



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
JULY – DECEMBER 2024





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Half Yearly Report

July – December 2024

Project Investigators

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Wildlife Institute of India, Dehradun

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COMPONENT - 1

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

1. ECOLOGICAL ASSESSMENT

1.1 Intensive Biodiversity Survey of Ganga River

A boat-based intensive biodiversity survey was conducted in the Middle Ganga River (Madhya Ganga Barrage, Bijnor to Sitab Diara, Ballia, Uttar Pradesh) and the Lower Ganga River (Sitab Diara, Ballia, Uttar Pradesh to Nurpur, South 24 Parganas, West Bengal) between November and December 2024. During the survey, sightings of Gangetic dolphins, otters, waterbirds, gharial and mugger were noted. All opportunistic sightings were recorded from the inflatable boat moving at a speed of 10 km/h on average.

1.1.1 Mammals

During the survey of the Middle Ganga River, 806 visual detection of dolphins, which includes 635 adult and 171 calves were recorded on 314 sighting occasions. The encounter rate was 0.6 sightings/km. No otter were seen during the survey.

During the survey of Lower Ganga River, 741 visual detections of dolphins were recorded on 289 sighting occasions. The encounter rate was 0.85 ± 0.33 sightings/km. Encounter percentage of adults (67.75%) was the highest followed by calf (17.14%), and unclassified (15.11%). Dolphins were encountered in river depths between 1.3 to 33.8 m. One smooth-coated otter was

observed in the stretch between Rajmahal, Jharkhand and Farakka, West Bengal.

1.1.2 Crocodiles

A total of 44 gharial individuals were seen during the survey in the Middle Ganga River between the State Wildlife Barasingha Sanctuary (formerly known as Hastinapur Wildlife Sanctuary) and the Upper Ganga Ramsar site with an encounter of 0.29 individuals/km. No mugger individuals were seen during the intensive biodiversity survey.

During the survey, no crocodile species recorded in the Lower Ganga River.

1.1.3 Waterbird

During the survey of the Middle Ganga River, 69 species of waterbirds were identified. Anatidae (17 species) had the highest species count, followed by Scolopacidae and Ardeidae. Families like Anhingidae, Glareolidae and Phoenicopteridae were represented by only a single species (Figure 1). Out of the total observed species, 56 were winter migrants and 13 were residents. Under the globally threatened categories, two species were Endangered (EN), three Vulnerable (VU), five Near Threatened (NT) and the remaining 59 were the Least Concern (LC). Endangered species recorded were black-bellied tern and Indian skimmer, whereas common pochard, river tern and sarus crane were vulnerable.

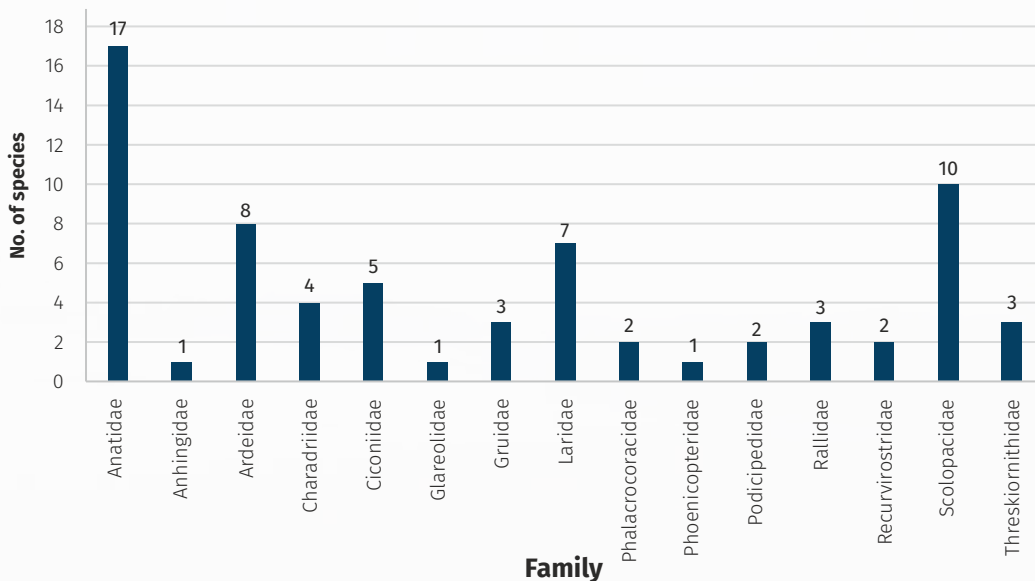


Figure 1: Family-wise species composition of waterbirds in the Middle Ganga River

During the survey of the Lower Ganga River, 80 species of waterbirds were identified. Scolopacidae (19 species) has the highest species count, followed by Anatidae and Ardeidae. Families like Anhingidae, Glareolidae, Podicipedidae and Pandionidae are represented by only a single species (Figure 2). Out of all the species

observed, 48 were winter migrants and 32 were residents. Under the globally threatened categories, two species were EN, eleven Near Threatened (NT) and the remaining 67 species were classified as Least Concern (LC). Endangered species recorded were Indian skimmer and great knot.

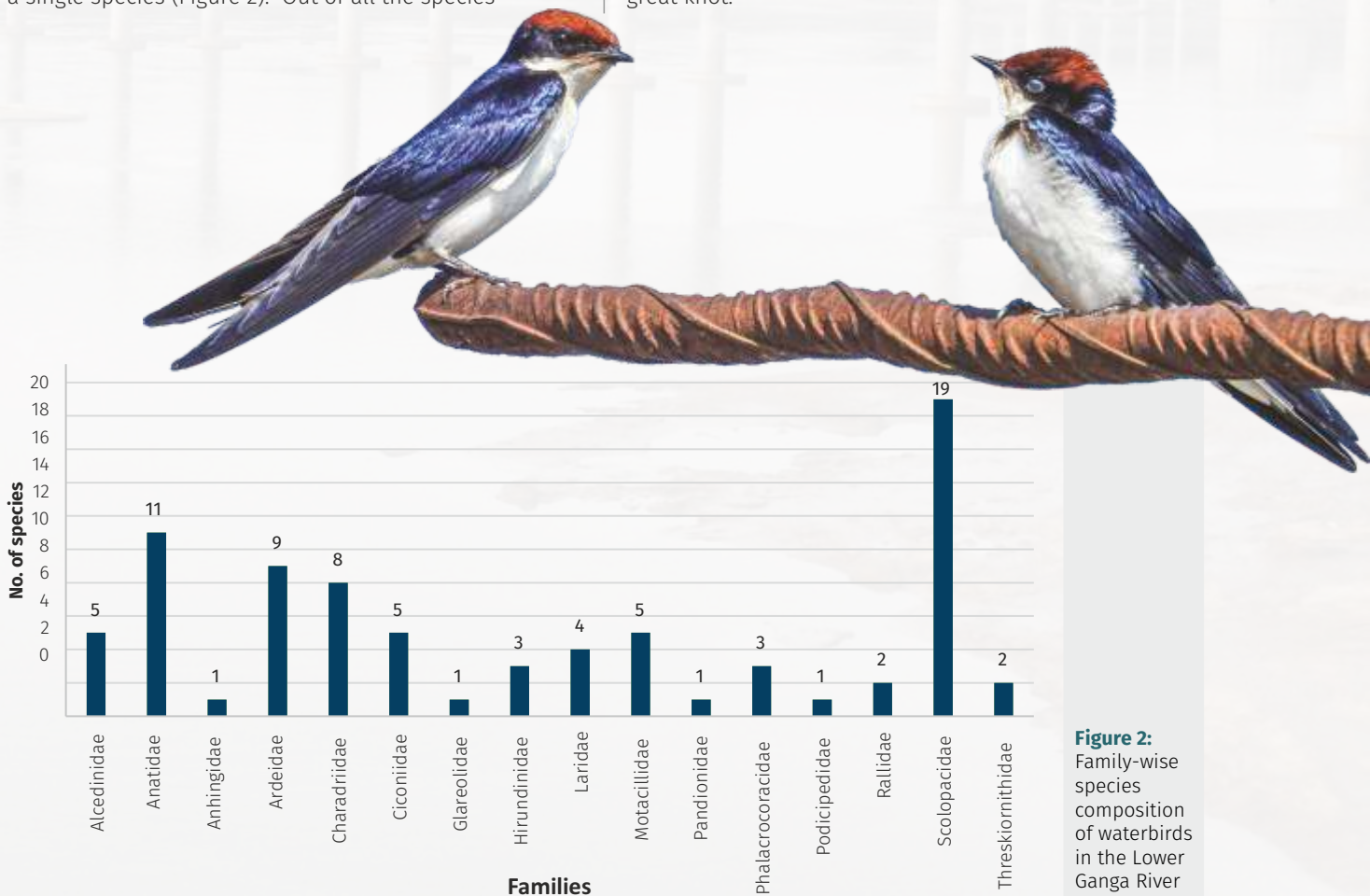


Figure 2: Family-wise species composition of waterbirds in the Lower Ganga River

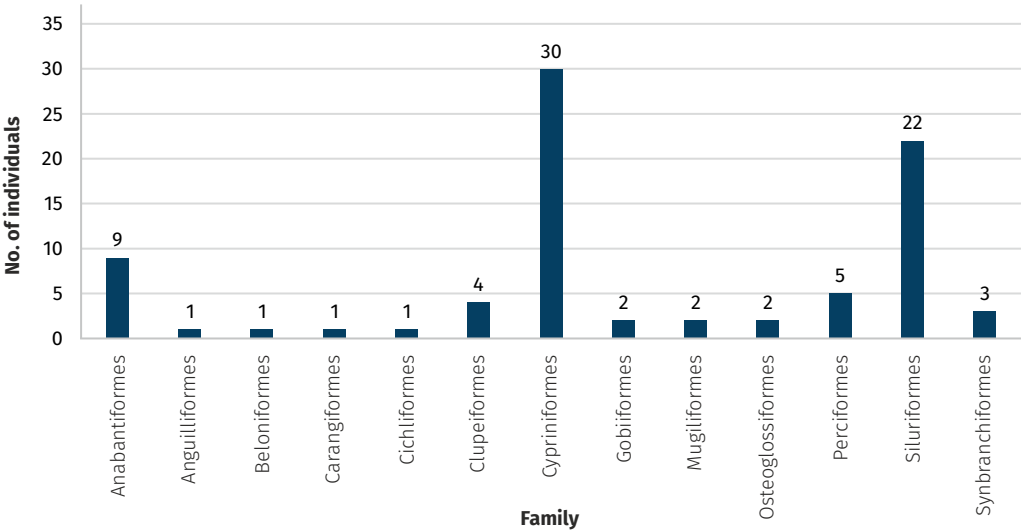
1.2 Fish Survey

Ganga River

Post-monsoon survey of the Upper Ganga and Lower Ganga River was conducted in December 2024. The Upper Ganga was surveyed from Haridwar to Mirzapur, Uttar Pradesh and the Lower Ganga was surveyed from Varanasi, Uttar Pradesh to Diamond Harbour, West Bengal to Diamond Harbour. A total of 28 intensive sampling sites were surveyed. A total of 89 species belonging to 29 orders and 13 families were recorded during the survey. Cyprinidae was the most dominant family with 30 species, followed by Siluriformes with 22 species (Figure 3). Three invasive fish species, namely *Ctenopharyngodon idella*, *Cyprinus carpio* and *Oreochromis niloticus*, were recorded during the survey. The highest Catch per Unit Effort per panel hour (Fish abundance in individuals) was recorded at the site Kannauj (17.76), followed by Narora (15.08), Bijnor (12.14), and Tigrighat (8.13) (Figure 4). Due to the field constraints the species information for Maheshtala and Diamond Harbour was recorded from fish market survey.



