नमामि गंगे

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 – JUNE 2023

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Progress Report
January – June 2023

Project Investigators
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COMPONENT 1

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

ESTABLISHMENT OF THE GANGA AQUALIFE CONSERVATION MONITORING CENTRE

Centre for innovation, catalysing change for a blue planet

The Ganga Aqualife Conservation Monitoring Centre/National Centre for River Research (GACMC/NCRR) has been established in the campus of the Wildlife Institute of India, Dehradun. The Centre has three state-of-the-art labs: a ecotoxicology laboratory, the aquatic ecology laboratory, and the GIS laboratory for spatial analysis.

(a) **Ecotoxicology Laboratory:** Equipped to conduct qualitative and quantitative estimation and monitoring of emerging and traditional toxic organic contaminants, determination of elements and their species in various kinds of aquatic samples, and quantitative estimation of diverse physical-chemical parameters related to environmental surveillance and management, which include water-quality indicators such as pH, dissolved oxygen, temperature, turbidity, conductivity and nutrient concentrations.

(b) **Aquatic Ecology Laboratory:** Equipped with the infrastructure for monitoring aquatic biodiversity and molecular studies.

(c) **GIS Laboratory:** Capable of conducting cutting-edge research pertaining to the application of geospatial tools for the conservation of freshwater ecosystems.



These three laboratories focus on research with respect to freshwater ecosystems and their associated biodiversity. In addition to the state-of-the-art laboratories, the Centre has a classroom, auditorium, library, and researchers' room to facilitate learning and research.




GANGA AQUALIFE CONSERVATION
MONITORING CENTRE
CENTRE FOR RIVER RESEARCH
CENTRALIZED GANGA AQUALABS
UNION BANK OF INDIA
CAR PARKING

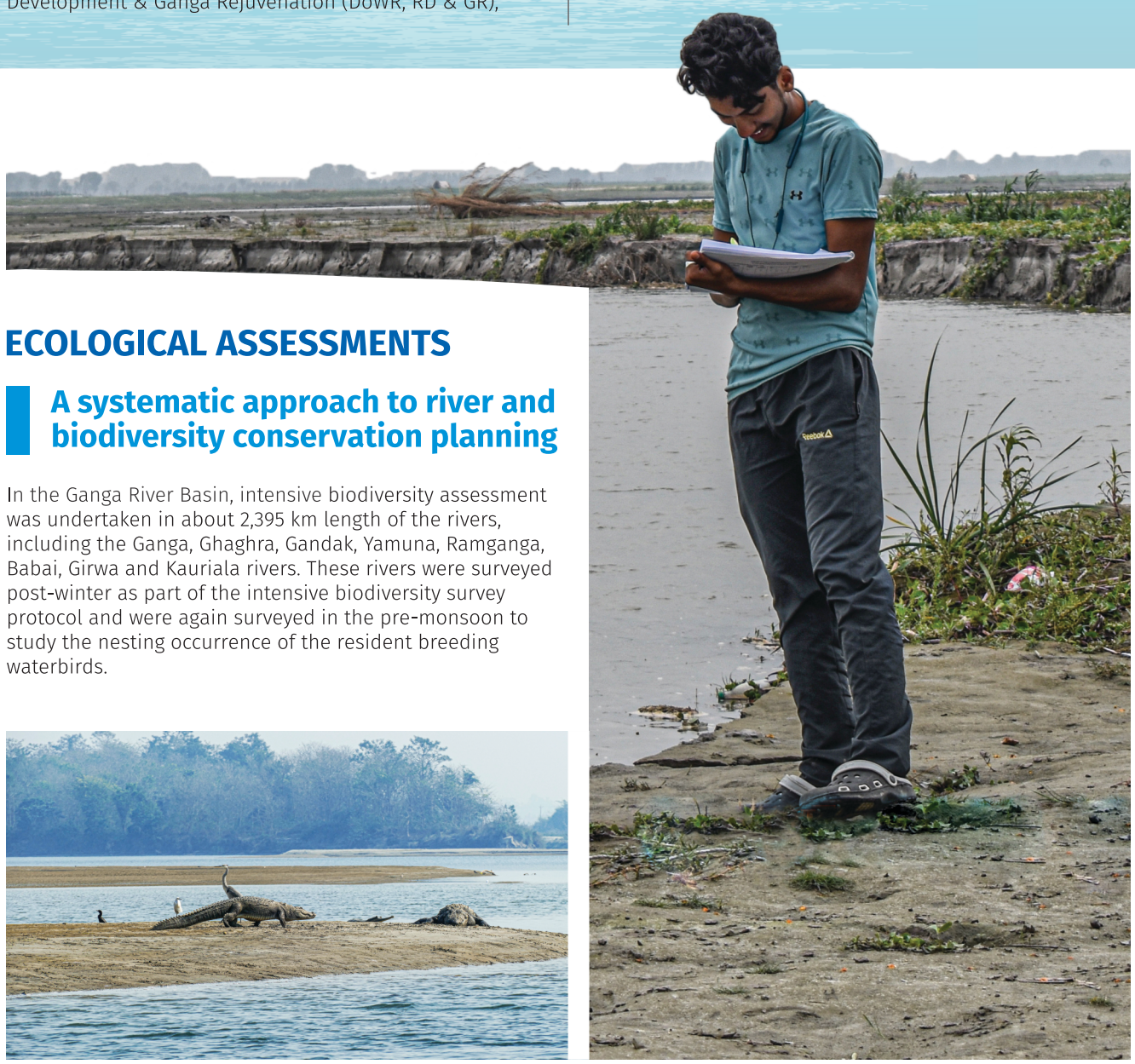


INITIATING M.Sc. COURSE

From classroom to conservation

Freshwater ecosystems are among the most endangered biomes. The intricate links and connectivity between terrestrial and freshwater ecosystems further exacerbate the fragility of the freshwater ecosystem. The recovery plan urges the integration of biodiversity inventory and basic ecosystem science, stressor assessment, systematic restoration and protected area management with links to terrestrial realms as required. The emergency recovery plan for the freshwater ecosystems calls for urgent actions through a set of measures, for which a trained workforce of researchers and ecologists are needed. Therefore, a proposal for initiating Master's degree in Freshwater Ecology and Conservation was prepared, on the advice of Secretary, Department of Water Resources, River Development & Ganga Rejuvenation (DoWR, RD & GR), Ministry of Jal Shakti, Government of India, during the review meeting of the project "Assessment of the ecological status of select Indian Rivers for conservation planning" under National River Conservation Programme (NRCP) held on 28th March 2023, at New Delhi.

Subsequently, a detailed syllabus for M.Sc. in Freshwater Ecology and Conservation was prepared and placed for approval by the 45th meeting of the Training, Research & Academic Council (TRAC) of Wildlife Institute of India (WII) held on 15th May 2023 at WII, Dehradun. The members of the TRAC approved initiating an M.Sc. course on Freshwater Ecology and Conservation. The course will be conducted through the Academy of Scientific & Innovative Research (AcSIR), at WII.



