).



Table 11. Location of newly established *Jalmala Samvaad*

District	State	Total students in school	Total teachers	River
Ramnagar	Uttarakhand	250	10	Ramanga
Haridwar	Uttarakhand	197	7	Ganga
Dehradun	Uttarakhand	250	12	Yamuna
Sarnath	Uttar Pradesh	750	18	Ganga
Bhopal	Madhya Pradesh	450	25	Chambal
Total		1,897	72	

School awareness workshops

A total of 527 school students and 27 teachers were sensitized through school awareness workshops and game-based activities along the Rivers Ganga, Ramganga and Chambal (Table 12).



Table 12. Activities conducted with school children and number of participants

District	No. of students	No. of teachers	River
Ramnagar	25	2	Ramganga
Bhopal	108	5	Chambal
Varanasi	204	6	Ganga
Kanpur	110	4	Ganga
Dehradun	80	10	Yamuna
Total	527	27	



Training session for teachers

Conducted a teacher training session with total of 64 trainees and 8 teachers. They all participated enthusiastically in the training session with the team (Table 13).

Table 13. Trainings conducted for teachers at various location in Uttarakhand and Uttar Pradesh

District	No. of trainee teachers	No. of teachers	River
DIET Sarnath	10	2	Ganga
DIET Dehradun	34	4	Yamuna
B.Ed. College	20	2	Yamuna
Total	64	8	

Awareness workshop and exhibition

A total of 1,00,139 students, teachers, students and community members, along the Ganga and Yamuna Rivers, were sensitized through awareness workshops, and exhibition (Table 14).



Table 14. Awareness programme and exhibition conducted in Uttar Pradesh

Program/Event	Districts	Participants	Total number
Community Awareness	Raipur, Sarnath and Kanpur	Students and Teachers	139
Exhibition	Varanasi and Mirzapur	Local community & Forest Department	1,00,000
Total			1,00,139

Special days celebration

From January to June 2025, a series of special days were commemorated across multiple locations in the Ganga River Basin. A total of 3,103 school students, teachers,

teacher trainees, tourists, forest department officials and local community members across four states in Ganga River Basin were sensitized through awareness programmes held on significant occasions (Table 15).

Table 15. Special days celebrated across the Ganga River Basin

Date	Day celebrated	Location	No. of participants
26 th January	Republic Day	Varanasi	70
2 nd February	World Wetlands Day Celebration	Dehradun, Varanasi, South 24 Parganas	205
3 rd March	World Wildlife Day Celebration	Dehradun, Mathura, Varanasi	450
22 nd March	World Water Day	Varanasi	100
23 rd May	World Turtle Day Celebration	Tehri Garhwal, Dehradun, Haridwar, Nadia, Kaithal	728
25 th May	World Otter Day	Dehradun, Kaithal	277
5 th June	World Environment Day	Dehradun, Kannauj, Varanasi, South 24 Parganas, Nadia,	673
17 th June	World Crocodile Day	Varanasi	50
21 st June	International Yoga Day	Nadia	550
Total			3,103



Digital outreach

Comic strips for biodiversity awareness and conservation were posted through social media and a total of 9 blogs were posted on "Ganga Darpan - an environmental blog".

Visitor footfall insights

The interpretation centres established in the Ganga basin attract a large number of visitors. During January to June 2025, on an average about 118 visitors per day visited the centres. Amongst the three centres, Anubhuti at Kanpur Zoological Park, Uttar Pradesh had the highest footfall (Table 16).

Table 16. Visitor footfall at Interpretation centres between January and June 2025

Interpretation centre	District	No. of visitor
Ganga Darpan	Varanasi	4,485
Anubhuti	Kanpur	9,425
Ganga Avlokan	Haridwar	7,369
Total		21,279

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नमामि गंगे की गंगा प्रहरी निखिल कुमार को चैंपियन अवार्ड से नवाजा गया"



अशोक मेहताजी

अजोब केराजी

उत्तराखण्ड के देहरादून स्थित संरक्षण में ऊकह कार्य करने भारतीय वन्यजीव संस्थान ने वाले व्यक्तियों को दिया जाता नमामि गंगे परियोजना के है। यह पुरस्कार निखिल तहत कार्यरत गंगा प्रहरी कुमार के लिए एक बड़ी निखिल कुमार को उनके उपलब्धि है और उनके कार्य सराहनीय कार्य को देखते हुए को और भी प्रोत्साहित करेगा पैथियन अवार्ड से नवाजा है। नमामि गंगे परियोजना एक यह पुरस्कार उन्हें उनके महत्वाकांक्षी परियोजना है ऊकह कार्य और जनजाति जिसका उद्देश्य गंगा नदी संरक्षण में उनके योगदान के और उसकी सहायक नदियों लिए दिया गया है। निखिल को स्वच्छ और प्रदूषण मुक्त कुमार ने अपने कार्य के बनाना है। इस परियोजना के दौरान वन्यजीवों के संरक्षण तहत गंगा प्रहरियों को गंगा नदी के संरक्षण में प्रशिक्षित किया जाता है जो गंगा नदी के संरक्षण में योगदान देते हैं।