Figure 3: Family-wise species composition in the Middle and Lower Ganga River



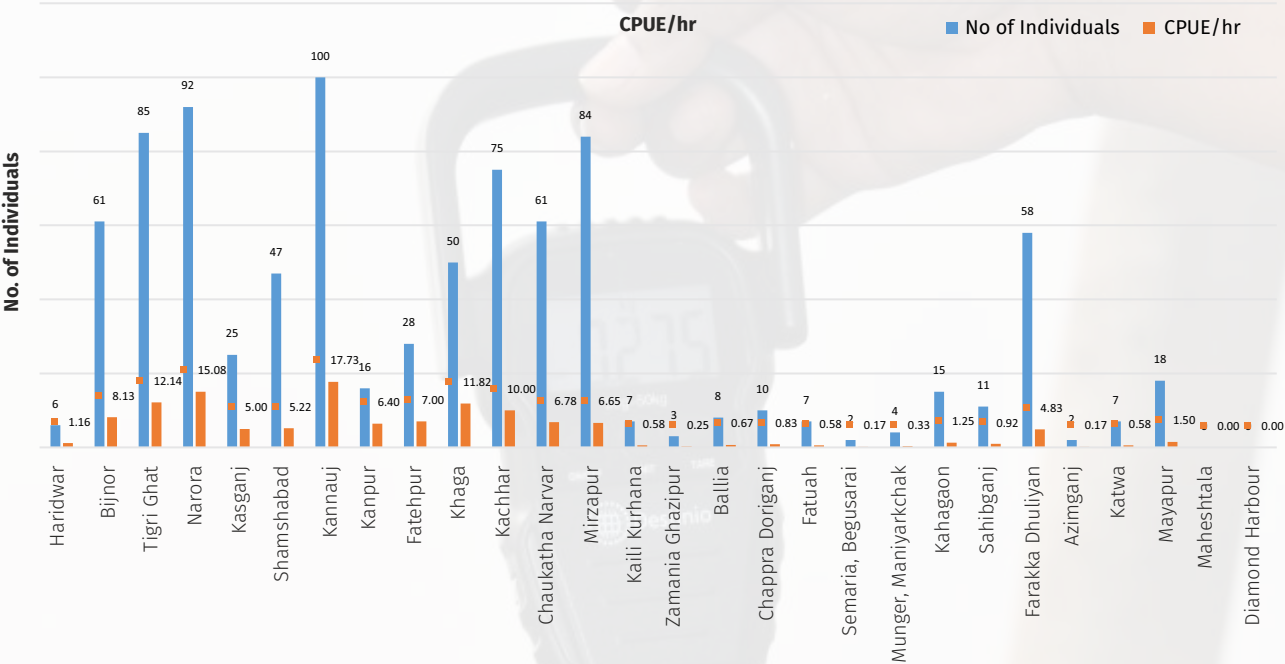


Figure 4: Catch per unit effort (Individuals/hr) across sampling sites in the Ganga River

Chambal River

During the post-monsoon survey, total 13 intensive sampling sites were surveyed in the entire course of the Chambal River. 675 fish individuals belonging to 34 species, were collected during the survey and were released back after recording the information. Of these, 32 were native species and two were invasive species: *Cyprinus carpio* and *Oreochromis niloticus*. Cyprinidae was found to be the most dominant family with 16

species, followed by Bagridae with 3 species and Danionidae, Ambassidae and Dorosomatidae with 2 species each (Figure 5). The highest Catch per Unit Effort per panel hour (Fish abundance in individuals) was recorded at Pachnada (49.25), followed by Ranapratap Sagar (38), Mandawara (38), Gandhi sagar (28), Barsala (26), Shahanpur (17), Kota (15) and the lowest was recorded at Liloli (9.5), Kenjra Ghat (9.25), Rajghat (7), Pali (6.5) and Gyanpura (2.5) (Figure 6).

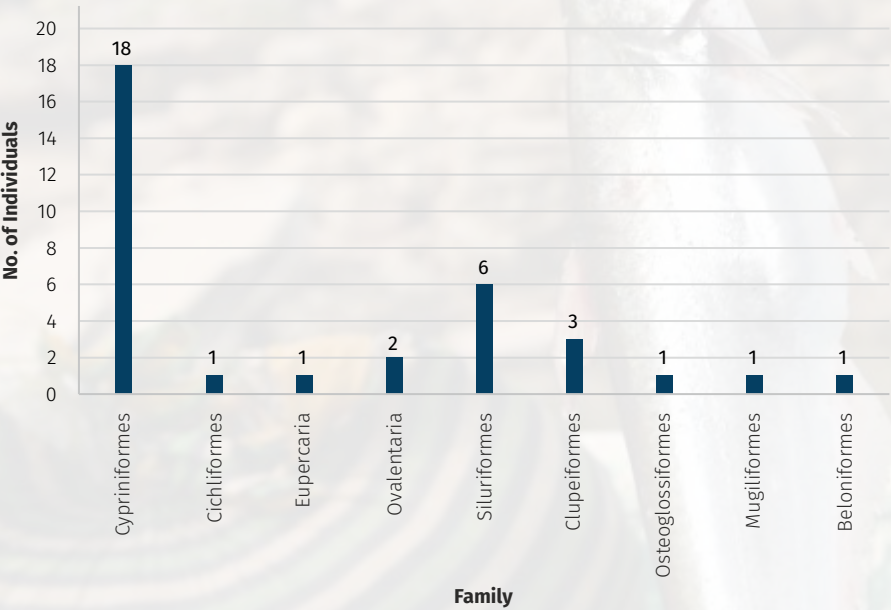
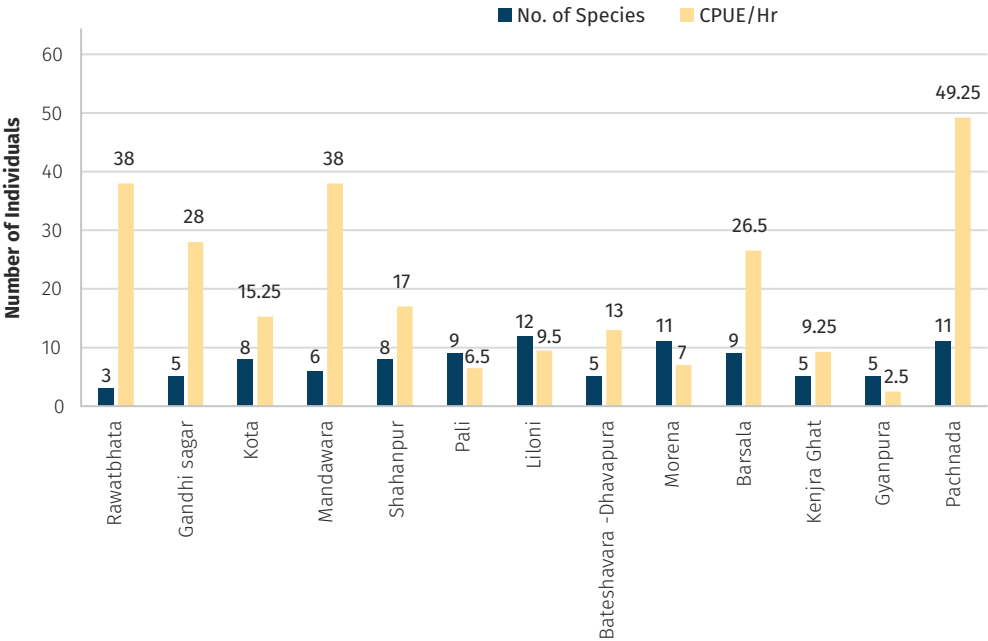


Figure 5: Family-wise fish species distribution

Figure 6:
Catch per
unit effort
(Individuals/
hr) across
sampling sites
in the Chambal
River



1.3 Amphibian Survey

Ganga River

A visual encounter survey was carried out in September 2024 to asses amphibians along the Ganga River, from Harsil in Uttarkashi, Uttarakhand to Nurpur in Murshidabad, West Bengal, across 31 sampling sites.

During the survey, 27 frog species belonging to 13 genera and 5 families were recorded from the sampling sites. Dicroglossidae was the most dominant family, with 13 species, followed by Microhylidae with five species (Figure 7). The richness of amphibians in the sampling ranged between 4 and 17 species and diversity ranged between 1.05 and 2.35. Highest richness was at Bijnor (n=17) followed by Katwa and Kalyani (n=14) (Figure 2). Dharasu (n=4) supported the minimum richness of amphibians. Diversity of species was maximum at Buxar (2.35) followed by Bijnor (2.25). Minimum diversity of amphibians was observed in Devprayag (1.05) (Figure 8). The common species found in the Ganga River was *Hoplobatrachus tigerinus* and *Microhyla nilphamariensis*, *Amolops jaunsari*, *Duttaphrynus himalayanus*, *Fejervarya cf. moodiei*, *Minervarya sp.* and *Nanorana minica* had the very narrow distribution and were recorded from only one sampling segment.