ECOLOGICAL ASSESSMENTS

A systematic approach to river and biodiversity conservation planning

In the Ganga River Basin, intensive biodiversity assessment was undertaken in about 2,395 km length of the rivers, including the Ganga, Ghaghra, Gandak, Yamuna, Ramganga, Babai, Girwa and Kauriala rivers. These rivers were surveyed post-winter as part of the intensive biodiversity survey protocol and were again surveyed in the pre-monsoon to study the nesting occurrence of the resident breeding waterbirds.

Intensive Biodiversity Survey

Ganga River

A total of 430 km of the Ganga River between Sitabdiara in Uttar Pradesh and Farakka barrage in West Bengal was surveyed during February-March 2023. During the survey, 59 species of water and water-associated birds and 33 species of grassland and terrestrial birds were recorded. Forty-five species of fish fauna were also documented during the survey.

Ghaghra River

A survey was undertaken in the Ghaghra River, between Girijapuri barrage and Revelganj at Ganga confluence, covering a distance of 615 km, during March-April 2023. A total of 422 visual sightings of the Gangetic river dolphin, 462 sightings of gharials, four sightings of muggers, and 3,489 sightings of freshwater turtles, including 33 individuals of *Nilssonia gangetica* were recorded during the survey. Additionally, 88 water and water-associated bird species were documented. Furthermore, congregations of Indian skimmers at two sporadic sites with 24 and 48 individuals, respectively, were observed.

Gandak River

A survey covering a distance of 290 km from Valmikinagar to Sonepur was carried out in the Gandak River in March 2023. A total of 159 visual sightings of the Gangetic river dolphin, 108 sightings of gharials, 17 sightings of muggers, and 651 sightings of freshwater turtles, including 633 individuals of *Pangshura* sp., and 18 individuals of *N. gangetica* were recorded during the survey. Besides this, 45 species of water and water-associated bird fauna were also documented.







Yamuna River

About 400 km of the lower Yamuna River stretch from Pachnada to Prayagraj was surveyed between February and March 2023. During the survey, only three individuals of Gangetic river dolphins were sighted 12 km downstream of the Yamuna-Betwa confluence, and 89 water and water-associated bird species were recorded. A large congregation of Indian skimmers (n=310) was recorded near Prayagraj, Uttar Pradesh.

Ramganga River

A total of 540 km stretch of the Ramganga River, from Dhikala (Corbett Tiger Reserve) to Ganga confluence near Kusumkhor of District Kannauj, Uttar Pradesh, was surveyed during May-June 2023. About 40 km of the surveyed stretch was within Corbett Tiger Reserve (Kalagarh Reservoir). During the survey, 5,779 sightings of water and water-associated birds, including 341 island nesting birds, were recorded. Interestingly, only a single nesting site was observed throughout the surveyed stretch. Additionally, seven species of turtle were also recorded during the survey.

During the survey of Ramganga River within Corbett Tiger Reserve, four individuals of smooth-coated otters (two adults and two juveniles), 41 individuals of gharial, 30 individuals of mugger, and 26 species of water and water-associated birds were recorded.

Babai River

The 80 km stretch of the Babai River from Babai barrage at Nanparain district Bahraich to Ghaghra confluence near Chahlari Ghat was surveyed. During the survey, an individual of Gangetic river dolphin, seven gharial individuals, three mugger individuals, four species of turtles and 28 species of water and water-associated birds were observed.

Girwa River

A 20 km stretch of the Girwa River from India-Nepal border to Girijapuri Barrage in Katarniaghat Wildlife Sanctuary was surveyed in February 2023. During the survey, seven sightings of Gangetic river dolphin, one individual of smooth-coated otter, 158 individuals of gharial, 59 individuals of mugger, three species of turtles and 15 species of water and water-associated bird were recorded.

Kauriala River

A 20 km stretch of the Kauriala River from India-Nepal border to Girija Barrage along the Katernaighat Wildlife Sanctuary was surveyed in February 2023. During the survey, thirteen sightings of Gangetic river dolphin, 41 individuals of gharial, 26 individuals of mugger, two species of turtles and ten species of water and water-associated birds were recorded.

Nesting Survey

During the nesting survey of the river islands in the Ganga, Yamuna, Ghaghra and Gandak rivers, a total of 11 species of birds were found to be nesting, including Indian skimmer (*Rynchops albicollis*), river tern (*Sterna aurantia*), river lapwing (*Vanellus duvaucelii*), little ringed plover (*Charadrius dubius*), little tern (*Sternula albifrons*), red-wattled lapwing (*Vanellus indicus*), Indian thick-knee (*Burhinus indicus*), pheasant-tailed jacana (*Hydrophasianus chirurgus*), small pratincole (*Glareola lactea*), blue-tailed bee-eater (*Merops philippinus*), and black winged stilt (*Himantopus himantopus*). In the Ghaghra River, a total of ten species were recorded, including Indian skimmer, river tern, river lapwing, little ringed plover, little tern, red-wattled lapwing, Indian thick-knee, pheasant-tailed jacana, small pratincole and blue-tailed bee-eater. Three species, namely little tern, small pratincole, and black winged stilt were recorded from the Ganga River. Only red wattled lapwing and small pratincole were recorded from the Yamuna and Gandak rivers, respectively. Direct sighting of eggs or nests of any water birds could not be made from the Gandak River, as most of the river islands were submerged due to irregular water discharge from the Valmikinagar barrage.

Black winged stilt eggs





Indian skimmer eggs and chick



Little tern egg and hatchling



Amphibian Survey

During the amphibian survey of the Ganga, Yamuna, Ghaghra and Gandak rivers, a total of seven species representing four families, namely Bufonidae, Dicroglossidae, Microhylidae and Rhacophoridae were recorded. The skittering frog (*Euphlyctis cyanophlyctis*), and Indian bull frog (*Hoplobatrachus tigerinus*) were recorded from all four surveyed rivers, whereas common Asian toad (*Duttaphrynus melanostictus*) was recorded from the Ganga and Ghaghra rivers. The ornamented pigmy frog (*Microhyla ornate*) was recorded from the Yamuna and Ghaghra rivers. While the dudhwa tree frog (*Chirixalus dudhwaensis*) and Indian tree frog (*Polypedates maculatus*) was recorded only from the Ghaghra River, and the Terai cricket frog (*Minervarya teraiensis*), was recorded only from the Yamuna River.



Indian tree frog

Indian bull frog



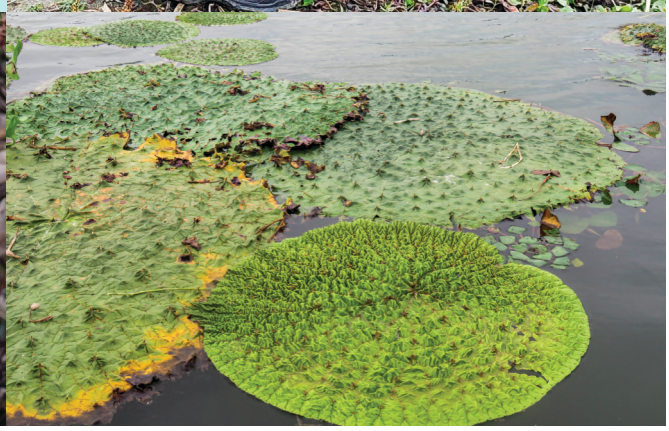
Vegetation Survey

The vegetation survey was conducted in about 2,450 km stretch along the Ganga, Gandak and Son rivers between January and May 2023. During the survey, about 610 plant species were recorded from the Ganga River, 260 plant species from the Gandak River, and about 110 plant species from the 50 km stretch of the Son River. Among these recorded plant species, Asteraceae, Fabaceae, Poaceae, and Acanthaceae represent the dominant families.