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Section 4

नमामि गंगे के गंगा प्रहरियों के द्वारा गांव में गोष्ठी कर महिलाओं को गंगा सफाई एवं जैविक खेती के लिए जागरूक किया



प्राथमिक गरी गंगा प्रशिक्षण की टीम के निदेशित निर्देश केन्द्र, कृष्ण कुम्हार, द्वारा क्षेत्र के गांव तलवार में एक महत्वपूर्ण मोर्चा का आयोजन किया गया। इस मोर्चा में क्षेत्र के लोगों को जागरूक किया गया कि कैसे वे अपने क्षेत्रों में जैविक क्षेत्रों का उपयोग हैं और क्या वे कुछ कचरा-कचरा हटाने के मुकामों के बारे में जानकारी दी गई। इस मोर्चा में काफी संख्या में महिला और पुरुष उपस्थित हुए और उन्होंने जैविक क्षेत्रों के बारे में जानकारी प्राप्त की। मोर्चा में उपस्थित लोगों ने

क्षेत्रों में अधिक समय उपस्थित हैं। इसके अलावा, जैविक क्षेत्रों का उपयोग भी सुनिश्चित किया है। मोर्चा में उपस्थित लोगों ने उन्होंने बताया कि वे अपने क्षेत्रों में जैविक खाद का उपयोग करेंगे और वे अपने क्षेत्रों में पानी का संयोजन करने के लिए भी काम करेंगे। इस मोर्चा के आयोजन में क्षेत्र के लोगों को जागरूक किया गया कि जैविक क्षेत्रों बनाने में उनके क्षेत्रों की उपस्थिति का उपयोग करेंगे।

लोहों में अधिक मात्रा में उपस्थित है। इसके अलावा
ऐटिका लोहों का ही पर्यायवाची भी प्रचलित रहता है।
लोहों में अधिक मात्रा में उपस्थित मात्रा कि वे अपने
लोहों में ऐटिका मात्रा का उपयोग करने और वे अपने
लोहों में पानी का उपयोग करने के लिए भी काम
करते हैं।

इस मोर्चे के आयोजन में क्षेत्र के लोगों को आमंत्रित किया गया कि जैविक मोर्चे बनने से उनके लोगों की पहचान बूझ सकाये।

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जिला वन अधिकारी से नमामि गंगे के
गंगा प्रहरियों की भेंट वार्ता



असोज २०७३

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उजाला स्पीड न्यूज

Web: jalaspeednews.com 22/4/2025

गंगा प्रहरियों ने बचाया घायल मोर



— 1977 —

असली नेताली
देहातून भयल्लो जन्मजीव संस्थान
जे जन्मति संग परिचयना के लख
रंग संग परिचयों ने एक पापल
को बसावन वन विभाग की टीम पापल में तन्मजीवों के
सीम दिया है। यह मोर बंदरी के मरद मिलेगी और
है में पापल हो गया था। जन्मजीवों के प्रति इस अवसर पर, टी
परिचयों ने बताया कि उन्हें आ स्वेगा। अवगत कराया गया
ना मिली थी कि एक मोर बंदरी संग परिचयों की टीम नमामि संग प्रह
हमले में पापल हो गया है। जन्मजीवों के काम कर रही है।
मि गुरुत मीके पर मुपवन मोर मिलेगी और लोनी और संरक्षण को बढ़
बसावन और जन्मति देहातून प्रति जागृक है। उन्होंने कहा कि उन
मोर को गंधीर बंदरी आई थी, इसे जन्मजीवों ने बुलंदशहर में संग
लेव् उन्हें वन विभाग की टीम कार्य करना किनारे के क्षेत्रों में विशेष
सीम में वन विभाग की मुख्य सुनिधि ने काम किया है, जहां
टीम के वन विभाग की मुख्य सुनिधि नदी की स्वच्छता को
सरकारी स्कूलों व कार्यालयों में

प्रतिरिती ने बताया कि उनके माता-पिता प्रहरी की का
ना मिली थी कि एक मोर बंदी लाया गया है। बाघजी की का
हवाली में पाया जा रहा है। बाघजी की का
ने गुरदा मीने पर पहुंचकर मोर बंदी की का
बाघजी और उसके दोस्तों ने बाघजी की का
और उसे गोली मारी जाई थी, इसे बाघजी की का
लेकिन उसे इन विभाग की टीम कार्य करना
लेकिन उसे इन विभाग की टीम कार्य करना
लेकिन उसे इन विभाग की टीम कार्य करना