Additionally, 70 individual frog specimens and 54 DNA samples were collected for further analysis, as the species identity could not be confirmed in some cases.



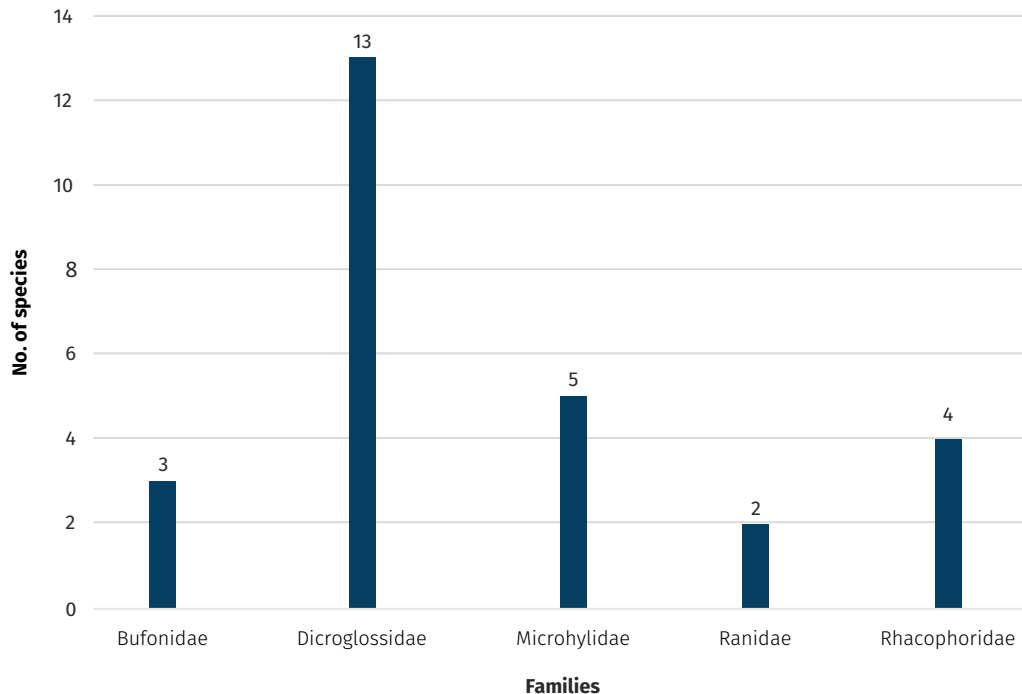


Figure 7: Species richness of amphibians in various families across the Ganga River

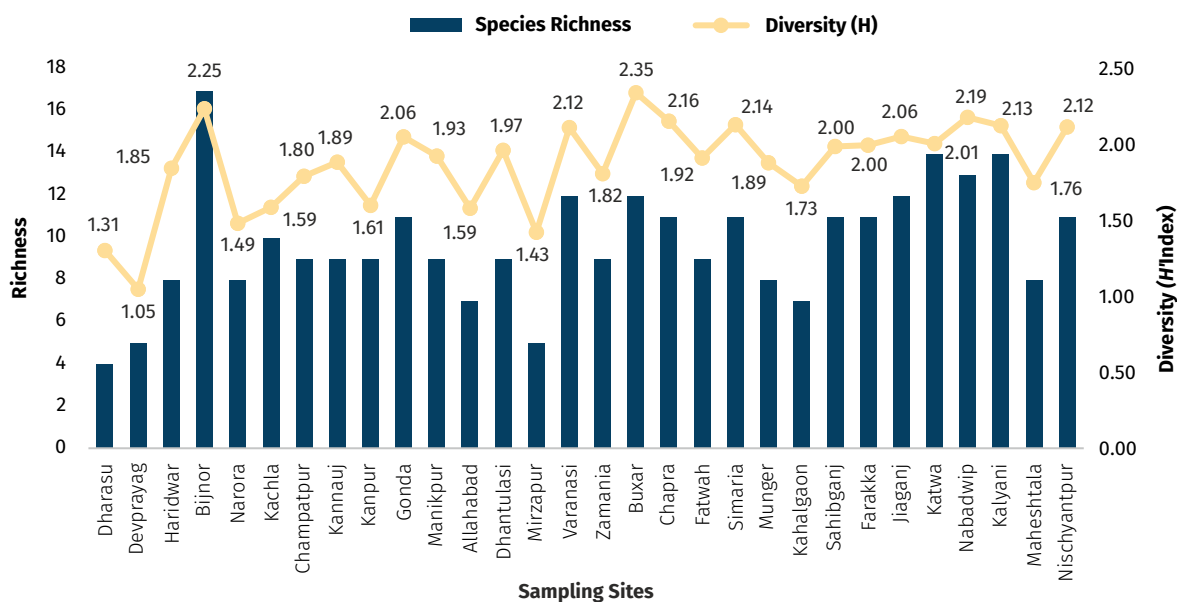


Figure 8: Richness and diversity of amphibians at various sampling segments of the Ganga River

Chambal River

A visual encounter survey for assessment of amphibians was conducted along the Chambal River during September 2024, at 11 sampling sites. 10 frog species belonging to 8 genera and 4 families were recorded across the study sites. Dicroglossidae was the most dominant family, represented by 6 species, followed by Bufonidae with 2 species (Figure 9). The richness of

amphibians in the sampling ranged between 4 and 10 species and diversity ranged between 0.846 and 1.859. Richness was highest in the sampling Rameshwar (n=10) followed by Ater, Batesura, Rijhenta and Sarsaini (n=7). Pali (n=4) of supported the minimum richness of amphibians. Diversity of species was maximum in Sarsaini (1.859) followed by Rameshwar (1.852). Minimum diversity of amphibians was observed in Pali (0.846) (Figure 10). *Euphlyctis cyanophlyctus*, *Hoplobatrachus*

tigerinus and *Microhyla nilphamariensis* were recorded from all segments of this River. *Minervarya cf. agricola* and *Polypedates maculatus* had the very narrow distribution and were recorded from only one sampling segment.

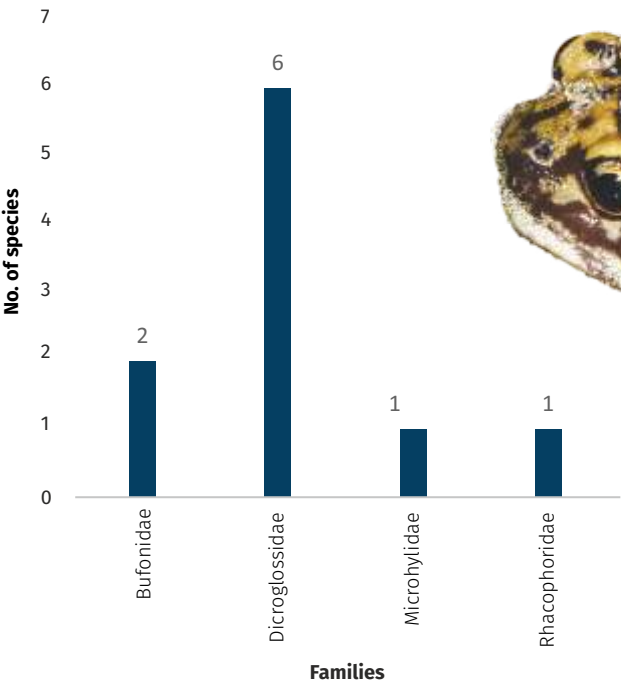
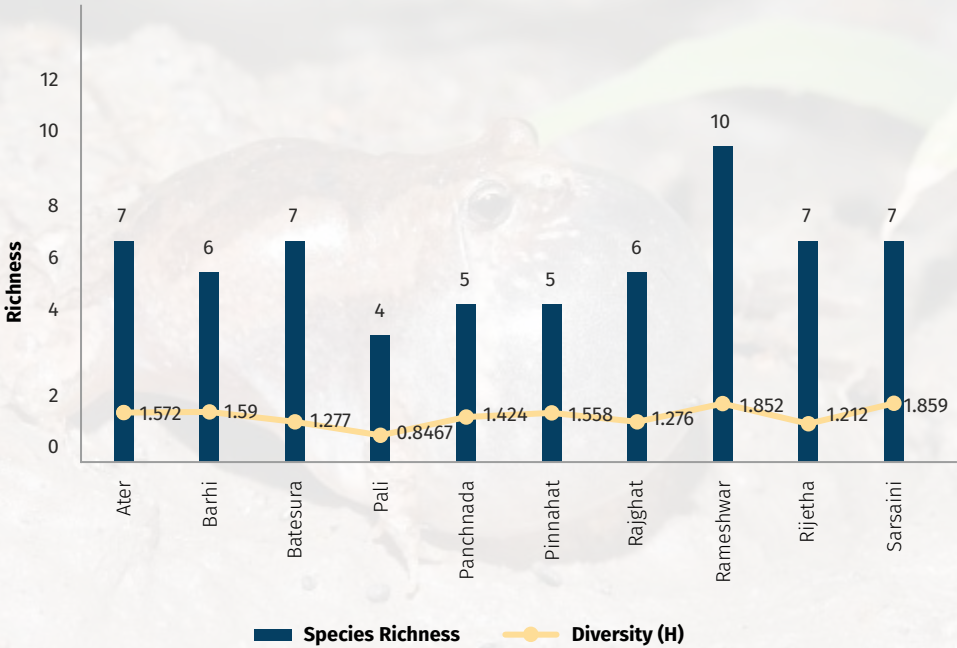


Figure 9: Species richness of amphibians in various families across the Chambal River



Figure 10: Richness and diversity of amphibians at various sampling segments of the Chambal River



1.4 Vegetation Survey

Between July and December 2024, vegetation survey was conducted in nine rivers of the Ganga River Basin, documenting species diversity across Ganga River and its tributaries (Figure 11). Poaceae was the most dominant family followed by Cyperaceae, Asteraceae, Fabaceae and Lamiaceae. Some of the common species recorded during the survey are mentioned below:

Trees

Acacia catechu, *Bombax cebia*, *Holoptelea integrifolia*, *Syzygium cumini*, *Haldina cordifolia*, *Broussonetia papyrifera*, *Dalbergia sissoo*, *Ficus* spp.