Clerodendrum infortunatum



Euryale ferox

Insights from the survey

For the first time, the Caspian tern (*Hydroprogne caspia*), grey plover (*Pluvialis squatarola*), black-faced bunting (*Emberizas podocephala*), black stork (*Ciconia nigra*) were recorded from the Ghaghra River.

Sighting of the grey plover from the Ghaghra and Mahanada rivers is the first recording of the species from the Ganga River Basin.



Grey plover recorded from Ghaghra River



Black-faced bunting recorded from Katerniaghat, Ghaghra River



Caspian tern

TECHNOLOGY IN ECOLOGY

Integrating modern approaches to conservation

Eco-toxicological Assessment

For the eco-toxicological study during the first half of 2023, two eco-toxicological field surveys were conducted, and the ecological samples collected during those surveys are being analysed.

The first post-monsoon eco-toxicological field survey was conducted in the months of January and February 2023, which aimed at water quality monitoring and collection of abiotic and biotic samples from the Ganga River and its tributaries, namely Yamuna, Gomti, Ghaghra, Ramganga, Chambal, Gandak, Kosi, Son, Damodar, Rupnarayan and Ajay in the Ganga River Basin. The samples consisted primarily of surface water, sediment, fish and macro invertebrates. These samples are currently being processed for the detection and quantification of Contaminants of Emerging Concerns (CECs), including pharmaceuticals and personal care products, heavy metals and Persistent Organic Pollutants (POPs). This information will then be used to estimate the risk to the river basin's biodiversity and ecology.



The second eco-toxicological survey was conducted in May and June 2023, specifically focusing on the Chambal River. The survey aimed to develop a non-invasive methodology for monitoring emerging contaminants in threatened species like the gharial, mugger, waterbirds, and turtles. During the survey, surface water, sediment, scat, and shed bird feathers were collected as part of the non-invasive monitoring strategy for CECs. Biotic samples from different trophic levels were also collected to study the bioaccumulation and species-specific distribution of CECs, as well as the biomagnification potential in the freshwater food web. Additionally, the survey also aimed to gather preliminary data on the status of light pollution in the habitats of threatened turtles and the gharial. The survey also aims to study the behavioural response of the gharial to different light regimes.

Furthermore, the team also studied the spatial-temporal trends of light pollution in India's major river basins and riparian habitats.

Genetic Analysis

Biological samples were collected from different regions within the Kosi and Gandak rivers. The primary objective of this collection was to assess the genetic diversity, gene flow, and demographic patterns of selected aquatic fauna. To achieve this goal, genetic barcoding was performed on fish species found in these rivers to address taxonomic uncertainties and identify lineages and gene flow patterns. A comprehensive genetic data set was generated and analysed for *Wallago attu*, spanning 19 locations across the Ganga, Ramgamga, Sharda, Saryu, Rapti, Gandak, and Kosi rivers. The results revealed a high level of genetic diversity and weak genetic structure within the studied river systems. These findings suggest the presence of genetic connectivity among *Wallago attu* populations in the Ganga River Basin, with no evidence of a bottleneck effect.

Furthermore, biological samples of *Batagur baska* were collected from the Turtle Breeding Centre in Sundarban, West Bengal, to evaluate the level of genetic fitness and inbreeding. The complete mitogenome of *Batagur baska* was generated using an in-house facility, and analysis is currently under process. To highlight the ongoing research activities centred on understanding the genetic aspects of turtles, a poster presentation titled "Exploring the Population Genetics and Gene Flow of Freshwater Turtles in the Gangetic River System" was delivered at the prestigious first Indian Conservation Conference (ICCON), held in Mysuru, Karnataka from 1st to 3rd April 2023. The presentation aimed to shed light on the intricate population dynamics, genetic diversity, and gene flow patterns of freshwater turtles in the Gangetic River system. This participation at ICCON signifies the commitment to advancing scientific knowledge and promoting conservation efforts to protect and sustainably manage these remarkable aquatic creatures.



RESCUE, REHABILITATION, RELEASE, AND RESEARCH

Four R's to strengthen conservation measures

Organised a capacity building workshop for the front-line forest officials of Morena Division, Madhya Pradesh, from 11th to 12th January 2023.

The existing facilities at the Turtle Rescue and Rehabilitation Centre, Sarnath, were renovated. The renovation activities included establishing a designated hospital space within the building to provide veterinary care to the injured turtles. The enclosures were enriched through the provision of bamboo platforms.

The eggs of *Nilssonia hurum*, *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 Turtle Rescue and Rehabilitation Centre, Sarnath, for incubation. The eggs were placed in artificial incubators set to replicate the natural incubation conditions required by each species. Upon hatching, the newly emerged hatchlings were closely monitored and provided with appropriate care to ensure their survival and well-being. 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 till their release into their natural habitats.



A total of 157 turtles belonging to the species, *Lissemys punctata* and *Nilssonia gangetica*, were rescued and transported to the Turtle Rescue and Rehabilitation Centre, Sarnath. Upon arrival, a preliminary assessment was conducted to determine the overall condition of the turtles. Of the rescued individuals, six perished. The remaining turtles were promptly provided with first aid.

Prior to the release, the confiscated turtles underwent thorough health assessments and were kept under observation and care at the rescue facility. Medical interventions, rehabilitation, and necessary treatments were provided to ensure the turtles' fitness for release. After completion of the recovery period, the confiscated individuals were released in suitable habitats in the presence of the Ramnagar Forest Department and Gram Pradhan by NMCG-WII Rescue and Rehabilitation team on 12th March 2023. The objective of the release was to return the turtles to their natural habitat and contribute to their conservation and population recovery.



Rescue and release operation



At Turtle Rescue Centre, Barhi, Bhind, Madhya Pradesh, activities such as nest relocation and monitoring, biodiversity surveys, habitat surveys, renovation of the Centre, and transportation of turtle hatchlings were undertaken.