...के साथ करीब
 के द्वारा पड़ी को अनापुत्र तरीके काटा
 जा रहा है। वागमूद पेड़ों के संरक्षण के
 लिए कई लोग व सामाजिक संगठन
 अनुभवल में गया प्रहरी संरक्षण
 साहाय्य के 16 सदस्यों के द्वारा स्कूलों
 में कई वर्षों से पौधरक्षण किया जा
 रहा है। संगठन से जुड़े गणप्रहरी ज्ञान
 से बताते हैं कि अनापुत्र काटने
 पेड़ों को स्कूलों, सरकारी
 मिनी परिसर में
 पौध रोपण करने तथा प्रहरी स
 साहाय्य के सदस्य

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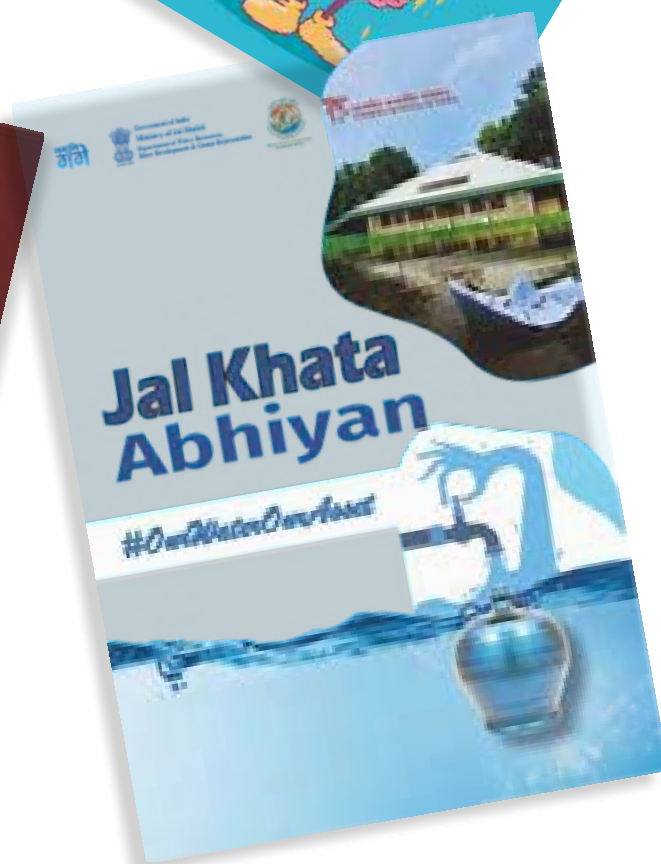
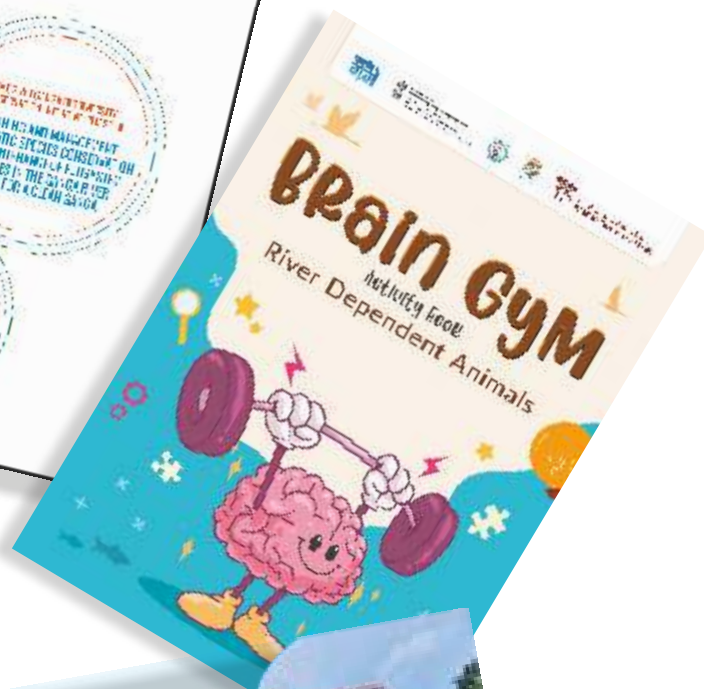
साहिबगंज/पाकुड़ पंच

साहिबगंज गंगा नदी के
में 300 से अधिक

सर्वों को मुक्तता प्रदान करने का प्रयत्न है। इस देश में जीवन का सर्वोच्च मूल्य है।

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NOTE

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NMCG

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