Shrubs

Calotropis gigantea, *Clerodendrum viscosum*, *Hyptis suaveolens*, *Leonotis nepetifolia*.

Herbs

Aerva anata, *Bidens pilosa*, *Calyptocarpus vialis*, *Centella*

asiatica, *Desmodium triflorum*.

Grasses

Coix lacryma-jobi, *Cyperus rotundus*, *Dactyloctenium aegyptium*, *Paspalum distichum*, *Rottboellia cochinchinensis*, *Sachharum benghalensis*, *S. spontaneum*, *Typha aungustifolia*, *Phragmites karka*, *Vetiveria zizanioides*, *Cynodon dactylon*.

Aquatic Species

Eicchornia crassipes, *Pistia stratoites*, *Lemna minor*, *Spirodela polyrhiza*, *Azolla pinnata*, *Hydrilla verticillate*, *Ceratophyllum demersum*, *Ipomoea aquatica*, *Potamogeton crispus*, *Vallisneria natans*, *Ludwigia adscendens*, and *Polygonum*, *Nelumbo* and *Nymphaea* species.

Exotic Species

Alternanthera ficoidea, *Alternanthera philoxeroides*, *Croton boplandianus*, *Eclipta prostrata*, *Ipomoea carnea*, *Lantana camara*.

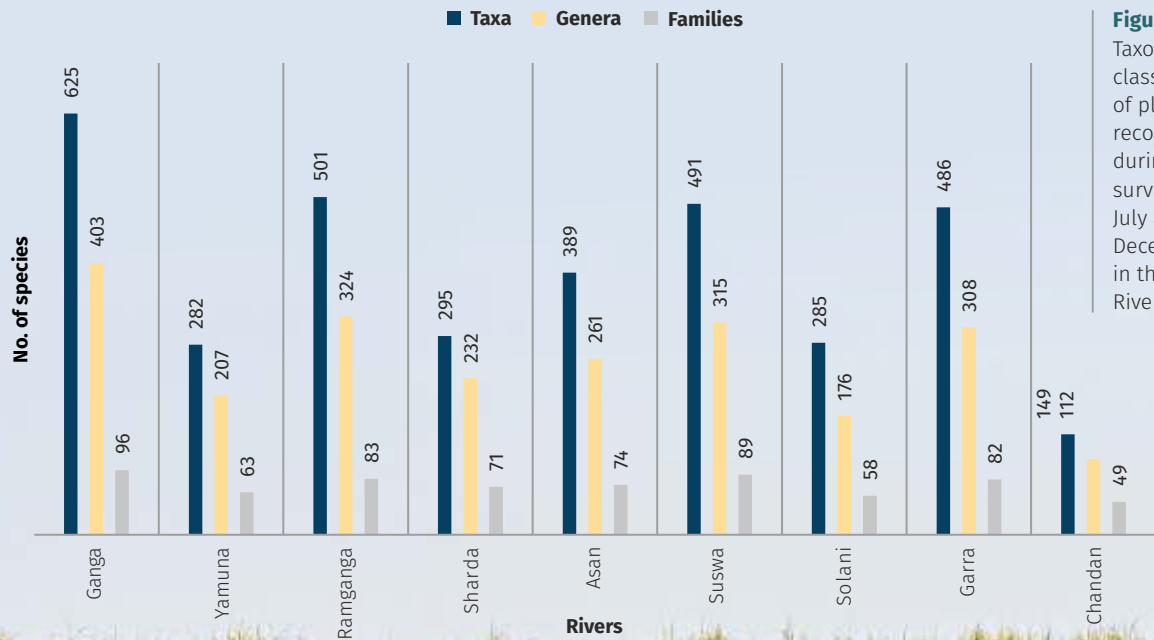


Figure 11: Taxonomic classification of plants recorded during the survey between July and December 2024 in the Ganga River Basin



1.5 Pre-Maha Kumbh Ecological Survey

Ganga River

An ecological survey was conducted in December 2024 in the Ganga River just before the onset of Maha Kumbh festival. The survey was conducted from Prayagraj to Varanasi in Uttar Pradesh. During the survey, 85 bird species were recorded belonging to 15 order and 34 families, including 32 wetland species, 13 water-associated species, and 40 forest-associated species, with an overall count of 3,016 individual birds. The families Muscicapidae and Scolopacidae were the most dominant, each represented by seven species, followed by Ardeidae and Motacillidae, with six species each. 14 families, including Alaudidae, Ciconiidae, Cisticolidae, Estrildidae, Glareolidae, Gruidae, Meropidae, Oriolidae, Pandionidae, Passeridae, Psittaculidae, Recurvirostridae, Threskiornithidae, and Upupidae, were represented by a single species. Out of all the species observed, 27 were winter migrants and 58 were residents. Among the species categorized as globally threatened, one species was recorded as Endangered (Egyptian vulture), one species as Vulnerable (sarus crane) and one species as Near threatened (river lapwing).



Yamuna River

An ecological survey was conducted along the Yamuna River at three sites from Ekdala (Fatehpur) to Palpur (Prayagraj). During the survey, 37 waterbirds were documented, comprising 4473 individuals in the Lower Yamuna River. Scolopacidae (7 species) was the most dominant family followed by Ardeidae (6 species), Charadriidae (4 species) and Motacillidae (4 species). Families like Glareolidae, Ciconiidae, Hirundinidae, Recurvirostridae and Threskiornithidae are represented by only a single species (Figure 5). Out of 37 species, one species was under near threatened category (river lapwing) and the rest were in the least concern category of the IUCN Red List.



2.

GENETIC ASSESSMENT

17 samples of Indian narrow-headed softshell turtle (*Chitra indica*) were collected from the Chambal River for genetic assessment. Three partial fragments of mitochondrial DNA viz. 16s rRNA, COI and ND4 were used to assess the genetic diversity in *C. indica*. The concatenated sequences analyzed, revealed six distinct haplotypes with 19 polymorphic sites. Haplotype diversity (Hd) was estimated to be 0.867 ± 0.085 , indicating moderate genetic variation within the sampled individuals, while the nucleotide diversity (Pi) was calculated at 0.00259 ± 0.00100 , reflecting a relatively low level of sequence divergence. The haplotype network reveals that the Barhi samples exhibited the highest haplotype richness with three haplotypes, while Bateswara had two, and Kanakpura contained only a single haplotype, as shown in the haplotype network (Figure 12).

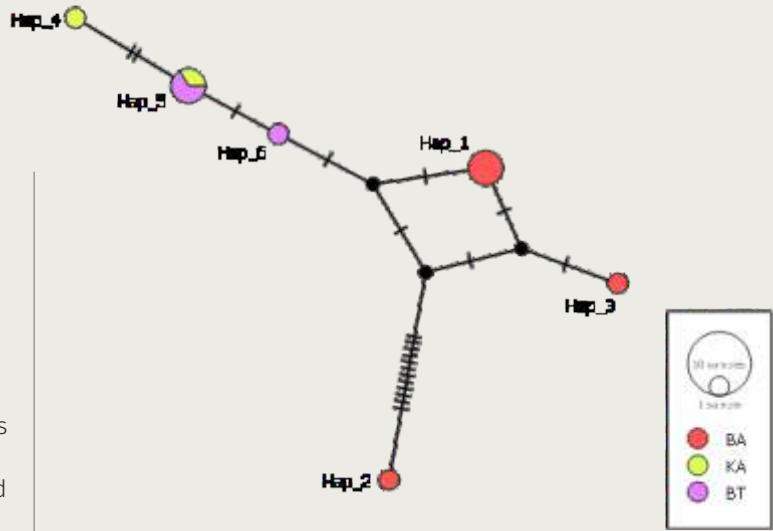


Figure 12: Haplotype Network of *Chitra Indica* using concatenated mitochondrial sequence.

BA = Barhi, KA = Kanakpura BT = Bateswara

Furthermore, fish samples were collected (n=200) from the Ganga, Yamuna, Chambal and Ghaghra for genetic assessment. Data generation is currently under process. Additionally, samples of *Gavialis gangeticus*, *Batagur dhongoka*, and *Batagur kachuga* were collected from Chambal River and Barhi Turtle Rescue and Rehabilitation Centre respectively for assessment of genetic diversity. The complete mitogenome of *Batagur kachuga* from Chambal River was generated and analysis is currently under process.





3. RESCUE AND REHABILITATION

3.1 Renovation Activities

3.1.1 Sarnath, Uttar Pradesh

The existing rescue and rehabilitation centre at Sarnath has three enclosures, one hatchery, and one medical care room. This infrastructure required renovation and improvements to meet the evolving needs of the centre. This aims to improve the pond conditions of turtles and facilitate their rehabilitation before release back into the wild.

Enclosure renovation

All three ponds in this rescue centre are currently functional. Pond I is dedicated to Yearling turtles, Pond III is dedicated to Rescue turtles, and Pond II is for Hatchlings. In Pond II, some overhanging trees were blocking sunlight, which hindered the basking of hatchlings-especially in winter when exposure and temperature are very low. To address this, some branches were pruned.

The wire mesh covering the enclosures, which protects the in-house turtles from potential threats, was rusted and damaged in all three ponds. All these damaged mesh was repaired.

Additionally, the banner board of our centre was

outdated and torn, so a new banner was installed.

Enclosure enrichment

Enclosure enrichment is one of the most important parts 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.

- Wooden logs are used for basking and are potential hiding places. Additional wooden logs have been strategically placed in the enclosures.
- Turtles also prefer Rubber mats for basking, as they provide a strong grip for the animals to haul out of the water and minimize abrasion from the coarse cement surface. The old rubber mats were replaced with the new rubber mats.



- Bamboo thatch is an important shading platform preferred by captive turtles. It is also used for basking and hiding places. The old bamboo thatches were damaged, so new bamboo thatches have been added to the enclosures. The shades were mainly placed in spots identified as spaces normally used by the animals.
- Different types of bushy plants have been planted in the enclosures. This provides a more naturalistic space and protects the animals from excessive sunlight. It is also a potential hiding place for them.
- Water hyacinth (*Eichhornia crassipes*) has been added to the turtle ponds. It provides shade and hiding place for turtles, and it also keeps the water temperature cool.
- Live fish and superworms were used to feed the turtles. This helps enhance and maintain their ability to capture prey and provides a good source of nutrients for them.