Capacity building



COMPONENT 2

CAPACITY BUILDING OF THE FOREST DEPARTMENT AND OTHER STAKEHOLDERS

TRAINING OF SPEARHEAD TEAMS

To promote and expedite the conservation efforts

Four spearhead training workshops were conducted at the State and National levels. A National level spearhead training workshop was conducted for veterinary college students from 21st to 23rd March 2023, which aimed to develop the capacity of veterinary students on 'handling of aquatic species in distress' for biodiversity conservation of the Ganga River Basin. A total of 67 veterinary students from 11 states and 13 government veterinary colleges and institutions participated. Three state level spearhead training workshops were organised for (a) the National Cadet Corps (NCC) cadets from 18th to 20th January 2023, which comprised of 41 cadets from three government colleges of Uttarakhand, (b) the NGOs from 29th to 31st May 2023, which comprised of 40 individuals representing 20 different NGOs who work on various aspects of environment and water conservation, and (c) the Police Personnel from 20th to 22nd June 2023, which comprised of 18 Police personnel from the Uttarakhand Police Force, who were trained on River conservation and the role of enforcement agencies in biodiversity conservation.




Every DROP Counts
INTERNATIONAL DAY OF ACTION FOR RIVERS



NCC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Wildlife Institute of India
Azadi Ka Amrit Mahotsav
State Level Training Workshop for Police Personne
Biodiversity & River Conserv n – Role of Enforcem
Agenc


Wildlife Institute of India
Chandrabani, Mehuwala Mafi
Lat 30.284605°
Long 77.973769°
31/05/23
Training workshop for NGO's in
'Biodiversity and Community Participation'
of Uttarakhand and Uttar Pradesh of
CHALLENGES

PROMOTING CONSERVATION BY TRAINING AND EDUCATION

Three training programmes were conducted for college students and professors, in which 307 college students and 32 professors were trained on different aspects of biodiversity conservation.

CATCH THE RAIN CAMPAIGN

Activities under the 'Catch the Rain' campaign were initiated in June 2022 and continued till June 2023. Activities such as awareness programmes, cleanliness and plantation drives, pledge, board installation, sandbagging, *chal & khal* renovations, slogan writing competitions, de-silting of tanks and removal of obstruction in channels were organised. A total of 1,445 people from different stakeholder groups, such as NCC cadets, NSS volunteers, local youth, college students, school children, teachers participated in the activities.







GANGA AQUALIFE KNOWLEDGE CENTRE (BAL GANGA PRAHARI CORNER)

Planting seeds of awareness

Ganga Aqualife Knowledge Centre (Bal Ganga Prahari Corner) was set up at Atal Utkrisht Rajkiya Adarsh Inter College, Uttarkashi with the aim to educate school children about the biodiversity of the Ganga River Basin and its significance through interesting and innovative mechanisms.

COMPONENT 3

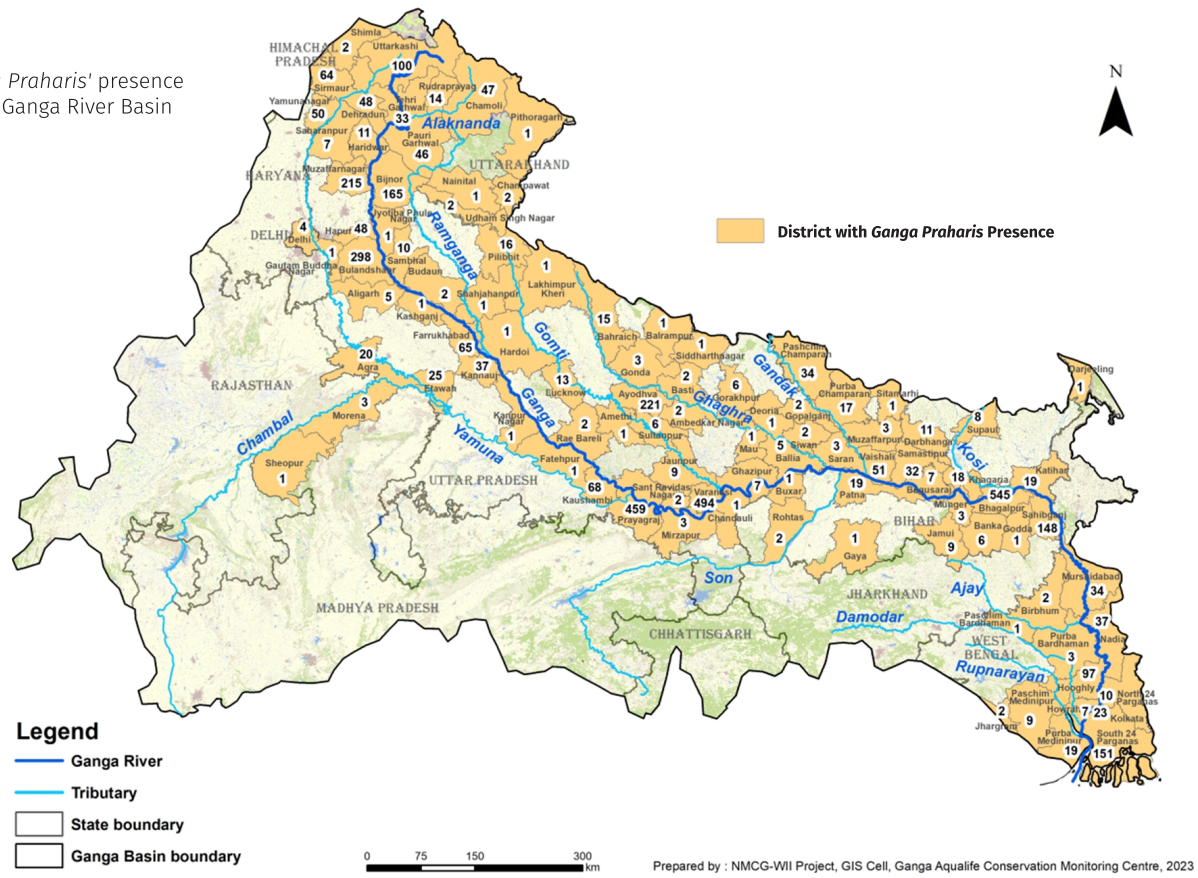
COMMUNITY BASED AQUATIC SPECIES CONSERVATION AND OUTREACH PROGRAMMES FOR THE GANGA RIVER BASIN

VOCAL FOR LOCAL — GANGA PRAHARI

Local community involved in Ganga River conservation initiatives

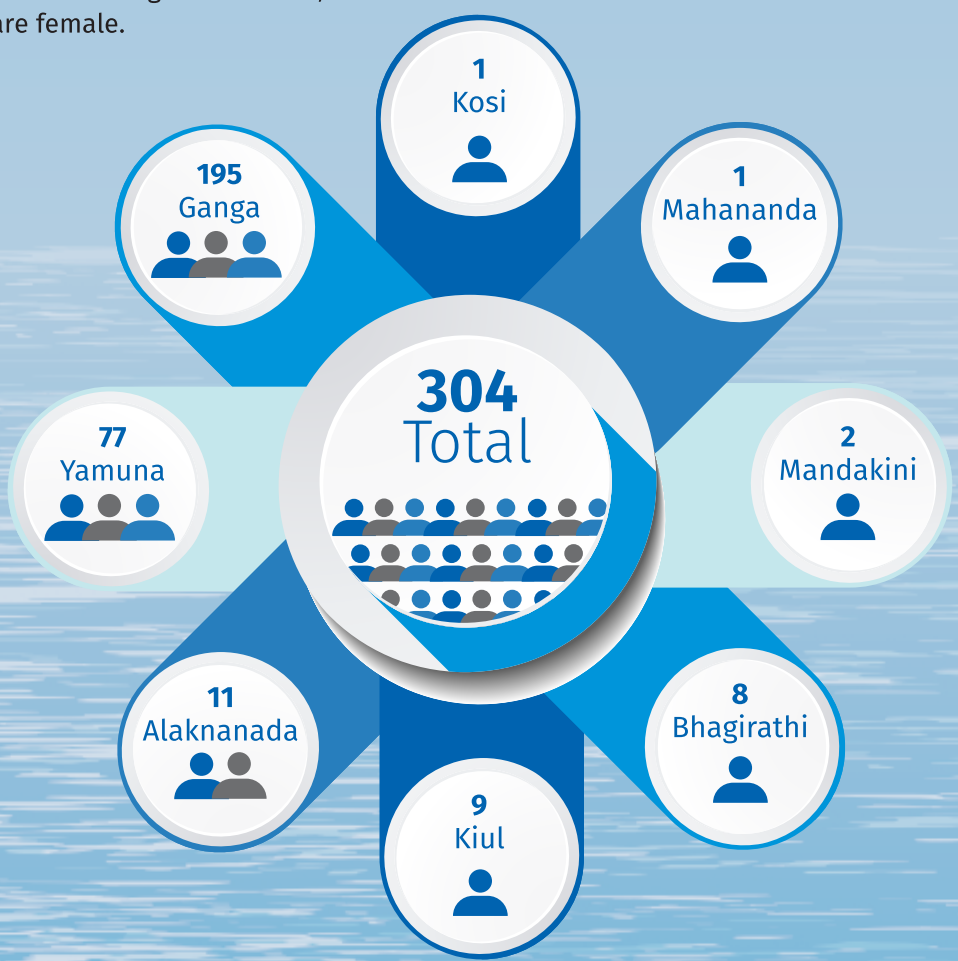
The *Ganga Prahari* cadre has increased to 3,984 individuals in the Ganga River Basin, of which 2,421 are female. Capacity development workshops were conducted for the *Ganga Praharis* from 19 significant tributaries, sub-tributaries, and newly identified *Ganga Praharis* from the Ganga mainstem. Subsequently, they were integrated with the previously trained cadre.

Ganga Praharis' presence in the Ganga River Basin





A total of 304 newly identified *Ganga Praharis* were inducted between January to June 2023 in the Ganga River Basin, of which 271 are female.



Ganga Prahari inducted between January and June 2023

COMMUNITY ENGAGEMENT IN GANGA RIVER AND BIODIVERSITY CONSERVATION

Communities as custodians

A total of 922 activities were conducted from January to June 2023, in which more than 34,000 individuals participated (Table 3.1).



Awareness Programme at West Champaran

Table 3.1. Activities conducted from January to June 2023

Type of Activities	No. of Activities	Participants
Awareness Programme	139	10,024
Cleanliness Drives	4	64
Consultative Meetings	325	8,360
Cultural Activities	2	48
Days Celebration	23	1,512
Ecological Monitoring	2	6
Focus Group Discussion	28	323
Key Stakeholder Interviews	7	11
LiFE Activities	119	7,579
Livelihood Activities	134	3,461
Livelihood Training	25	846
Orientation workshop/ Mobilisation	5	73
Participatory Mapping	6	523
Plantation Drive	9	141
Sensitisation Workshops	21	597
Site Visit	15	71
Socio-economic Survey	40	236
Training Workshops	4	96
Others	14	786
Total	**922**	**34,757**



Consultative meeting with boatmen at Begusarai



Educational activities at East Champaran



LiFE activity at Bhagalpur



Honorable Chief Minister, Uttar Pradesh, Shri Yogi Adityanath, visited the WII-NMCG stall at Gorakhpur

From January to June 2023, trained *Ganga Praharis* conducted 277 activities, of which 137 were input activities and 140 were output activities (Table 3.2). These activities include awareness and cleanliness drives, plantation, livelihood development, micro plan data collection, rescue and rehabilitation and others.

Table 3.2. Activities conducted by *Ganga Praharis* from January to June 2023

Type of Activities	Input		Output		Total	
	No. of Activities	No. of Participants	No. of Activities	No. of Participants	No. of Activities	No. of Participants
Awareness drive	83	3,862	71	4,537	154	8,399
Cleanliness drive	11	356	10	226	21	582
Ecological monitoring	14	39	8	42	22	81
Ecotoxicology sample collection	1	6			1	6
Ecological Survey	1	5	2	21	3	26
Livelihood activity	3	50	0	0	3	50
Others	13	224	23	1,505	36	1,729
Plantation Drive	1	26	5	51	6	77
Reporting of dead species	1	2	2	3	3	5
Rescue and Rehabilitation	4	30	10	54	14	84
Yoga Session	4	242	6	296	10	538
Republic Day celebration	1	264	3	542	4	806
Total	**137**	**5,106**	**140**	**7,277**	**277**	**12,383**



Quiz competition conducted at Sahibganj by *Ganga Praharis*



Awareness programme conducted by *Ganga Praharis* in Sahibganj



Exhibition and awareness programme by *Ganga Praharis* at Begusarai

LINKING CONSERVATION AND GREEN ECONOMY

A community-based approach

A total of 25 trainings were conducted to develop sustainable livelihood skills of local communities and *Ganga Praharis*, during which 846 individuals were trained (Table 3.3).



Candle-making training in Bihar

Table 3.3. Livelihood training conducted from January to June 2023

Type of Training	No. of training	No. of Participants
Bag making	1	14
Basket weaving	1	13
Jewellery making	1	31
Food Processing	1	29
Herbal Holi colour making	2	72
Incense stick, Dhoop, and Candle Making	3	101
Natural Farming	1	90
Nukkad Natak	1	43
Sewing and Stitching	14	453
Total	**25**	**846**



Food processing training at Sirmaur, Himachal Pradesh

UNDERSTANDING THE SOCIO-ECOLOGICAL SYSTEMS

Data pertaining to socio-economic factors and biodiversity was gathered from six villages to understand the socio-ecological systems in the Ganga River Basin. This data also facilitates the development of village-level Microplans. Following thorough data verification, the Microplans for two villages, namely Rajepur village in Jaunpur district, Uttar Pradesh, and Dinkarpur village in Ayodhya district, Uttar Pradesh were finalised. Concurrently, activities focusing on raising awareness and improving livelihoods are being implemented across all the Microplan villages.



Microplan mapping in Rajepur village, Jaunpur

For the extensive study, the socio-economic surveys were conducted in 66 villages covering fourteen districts of five states, namely Himachal Pradesh (no. of districts n=1), Uttarakhand (n=2), Uttar Pradesh (n=5), Haryana (n=1) and Bihar (n=5) in the Ganga River Basin. These districts include Sirmaur in Himachal Pradesh, Tehri and Uttarkashi in Uttarakhand, Sambhal, Shajahanpur, Kannauj, Farrukhabad, and Bulandshahr in Uttar Pradesh, Yamunanagar in Haryana, and East Champaran, West Champaran, Khagaria, Katihar, and Bhagalpur in Bihar. The overarching objective of these surveys was to evaluate the level of dependence exhibited by these villages on the Ganga River and its associated tributaries.