3.1.2 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 enhancements have been implemented to improve the facility's functionality and overall appearance.

Enclosure renovation

All three enclosures are currently functional in this centre. The wire mesh covering the enclosures, which protects the in-house turtles from potential threats, was rusted and damaged and needed to be replaced. Therefore, new iron wire mesh was installed in each enclosure.

Enclosure enrichment

Enclosure enrichment is one of the most important parts 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.

- Different types of bushy plants have been planted in the enclosures. This provides a more naturalistic space and protects the animals from excessive sunlight. It is also a potential hiding place for them.



- New wooden baskets were fastened from the roof of the enclosure into the water. These provide basking and hiding places for the turtles.
- 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, fresh sand has been added to enclosures.

3.2 Daily Management and Maintenance

3.2.1 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 resident 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* (for the years 2023 and 2024), and *Nilssonia hurum* (for the 2023 batch). This detailed assessment, conducted between the 1st and 5th 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.

3.2.2 Barhi Turtle Rescue and Rehabilitation Centre

At the Barhi Turtle 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* and follow the same systematic approach as in Sarnath. Conducted between the 1st and 5th of each month, these assessments begin with algae removal and 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* includes a combination

of seasonal vegetables, fruits, and commercial turtle feed, scheduled on alternating days. For rescued turtles (*Lissemys punctata*), the proportion of carnivorous food, primarily chicken meat has been provided.

3.3 Health Care and Management of Aquatic Species

3.3.1 Sarnath Turtle Rescue and Rehabilitation Centre

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 triage. The rescued animals are categorized 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. Commonly encountered injuries include fractured shells, avulsion fractures, fractured toes, puncture wounds on various body parts, septic wounds, and more.



A necropsy was conducted on a rescued *Nilssonia gangetica* at the Sarnath Turtle Rescue and Rehabilitation Centre, revealing that the probable cause of death was septicemia. This resulted from deep perforated wounds on the lateral body, along with lacerated, perforated, and fractured wounds on all limbs. The necropsy also indicated prolonged starvation, as evidenced by an empty gastrointestinal tract and the presence of mucus, which may have contributed to compromised immunity.

Health assessments of in-house turtles are conducted monthly alongside routine morphometric analysis. Any individual suspected of infection is isolated and provided 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, with symptoms including 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 were treated accordingly, leading to recovery.



3.3.2 Barhi Turtle Rescue and Rehabilitation Centre

At the Barhi Turtle Rescue and Rehabilitation Centre, juvenile turtles of *Batagur dhongoka* (three-striped roofed turtle), *Batagur kachuga* (red-crowned roofed turtle), and *Lissemys punctata* (Indian flapshell turtle) 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 protein- and calcium-rich diet for 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.

A necropsy was conducted on five deceased juveniles *Batagur dhongoka* at the Barhi Turtle Centre in Bhind. No external signs of injury or disease were observed, but the carcasses were emaciated and dehydrated. Internal examinations revealed generalized infection, fat degeneration, congestion, and enteritis in some individuals. Secondary bacterial infections in the gastrointestinal tract were suspected, possibly resulting from metabolic disturbances.

3.3.3 Gharial Eco-Park, Deori, Morena (M.P.)

At Gharial Eco-Park, Deori, the health and body condition of turtles and gharial hatchlings and juveniles were assessed. Injured and dehydrated individuals were treated with antiseptic dressing (ASD) using a 10% Betadine solution and Neosporin powder. To reduce dehydration, turtles were kept in a pond maintained at an ambient water temperature. Environmental enrichment, including sieved sand, wooden, and bamboo platforms, was set up to encourage natural behaviours such as swimming, basking, and exploration, helping

them overcome stress. Their behaviour, eating habits, and overall health were closely monitored. Detailed records of treatments, observations, and any changes in condition were maintained.

Necropsy examinations were conducted on adult *Batagur kachuga* and 101 *Gavialis gangeticus* hatchlings at Gharial Sanctuary, Deori. The carcasses showed no external signs of injury or disease. However, congestion was observed in the lungs, liver, and heart. Mucus was present in the intestines, and hypertrophy of the gall bladder indicated starvation in turtles. In gharial hatchlings, incompletely absorbed yolk was found attached to the stomach and intestines. Undigested food was present in the stomach, along with enteritis and secondary bacterial infections in the gastrointestinal tract, likely caused by unabsorbed yolk sacs and metabolic disturbances.



3.4 Temperature Maintenance (wintering)

3.4.1 Sarnath Turtle Rescue and Rehabilitation Centre

Optimal temperature maintenance in captivity posed a challenge. During winter, temperatures in the Sarnath 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. Twice daily, we changed the water in each pond with submersible pump water and utilized water filters to cool it down.

3.4.2 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. Twice daily, we changed the water in each pond with submersible pump water and utilized water filters to cool it down.



3.5 Rescue and Rehabilitation of Turtles

Sarnath rescue and rehabilitation centre in the Varanasi Circle, is an important centre. 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 28th July 2024, the Varanasi Development Authority (VDA) and Forest Department successfully rescued 1 *Geoclemys hamiltonii* from Banaras Kothi and handed them to Sarnath Rescue Centre.
- On 4th August 2024, the Railway Police Force (RPF) and Forest Department successfully rescued 15 turtles, including 14 *Lissemys punctata* and 1 *Nilssonina gangetica*, from Mughalsarai railway station and handed them over to the Sarnath Rescue Center.

- On 24th August 2024, the Intelligence Bureau (IB) and Forest Department successfully rescued 40 turtles, including 35 *Batagur kachuga* and 5 *Batagur dhongoka*, from Mughalsarai railway station and transferred them to the Sarnath Rescue Center.
- On 15th September 2024, the Railway Police Force (RPF) and Forest Department successfully rescued 18 *Lissemys punctata* from Mughalsarai railway station and handed them over to the Sarnath Rescue Center.
- On 10th November 2024, the Government Railway Police (GRP) and Forest Department successfully rescued 5 *Nilssonia gangetica* from Mughalsarai railway station and transferred them to the Sarnath Rescue Center.
- On 10th December 2024, the Government Railway Police (GRP) and Forest Department successfully rescued 75 *Lissemys punctata* from Mughalsarai railway station and handed them over to the Sarnath Rescue Center.



3.6 Egg Rescue, Hatching Management and Post-Hatching Care

Rescue and rehabilitation of aquatic species form the backbone of the successful species restoration and assisted colonization plan. Thus, egg rescue, hatchling management and post hatching care are crucial steps. From the Sarnath Centre, we carried out assisted colonization for *Batagur kachuga* and *Batagur dhongoka*. Details of which are provided in preceding sections.



- **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.

Outcome

- The egg rescue efforts resulted in the successful hatching of over 742 animals, including 731 *Batagur dhongoka*, and 11 *Batagur kachuga* hatchlings.
- Through close monitoring and appropriate care, the hatchlings exhibited healthy growth and survival rates, contributing to the population recovery of these endangered turtle species.
- 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.
- 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 contributed significantly to the conservation and population recovery of *Batagur dhongoka* and *Batagur kachuga*. Through careful incubation, appropriate care, and optimal environmental conditions, 742 hatchlings have been nurtured to support 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.



3.7 Updating of Stocklist of Turtles

3.7.1 Sarnath Turtle Rescue and Rehabilitation Centre

A total of 1,463 turtles reside at the Sarnath Turtle Rescue and Rehabilitation Center in Varanasi, including 1165 individuals of *Batagur dhongoka*, 133 individuals of *Batagur kachuga*, 57 of *Nilssonina gangetica*, 07 of *Lissemys punctata*, 1 of *Geoclemys hamiltonii*. Of these, *B. dhongoka*, *B. kachuga* and *N. gangetica* individuals were hatched at the centre.

3.7.2 Stock list of turtles at Barhi Turtle Rescue and Rehabilitation Centre

A total of 160 turtles reside at the Barhi Turtle Rescue and Rehabilitation Center, including two in-house species: 101 *Batagur dhongoka* and 50 *Batagur kachuga*, as well as one rescued species: 9 *Lissemys punctata*.



4.

ECO-TOXICOLOGICAL ASSESSMENT

Survey was conducted to collect eco-toxicological samples from the Ganga and its tributaries between November and December 2024. These surveys focused on investigating the pollution dynamics of emerging and legacy pollutants; while assessing the risks they pose to the biodiversity of the Ganga River Basin.

A total of 133 sampling sites across the Ganga (43), Yamuna (23), Gomti (14), Ghaghra (10), Gandak (5), Kosi (5), Son (9), Chambal (11), and Ramganga (13) were surveyed. Additionally, four wetlands namely

Haiderpur, Gogabeel, Kabartal and Udhwa were also surveyed. Surface water, sediment, and biota samples were collected for ecotoxicological assessment, with water quality parameters quantified on-site. The analysis and quantification of target analytes are currently in progress. Two reports assessing pollution levels and associated threats in selected rivers of the Ganga River Basin, specifically within the states of Uttar Pradesh and Bihar, have already been submitted.



COMPONENT - 2

CAPACITY BUILDING OF THE FOREST DEPARTMENT AND OTHER STAKEHOLDERS

1. SPEARHEAD TRAININGS

Between July to December 2024, two national-level trainings were conducted under the Spearhead Training Initiative. The first workshop aimed at teachers with of 119 participants, conducted in July 2024 at Wildlife Institute of India, Dehradun and focused on integrating river conservation into education. The second training held in October 2024, at Shaheed Ashfaq Ullah Khan Prani Udyan, Gorakhpur Zoo with 73 participants, was conducted for veterinarians, students, zookeepers, and frontline officials, and centred on aquatic wildlife rescue

and rehabilitation. These trainings enhanced conservation knowledge and practical skills among key stakeholders.



Teachers on Integrated River Conservation into Education Programme





Training at Gorakhpur Zoo

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 four training workshops were conducted between July and December 2024, with 755 participants (Table 1). 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.



Training Workshop at Shri Renuka Ji Mini Zoo

Table 1: Capacity-building training carried out for stakeholders between July and December 2024

Training	Location	No. of Participants
'Rescue and handling of macro aqua-fauna in distress' for zoo keepers and frontline forest staff	Shri Renuka Ji Mini Zoo, Sirmour, Himachal Pradesh	37
'Ganga biodiversity and wetland conservation'	Deen Dayal Upadhyaya Gorakhpur University, Gorakhpur, Uttar Pradesh	367
'Conservation of Ganga River and its macro aquatic species' for visually impaired trainees	Wildlife Institute of India, Dehradun	37
Fundamental aspects of turtle biology, handling and significance	Turtle Rescue and Rehabilitation Centre, Sarnath	314
Total		755

COMPONENT - 3

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

1.