Socio-economic survey in West Champaran

Participatory mapping of ecosystem services by local communities was carried out in 40 villages from January to June 2023, including six villages of Dehradun, Uttarkashi, and Tehri Garhwal districts of Uttarakhand, 32 villages of Bijnor, Muzaffarnagar, Bulandshahr, Farrukhabad, Kannauj, Sambhal and Shahjahanpur districts of Uttar Pradesh and two villages of Yamunanagar district, Haryana states along the rivers Bhagirathi, Ganga, Yamuna, Ramganga, Kali, and Solani. The purpose of the study is to assess the perceived dependency on the ecosystem services provided by rivers (such as the biotic and a biotic resources, cultural and religious services, dependence of agriculture, livestock, and other village-level economic constituents upon the riverine resources) and 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.



Participatory mapping at Kannauj



Participatory mapping at Farrukhabad

BAL GANGA PRAHARI PROGRAMME

Educating for a better tomorrow

Skill Development Workshops

Three skill development workshops on handmade card making, bookmarks, mandala arts, and earthen pot painting were organised for Bal Ganga Praharis and teachers, in which 254 students and 25 teachers participated.

Exposure visits for Bal Ganga Praharis on the theme 'Appreciating Nature, Science & Wildlife'

A series of exposure visits for school children were undertaken from January to June 2023 on the theme 'Appreciating Nature, Science & Wildlife' at selected educational sites and the Wildlife Institute of India, Dehradun. The objective was to sensitise the students about the importance of wildlife, the value of science, nature and every living species present in the surrounding. More than 500 students and 95 teachers were sensitised during these exposure visits.

Sensitisation workshops

More than 30 sensitisation workshops and awareness programmes were organised for school children and teachers in the Ganga River Basin states. A total of 23 schools and seven colleges participated in the Bal Ganga Praharis programme, in which more than 3,000 school children and 115 teachers were sensitised.

In addition, awareness workshops were conducted in 20 schools situated along the Yamuna River in the Dehradun, Uttarkashi, Yamunanagar, Etawah, and Auraiya districts. A total of 975 students participated in the workshops. With the help of games and interactive activities like wildlife sudoku, questionnaires, puzzle, dart game, origami sessions, web of life, and save the planet, a message on the importance of the conservation of rivers and aquatic species was effectively conveyed.

INTERPRETATION CENTRES

Promoting river and biodiversity conservation

Established 16 additional small-scale interpretative corners, *Jalmala Samvaad* in the districts of Agra, Etawah, and Auraiya in Uttar Pradesh, Dehradun and Uttarkashi districts in Uttarakhand, and Yamunanagar district in Haryana along the Yamuna River.









Educational Tour

Various schools of Sarnath and Varanasi undertook educational tours to the "*Ganga Darpnan*" Interpretation Centre at Sarnath. A total of 125 students and 12 teachers were sensitised and made aware of the biodiversity of the Ganga River and threats to its aquatic ecosystem.

TRAINING AND WORKSHOPS

Training the Trainers

Conducted a teacher training session with the teachers of the District Institution of Education and Training, Sarnath, Uttar Pradesh. A total of 70 trainees participated enthusiastically in the training session with the team. Teacher trainees were equipped with the correct knowledge, attitudes, behaviours, and approaches to conserve biodiversity.

Teacher training was also conducted for the teachers at the selected schools along the Yamuna River. A total of 50 teachers were trained in the schools of Dehradun, Uttarkashi, Yamunanagar, Etawah, and Auraiya districts.

Capacity Building Workshops

A capacity building workshop for 32 tourist guides was conducted at *Ganga Darpan* Interpretation Centre, Sarnath. The workshop enhanced their skills as biodiversity guides and also enlightened them about the Mission LiFE campaign. Inspired, they passionately pledged to embrace an eco-friendly lifestyle, fostering a sustainable future.

A capacity building workshop with 20 e-rickshaw drivers was conducted at *Ganga Darpan* Interpretation Centre, Sarnath. The workshop made them aware of the importance of the Ganga River and its biodiversity and enlightened them about the impactful Mission LiFE campaign. They pledged to adopt a Lifestyle for the environment.

A puppet-making training workshop was conducted with 35 local vendors and Self-help groups at Ahilya Bai Ghat in Varanasi.

Village Walk

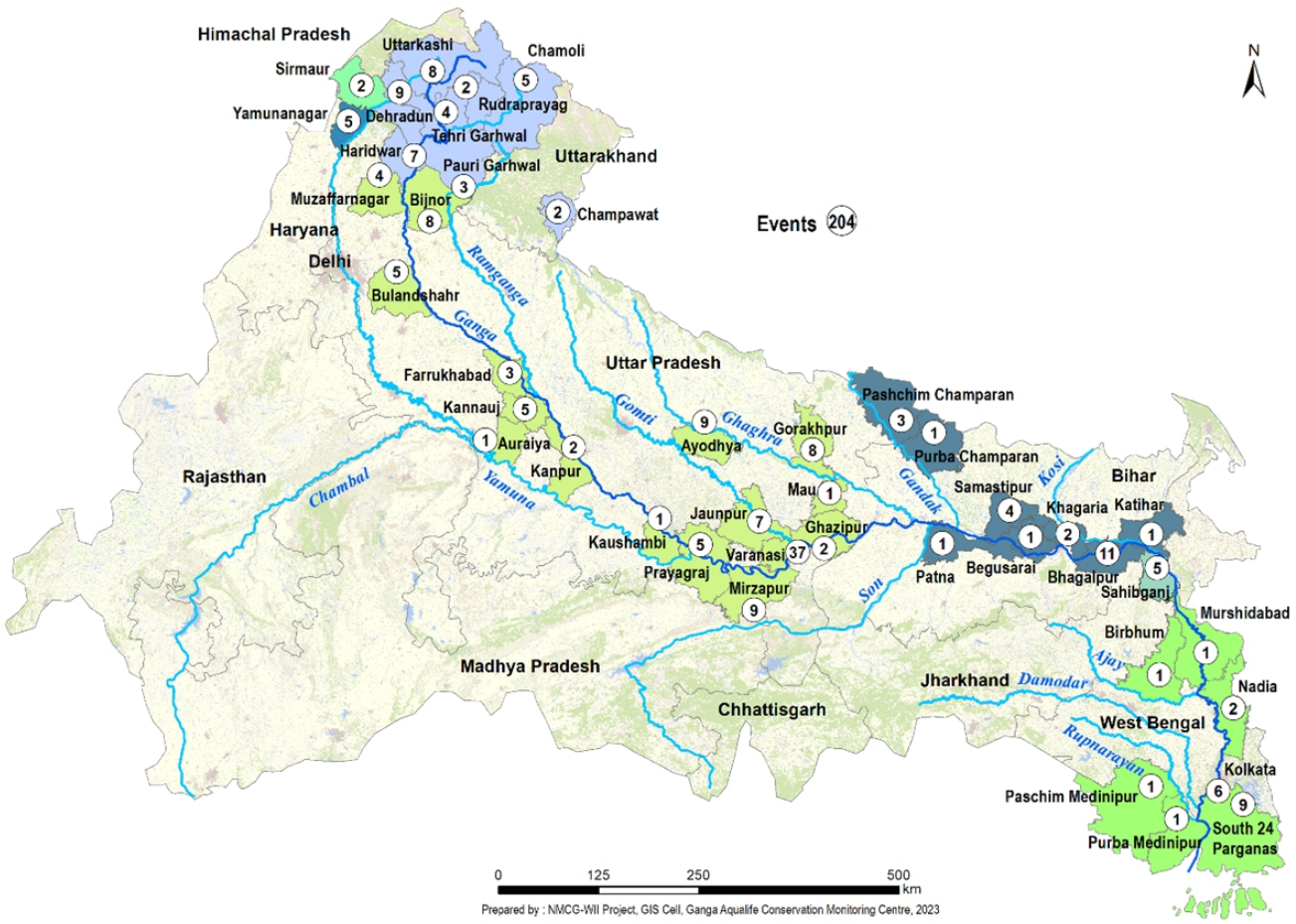
Established a village walk with biodiversity and informative signages at Sirror Village, Uttarkashi, Uttarakhand. Also conducted a workshop with 50 participants, including students and the local community, regarding the importance of the river and its biodiversity.