CONSERVATION THROUGH A GROWING GANGA PRAHARI NETWORK

A total of 5,971 Ganga Prahari were registered, of which 3,945 are female and 2,026 are male. 101 Ganga Prahari (55 females and 46 males) were inducted to the cadre between July and December 2024, emanating from various regions within the Ganga River and its tributaries, including Alaknanda, Ghaghra, Hooghly, Mahananda, Ramganga, Rapti, Sarayu, Sharda, Son and Yamuna (Figure 13).

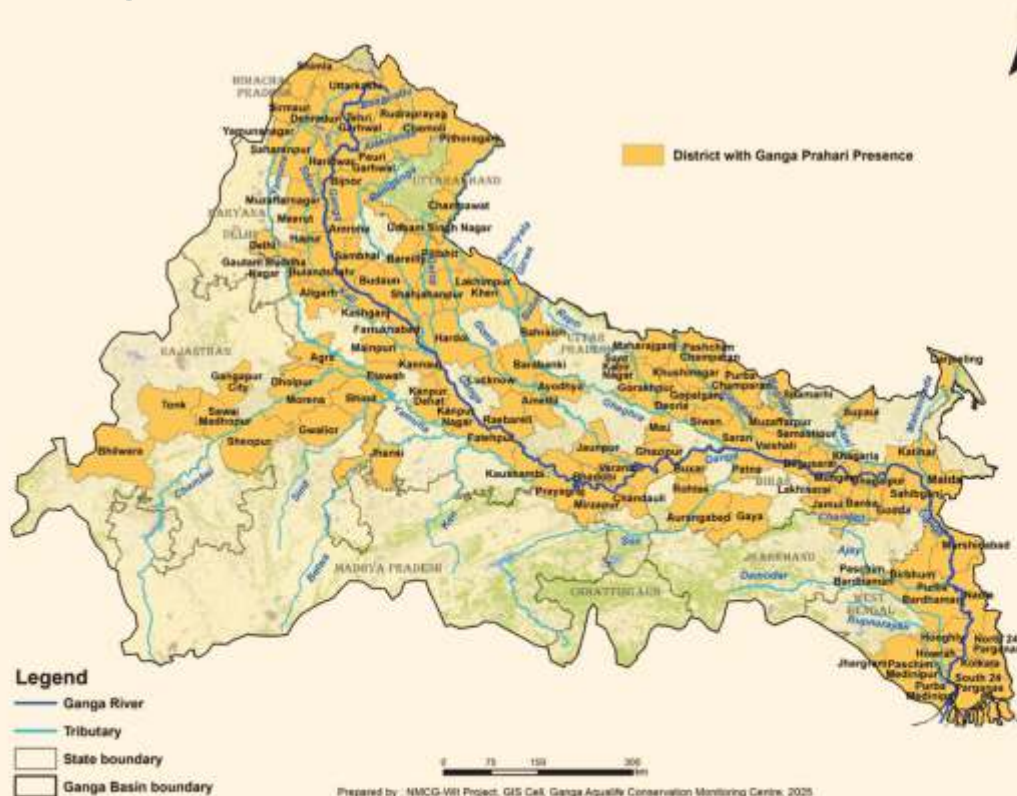


Figure 13: Distribution of Ganga Prahari in Ganga River Basin

2.

COMMUNITY ENGAGEMENT ACROSS THE GANGA RIVER BASIN

A cumulative total of 678 activities, encompassing awareness programs, cleanliness drives, plantation initiatives, sensitisation workshops, mobilisation, orientation workshops, consultative meetings, livelihood training sessions, cultural activities, participatory mapping, and ecological surveys were diligently carried out across 56 districts of seven states including Uttarakhand, Uttar Pradesh, Bihar, Jharkhand, West

Bengal, Himachal Pradesh, and Madhya Pradesh across the Ganga River basin by the Wildlife Institute of India (WII). Approximately, 24,736 participants, predominantly comprised of different stakeholder categories, including local community representatives, Ganga Praharis, Forest Department officials, district administration officials, NGOs and other line agencies, participated in these events (Table 2).

Table 2: Activities conducted from July to December 2024

Activities	Type of meeting	Total participants
Awareness & sensitization programme	157	7,812
Cleanliness drives	46	2,247
Consultative meetings	248	3,222
Exhibition	6	1,182
Field Visit	8	32
Focus group discussion	20	291
Livelihood activities	87	2,191
Others 5	775	
Plantation drive	35	954
Socio-economic survey	55	729
Special occasion and days celebrations	11	5,301
Total	678	24,736



3. CREATE SELF-SUFFICIENCY THROUGH LIVELIHOOD TRAINING

Eleven distinct livelihood training programmes were initiated in eight districts of three states (Uttar Pradesh, Bihar and Jharkhand) in the Ganga River basin, each functioning as a specialized platform for skill development. Across these training sessions conducted at diverse locations, a cumulative total of 247 participants underwent comprehensive training in various fields, including Bag making, Basket weaving,

food processing, incense stick and candle making and sewing and stitching (Table 3). Furthermore, Ganga Prahari's active participation in Jalaj initiatives was pivotal in establishing additional opportunities geared towards cultivating self-sufficiency and independence, aligning with the Arth Ganga initiative.

Table 3: Livelihood skill development trainings

Training	No. of trainings	No. of participants
Bag making	1	25
Basket weaving	2	34
Basket weaving & food processing	1	8
Food processing	1	27
Health and wellness	2	53
Incense stick & candle making	1	10
Sewing & stitching	3	90
Total	11	247

From July to December 2024, Ganga Praharis, who underwent training, conducted a total of 240 activities, with 167 categorized as input activities and 73 as output activities (Table 4). These activities encompassed initiatives such as awareness and cleanliness drives, tree plantation, livelihood development, assistance in ecological monitoring and ecological surveys, and microplan data collection, rescue, and rehabilitation.



Table 4: Activities initiated by Ganga Praharis

Activities	No. of activities	Total Participants
Awards and achievements	2	1,747
Awareness activity	131	4,546
Cleanliness drive	20	397
Consultative meeting	2	28
Ecological monitoring	8	21
Participation in activities of other organisation	4	1,463
Plantation programme	21	307
Rescue & rehabilitation	29	294
Socio- economic survey	2	5
Special day celebration	21	1,334
Total	240	10,142



4. 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 was done in 19 villages in the districts of Agra, Bhadohi, Chandauli, Etawah, Ghazipur, Jalaun, Jaunpur, Kanpur, Kausambhi, Mirzapur, Prayagraj, Unnao and Varanasi in Uttar Pradesh, and in one village in Bhind,

Madhya Pradesh (Table 5). The villages were situated along the rivers Chambal (n=2), Ganga (n=12), Gomti (n=2) and Yamuna (n=4). Participants were asked about the ecosystem services they receive from the rivers 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 5: Participatory Mapping of Ecosystem Services

State	District	No. of villages	River
Madhya Pradesh	Bhind	1	Chambal
Uttar Pradesh	Agra, Bhadohi, Chandauli, Etawah, Ghazipur, Jalaun, Jaunpur, Kanpur, Kausambhi, Mirzapur, Prayagraj, Unnao, Varanasi	19	Chambal, Ganga, Gomti, Yamuna



5. BAL GANGA PRAHARI PROGRAMME

5.1 Bal Ganga Prahari Corners (Ganga Aqualife Knowledge Centre)

Over the course of six months, five Bal Ganga Prahari Corners were successfully established in the GRB. Two were established in West Bengal, two were in New Delhi and one in Uttarakhand (Table 6).



Julpia Andharmanik High School, South 24 Parganas, West Bengal

Table 6: Bal Ganga Prahari corner establishen in the GRB

Date of Inauguration	Name of School
27-08-24	Rangabelia High School, Gosaba, South 24 Parganas, West Bengal
02-10-24	Julpia Andharmanik High School, South 24 Parganas, West Bengal
25-11-24	Mahavir Senior Model School, Ashok Vihar, New Delhi
27-11-24	Sarvodaya Bal Vidyalaya Zeenat Mahal, Kamla Market, New Delhi
10-12-24	Government Inter College, Nagni, Tehri Garhwal, Uttarakhand



Mahavir Senior Model School, Ashok Vihar, New Delhi



Sarvodaya Bal Vidyalaya Zeenat Mahal, Kamla Market, New Delhi

5.2 Bal Ganga Prahari Sensitization

Between July and December 2024, more than 10 schools were engaged in biodiversity conservation awareness programmes, reaching approximately 20,000 students. Through interactive workshops, educational games, hands-on activities and awareness campaigns, students gained insights into the ecological significance of the Ganga River and the need for its conservation.



Scholarship Awardees of Govt. Inter College, Nagni, Uttarakhand



Swatchhta Hi Sewa Campaign at Swami Atamananda Govt. Excellence English School, Chhattishgarh and Julpia Andharmanik High School, West Bengal



National Wildlife Week Celebration at Learning Tree Special School, Dehradun, and Govt. High School, Behral, Himachal Pradesh

6. JALMALA SAMVAAD

Between July and December 2024, nine Jalmala Samvaad were established in eight districts of six states. 8,507 students and 208 teachers were sensitized through these low cost interpretation corners (Table. 7).

Table 7: Location of newly established Jalmala samvaad

District and State	Total Students in School	Total Teachers
Dehradun, Uttarakhand	930	32
Sirmour, Himachal Pradesh	1,500	40
Morena, Madhya Pradesh	1,000	30
Sahibganj, Jharkhand	560	25
Samastipur, Bihar	840	24
Kanpur, Uttar Pradesh	554	12
Bareilly, Uttar Pradesh	2,239	35
Kannauj, Uttar Pradesh	884	10
Total	8,507	208



7.