MISSION LIFESTYLE FOR ENVIRONMENT (LiFE) CAMPAIGN

A series of 204 LiFE events were conducted in 42 districts of the seven Ganga River Basin states, namely Himachal Pradesh, Uttarakhand, Uttar Pradesh, Haryana, Bihar, Jharkhand, and West Bengal, from April to June 2023, in which more than 23,000 people participated Infographic 3.1. During these events, a total of 265 activities were conducted under 15 categories, including awareness activity and oath (n=117), awareness activity (n=32), cleanliness drive (n=24), educational competition (n=19), awareness activities and educational competition (n=17), yoga (n=14), plantation (n=13), training workshop (n=10), earthen drinking water pot installation (n=5), river walk (n=5), cultural activity (n=3), eco-art (n=3), bird watching (n=1), exposure visit (n=1), and nukkad natak (n=1). Of these activities, 51.7% of were conducted in Uttar Pradesh (n=137),followed by 19.2% in Uttarakhand (n=51), 13.6% in Bihar (n=36), 9.4% in West Bengal (n=25), 2.6% in Haryana (n=7), 2.6% in Jharkhand (n=7), and 0.8% in Himachal Pradesh (n=2). These activities created awareness among the general public about the Mission LiFE Campaign, the importance of adopting sustainable practices, the significance of cleanliness and conserving rivers and wetlands, and the impact of pollution on the river and wetland ecosystems.

Districts covered for Mission LiFE events in the Ganga River Basin base



Infographic 3.1. People's participation in the Mission LiFE activities from the Ganga River Basin



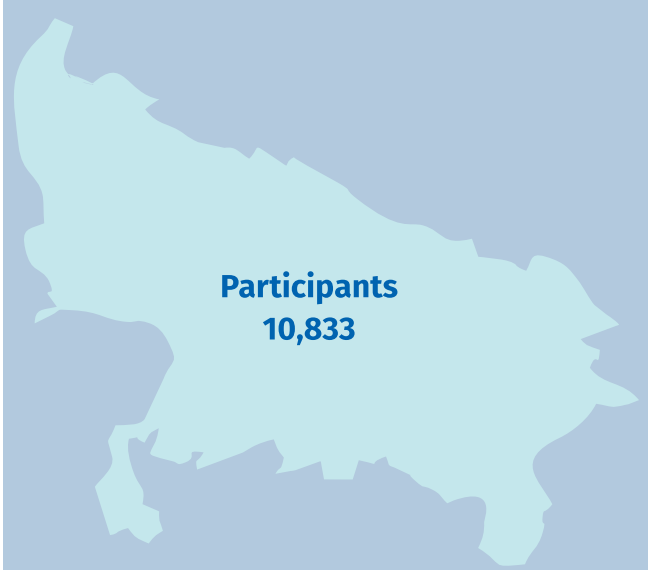
HIMACHAL PRADESH

Districts	Participants
Sirmaur	35



UTTARAKHAND

Districts	Participants
Chamoli	288
Champawat	55
Dehradun	2,335
Haridwar	2,588
Pauri Garhwal	453
Rudraprayag	130
Tehri Garhwal	1,288
Uttarkashi	1,123



UTTAR PRADESH

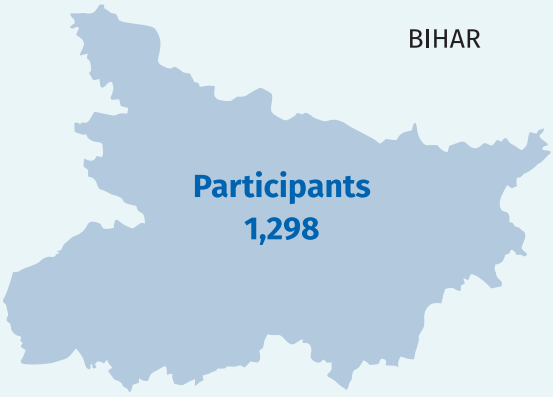
Districts	Participants
Auraiya	25
Ayodhya	965
Bijnor	2,369
Bulandshahr	349
Farrukhabad	220
Ghazipur	92
Gorakhpur	3,415
Jaunpur district	261
Kannauj	317
Kanpur	345
Kaushambi	52
Mau	30
Mirzapur	448
Muzaffarnagar	272
Prayagraj	310
Varanasi	1,363

HARYANA



Districts	Participants
Yamuna Nagar	465

BIHAR



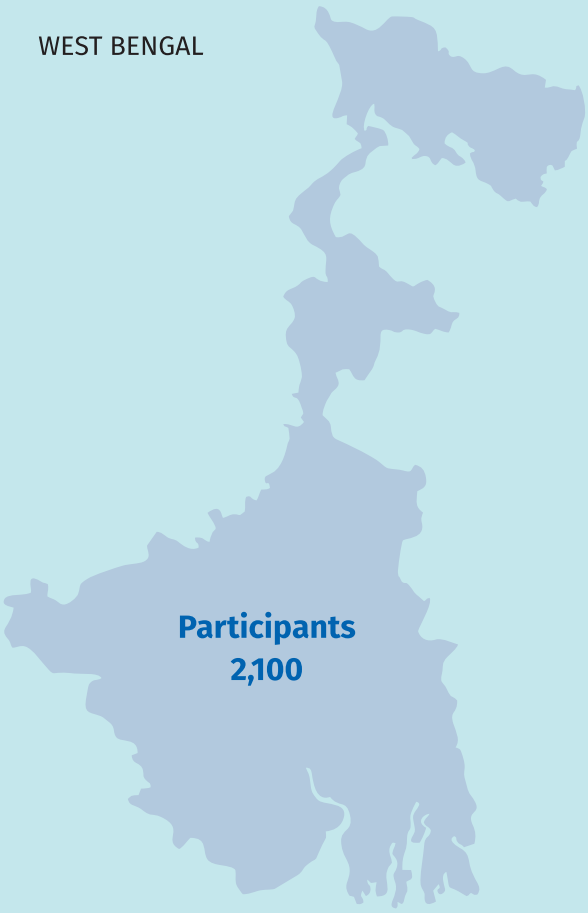
Districts	Participants
Begusarai	38
Bhagalpur	692
Katihar	20
Khagaria	100
Patna	46
Paschim Champaran	144
Purba Champaran	44
Samastipur	214