AWARENESS WORKSHOP AND TRAINING FOR TEACHERS

A series of educational and awareness initiatives were conducted across multiple locations, engaging a total of 7,025 participants (Table 8). School awareness workshops and game-based activities were organized in several districts of Uttar Pradesh, Uttarakhand, and Himachal Pradesh to enhance environmental understanding among students and teachers. A specialized teacher training session was conducted at the District Institution of Education and Training in Kanpur, Uttar Pradesh, to

equip trainees and teachers with essential skills and knowledge. Additionally, awareness programmes, including nukkad-natak (street plays) and puppet shows, were held in Kanpur and Varanasi, fostering community engagement and promoting conservation awareness. These initiatives contributed to strengthening environmental education and participation across diverse groups.

Table 8: Activities conducted with school children and number of participants

Activity	Participants	Location	No. of Participants
School awareness workshops & game-based activities	Students and teachers	8 districts of Uttar Pradesh, 1 district each in Uttarakhand & Himachal Pradesh	3,239
Teacher training session	Trainees and teachers	District Institution of Education and Training, Kanpur in Uttar Pradesh	75
Awareness workshops, nukkad-natak & puppet shows	Students, teachers, zookeepers and community members	Kanpur and Varanasi in Uttar Pradesh	3,711
Total			7,025



8. SPECIAL DAYS CELEBRATION WITH STAKEHOLDERS

A total of 2,419 school students, teachers, trainee teachers, tourists, forest department officials, and community members across seven districts in five states

were sensitized through awareness programs held on significant days (Table 9).

Table 9: Special days celebrated across the Ganga river basin

Event	District	No. of Participants
World Elephant Day	Delhi	50
Independence Day	Varanasi, Kanpur, Dehradun	179
World River Day	Varanasi, Kanpur	124
National Dolphin Day	Sirmour	125
Wildlife Week	Varanasi, Kanpur, Sirmour, Dehradun, Kannauj, Nadia	1,641
Ganga Utsav	Varanasi	300
Total		2,419



Plantation during Wildlife Week



World Elephant Day at Govt. Boys Senior Secondary School, Zeenat Mahal, Delhi

9.

EDUCATIONAL TOURS

A total of 1,540 School students, teachers, trainee teachers, were sensitized through educational tours at Ganga Darpan Interpretation Centre at Varanasi and Anubhuti Interpretation Centre at Kanpur in Uttar Pradesh.



10.

DIGITAL OUTREACH

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



11.

VISITOR FOOTFALL INSIGHTS

The interpretation centres established in the Ganga basin attract a large number of visitors. During the second half of 2024, on an average about 21 visitors visited the centres. Amongst these three, the Anubhuti at Kanpur zoo had the highest footfall (Table 10).

Table 10: Visitation to the interpretation centres in the Ganga river basin

Interpretation Center	District	Total Number
Ganga Darpan	Varanasi	1,278
Anubhuti	Kanpur	33,800
Ganga Avlokan	Haridwar	3,160
		38,238

IN NEWS

एक पेड़ माँ के नाम लगाने का किया आह्वान
तालझारी, भारतीय वन्यजीव संस्थान के सौजन्य से मसकलेया पंचायत के प्रशिक्षण केंद्र के प्रतिभागियों के साथ गंगा प्रहरियों ने पुराना पंचायत भवन में शुक्रवार को पौधरोपण किया. कार्यक्रम में एक पेड़ माँ के नाम लगाने की गयी. मौके पर गंगा प्रहरी राजेश कुमार सिन्हा, कामदेव कुमार, लखेटू ठाकुर, पूनम देवी आदि मौजूद थे.

जूट शिल्पकारों का कौशल विकास हेतु प्रशिक्षण का शुभारंभ



प्रभात मंत्र संवाददाता
उधवा : मुख्यमंत्री लघु एवं कुटीर उद्यम विकास बोर्ड रांची के द्वारा प्रायोजित कौशल उन्नयन योजना के तहत जूट शिल्पकारों को कौशल विकास हेतु 25 दिवसीय प्रशिक्षण दिया जाना है। इसका शुभारंभ बुधवार को दक्षिण पलाशगाछी पंचायत सचिवालय में पंचायत की मुखिया नफीसा खातुन ने फीता काटकर किया। इस दौरान नोडल पदाधिकारी मोहोबूर रहमान ने बताया कि 20 शिल्पकारों का एक बैच होगा। उन सभी को मास्टर ट्रेनर के द्वारा 25 दिनों तक प्रशिक्षण दिया जाएगा। प्रशिक्षण पुर होने के उपरांत सभी को प्रमाणपत्र, दस तरह का पुर्लिकट्स, खानपान का समान, 300 रुपए प्रति दिन के हिसाब से एक बैच का डेढ़ लाख रुपए दिए

जाएंगे। प्रशिक्षण के संपन्न के बाद रोजगार उपलब्ध करवाने हेतु स्फूर्ति या क्लासटर डिप्लोपमेंट स्किम के साथ जोड़ दिया जाएगा। वहीं अंचलाधिकारी पवन कुमार ने सभी शिल्पकारों को प्रशिक्षण लेकर हुनरमंद बनने को कहा। हुनरमंद बनने से जिंदगी में कुछ ना कुछ तलाश ही लेंगे। जरूरी नहीं है कि सबको नौकरी ही करना है अगर नौकरी नहीं मिलती है तो आप हुनरमंद बनकर कहीं भी काम कर

अंतर्गत भारतीय वन्य जीव संस्थान देहरादून के सामंजस्य से सफाई अभियान चलाया गया।

गंगा की निर्मलता से घाट पर नजर आती है डाल्फिन : असीम अरुण

जासं, कन्नौज : गंगा की शुद्धता, अचिरलता और निर्मलता बनाए रखने के लिए हम सबको मिलकर कार्य करना है। गंगा के जीवों को किसी प्रकार का नुकसान न हो। गंगा की निर्मलता से ही जनपद के गंगा तट पर डाल्फिन भी दिखना शुरू हो गई हैं। लेकिन, मां गंगा की निर्मलता के लिए अभी और कार्य करना है। सोमवार को यह बात मेहंदौघाट पर हुए गंगा उत्सव कार्यक्रम के दौरान विधायक व समाज कल्याण राज्यमंत्री असीम अरुण ने कही।

कार्यक्रम के दौरान आचार्यों ने विधि विधान से मां गंगा को आरती कराई। हर हर गंगे के जपकारों एवं शंखनाद से घाट गूंज उठा। इस दौरान रंगोली प्रतियोगिता में

वन्यप्राणी सप्ताह के अंतर्गत आयोजित पेंटिंग प्रतियोगिता स

गरीबों का सहाय

कन्नौज। भारतीय वन्य जीव संस्थान देहरादून की जलज प्रियोजना सहायक रमा लिकरी के नेतृत्व में कन्नौज जनपद की ग्राम रंभायल गंगधरपुर के राजकीय अभिनव इंटर कॉलेज में पेंटिंग प्रतियोगिता का आयोजन किया गया। जिसमें पांच शिष्टलाभ के सौ अत्र-छात्रों ने प्रतिभाग किया। जलज परियोजना सहायक रमा लिकरी ने बताया की जलज प्रियोजना के प्रोजेक्ट साइट्स खीरभ गवन के निर्देशन एवं प्रोजेक्ट एसोसिएट अजय मार्गदर्शन में कन्नौज के के एन इंटर कॉलेज में वन्य जीवों के संरक्षण एवं जलीय जीवों के प्रति जन जागरूकता कार्यक्रमों का आयोजन के अक्टूबर से आठ अक्टूबर के बीच वन्य प्राणी सप्ताह मनाया जाता है। इस अवसर पर मानस के साथ-साथ विधायक जे.पी. सिंह ने जीवों के संरक्षण प्रतिनिधायक अदि लंग मौजूद रहे



गंगा प्रहरी रविकांत स



देहरादून में स्वच्छता हीरो का सम्मान ग्रहण करते रविकांत नागर (जकातप) (गयापुर) : पटना गांव के गंगा प्रहरी रविकांत नागर को राष्ट्रीय स्वच्छ गंगा मिशन योजना के अंतर्गत स्वच्छता के लिए सम्मानित किया गया। देहरादून में 28 नवंबर से एक दिसंबर तक विश्व वन्यजीव संस्थान से आयोजित कार्यक्रम में नोडल अधिकारी डा. रुचि बडोला ने रविकांत नागर को स्वच्छता हीरो का प्रमाणपत्र और मेडल देकर सम्मानित किया। चार दिवसीय इस कार्यक्रम में वन्यजीव विशेषज्ञ एवं इस योजना से जुड़े अधिकारियों ने वन्यजीवों के सुरक्षा, संरक्षा एवं संवर्धन की कई योजनाओं पर प्रकाश डाला। नमामि गंगे योजना के तहत पटना गांव से सैन्टु नगर तक गंगा नदी में

मौ मुनब्वर ब्यूरो कीफ दैनिक अयोध्या टाइम्स कन्नौज कन्नौज। श्रावण मास के मेले के दौरान नैहदाघाट पर जिला पर्य

गंगा घाट पर स्वच्छता अभियान चलाया गया

करते हुए बताया की गंगा घाट में कचरा कड़ा करके

छापेमारी में प्राप्त तीन कछुओं को उपायुक्त एवं वन प्रमंडल पदाधिकारी के द्वारा गंगा में छोड़ा गया साहिबगंज। शनिवार को वन विभाग ने

स्वतंत्र चेतना

खारापासी। श्री कृष्ण बालिका
 द्वाराएव सरस्वती के प्रयोग में ३१
 वी व १३७ गीता टास्क मेन्स २१
 टीका राईफल के जवानों द्वारा
 आरोपण कार्यकम किया गया।
 गानों द्वारा निष्ठापाल के प्रधानचार्य
 सिंह यादव के सहयोग में
 आरोपण किया गया। बिस्मय मुख्य
 अधिक अर्थात् सिंह यादव ने
 आरोपण अधिवेशन में साक्ष्य दिया।
 श्री टास्क मेन्स के अधिकारी
 जवानों द्वारा कि पीछे हमारे
 बल को अमुष्ण निधि है।
 हमारे संरक्षण में सदाकाल है। पीछी
 में अकीर्तोजन मिलती है जो हमारे
 बल के निधि सबसे लम्बा है। हमें
 अधिक से अधिक पैदल पीछी लक्ष्य
 हमारे को ही भरा जाना चाहिए।

उन्होंने कहा कि विद्यार्थियों को जन्मदिन, परिवार में विवाह इसका अन्य आयोजनों पर पेड़ पीछे लगाने चाहिए। साथ ही बताया कि धरती के अंदर अनेकों चीजों का भंडारा है। प्रकृति से हमें काबे मोख ले सकते हैं और अधिक से अधिक पेड़ पीछे लगाने के लिए प्रेरित किया। गंगा ब्रह्मी के संयोजक प्रमोद कुमार द्वारा बताया गया कि ऐसे कार्यक्रम

पटना में गंगा किनारे सू...

पटना में गंगा किनारे मृत मिला डाल्फिन शिशु

संगठन सूत्र, जागरण, खानपुर (गंजीपुर) : गंगा नदी में पटना गाँव के किनारे मंगलवार की सुबह डाल्फिन मछली का एक मृत शिशु मिला। पिछले चार साल से पटना में गंगा घाट के आसपास सैकड़ों की संख्या में डाल्फिन मछलियों दिखाई देती हैं। यहाँ का शांत सुस्थ वातावरण शांति प्रिय गंगा गाय डाल्फिन को बहुत पसंद है। इस जगह को डाल्फिन संरक्षण केंद्र बनाने के लिए वन विभाग सहित देहरादून की जलीय वन्य संरक्षण समिति भी कई बार दौरा कर इसे सुरक्षित एवं संरक्षित करने का अपील कर चुके हैं। जिला प्रशासन की धोर लापरवाही और अनदेखी से यहाँ के जलीय डाल्फिन मछलियों का जीवन खतरे में पड़ गया है। मंगलवार की सुबह डाल्फिन शिशु का शव मिलने के बाद वन विभाग के अधिकारी नहीं पहुंचे। नाविकों ने उस गंगा की धारा में प्रवाहित कर दिया। तटवर्ती नाविकों का कहना है कि

पटना गंगा घाट पर मृत डॉल्फिन शिशु
इसके पूर्व भी एक डॉल्फिन का शव
कुत्तों और जानवरों ने नष्ट कर दिया
था। औडिहार के आशीष सिंह गुंजन
का कहना है कि वन विभाग एवं
जिला प्रशासन की लापरवाही से यहां
डॉल्फिन मछलियों की जान खतरे में
है। सैदपुर के वन रेंजर श्यामनारायण
उपाध्याय ने बताया कि गंगा प्रकृति
से डॉल्फिन मछली मरने की सूचना
मिली। हम लोगों के पहुंचने तक
नाविकों ने उसे जलसमाधि दे दी थी।

अधिक से अधिक पेड़ पीछे लगाकर
बातावरण को हरा भरा बनाना चाहिए।

स्कूली छात्रों के बीच चित्रकला प्रतियोगिता



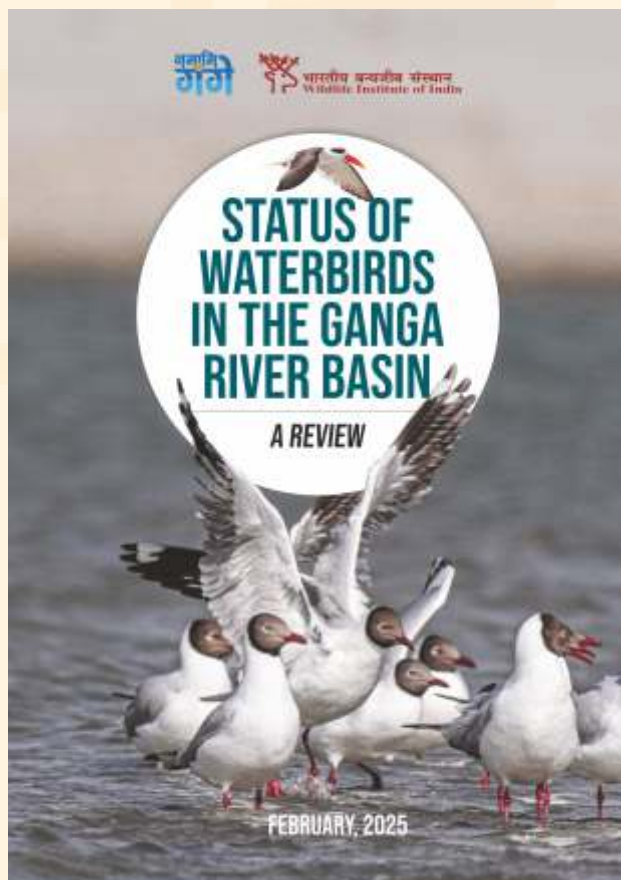
संवाद सहयोगी जागरण नालझारी
(साहित्यगर्ज) : भारतीय वन्य
जीव संस्थान देहरादून की ओर
से मंगलहार को कन्हैयास्थान
इस्पाँन मींदर पीससर में चर
स्कूल के करीब 76 छात्र-छात्राओं
के बीच चित्रकला प्रतियोगिता का
आयोजन किया गया है।
इस प्रतियोगिता में उच्च विद्यालय
महाराजपुर के 27, प्रस्तावित
योगीचक जयसामपुर उच्च
विद्यालय सरकंडा के 21, पलस
दू उच्च विद्यालय मंगलहार के
13 तथा उत्तमवित उच्च विद्यालय
मसकलैया के 15 छात्र-छात्राओं
ने भाग लिया है। प्रतियोगिता में

शामिल प्रतिभागियों में से विजेता प्रतिभागी को आगामी 14 नवंबर को भारतीय वन्य जीव संस्थान देहरादून में पुरस्कृत किया जायेगा। मौके पर भारतीय वन्य जीव संस्थान के वरुण कुमार

दैनिक जागरण

सर्करेड स्कूल के प्रधानाचार्य
रुपेश चौधरी, विजय गुप्ता,
प्रीति कुमारी, निलेश कुमार
तिवारी, सिद्ध मंडल, वामन
मंडल, दीपक मंडल सहित अ
लोग थे।

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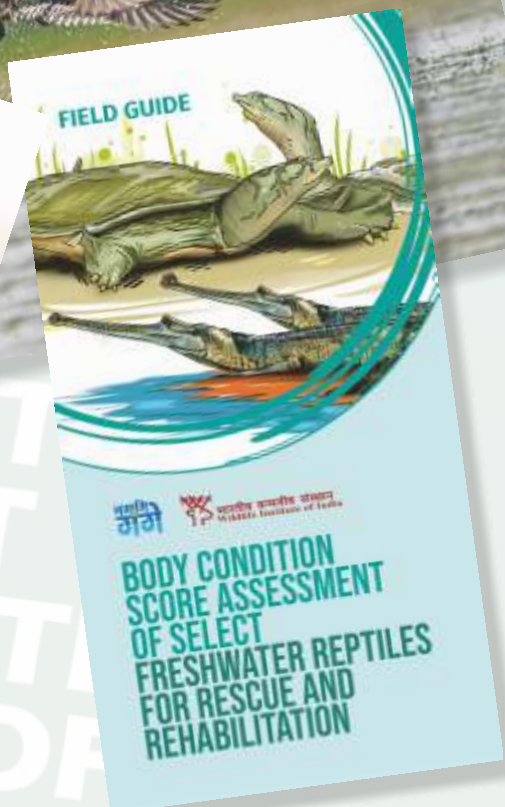
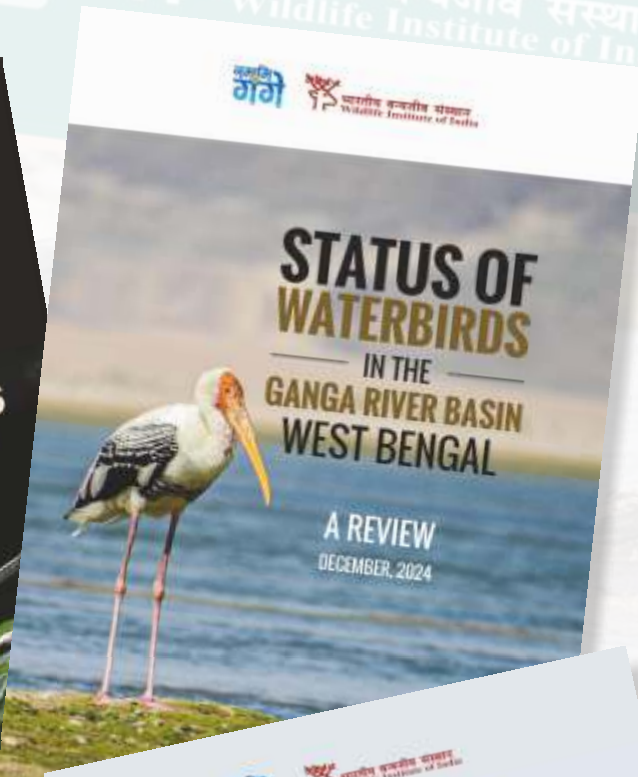
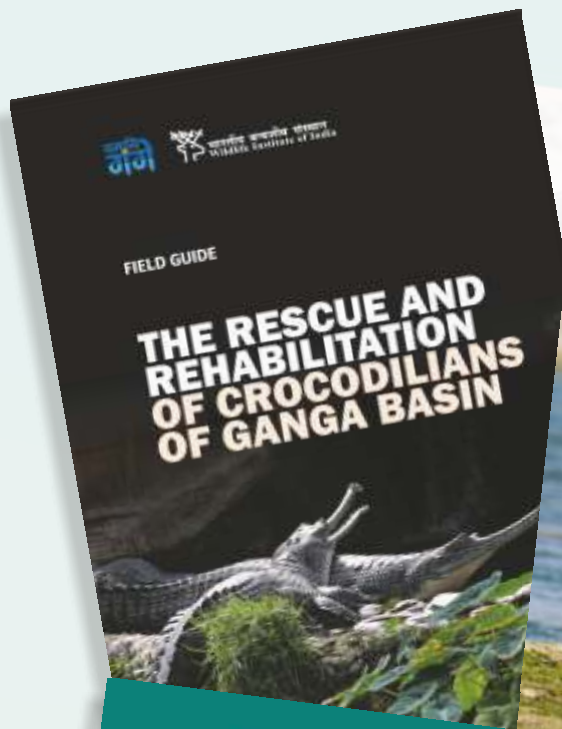
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Wildlife Institute of India



EXAMINATION OF FRESHWATER REPTILES OF GANGA BASIN



भारतीय वन्यजीव संस्थान
Wildlife Institute of India

NMCG

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GACMC/NCRR

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