JHARKHAND



Districts	Participants
Sahibganj	307

WEST BENGAL



Districts	Participants
Birbhum	45
Kolkata	441
Murshidabad	81
Nadia	292
Paschim Medinipur	35
Purba Medinipur	160
South 24 Parganas	1,046

Total Participants : 23,298

DIGITAL MEDIA

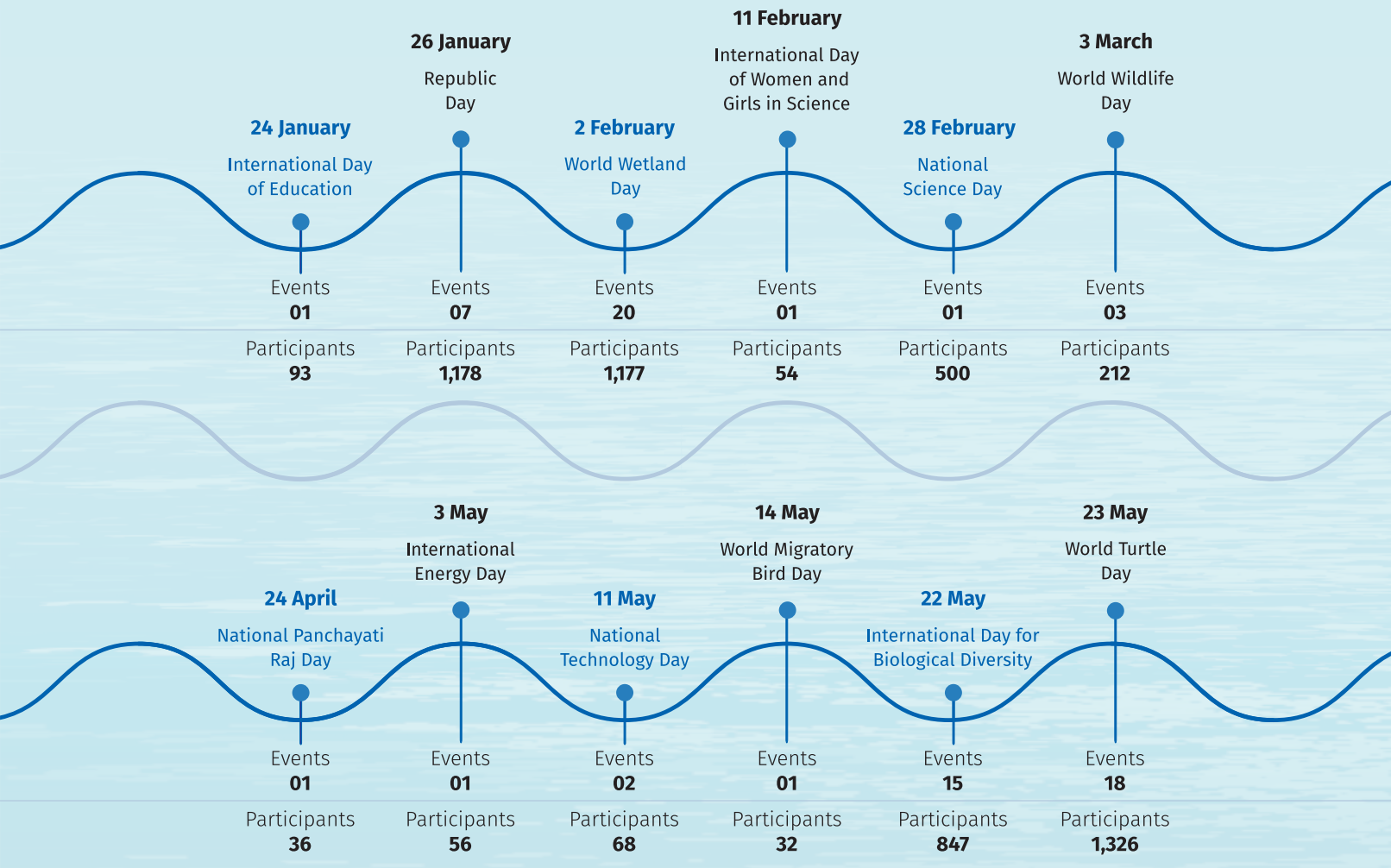
Prepared comic stripes for biodiversity and species awareness and conservation (Engagement and likes on the post: 80).

Developed social media posts for important days, which includes International Biological Diversity Day, Endangered Species Day, Earth Day, World Heritage Day, World Wildlife Day, World Sparrow Day, International Day of Forests, World Water Day (Engagement and likes on the posts: 176)

Started a *Ganga Darpan* blog on 20th March 2023, which is an environmental blog dedicated to biodiversity and conservation education (URL link: https://gangadarpan.wordpress.com/about/). Till June 2023, 28 blog posts were posted, which were visited by 1,031 visitors and had 1,850 views.

CELEBRATION OF SPECIAL DAYS AND EVENTS

Celebrated special days and events such as International Day of Action for Rivers, World Earth Day, International Day for Biological Diversity, World Turtle Day, World Wetland Day, World Wildlife Day, World Environment Day, World Crocodile Day, World Population Day, with school students by organising interactive activities like biodiversity quizzes, wildlife puzzles, quiz competition, river rally, storytelling





competition on 'Our Rivers', slogan writing competition, biodiversity outdoor exercises, poster making competition, drawing competition, plantation & cleanliness drive. A total of 34,462 participants participated in the celebration of important days through 425 activities.

8 March
International Women's Day
Events **01**
Participants **162**

14 March
International Day of Action for Rivers
Events **12**
Participants **376**

20 March
World Sparrow Day
Events **02**
Participants **15**

21 March
World Forestry Day
Events **03**
Participants **119**

22 March
World Water & Sanitation Day
Events **06**
Participants **477**

18 April
World Heritage Day
Events **03**
Participants **101**

22 April
World Earth Day
Events **10**
Participants **888**

25 May
World Otter Day
Events **07**
Participants **240**

5 June
World Environment Day
Events **26**
Participants **2,231**

17 June
World Crocodile Day
Events **01**
Participants **13**

21 June
International Yoga Day
Events **18**
Participants **963**

April - June
Mission LiFE
Events **265**
Participants **23,298**

Events
425

Participants
34,462

PUBLICATIONS

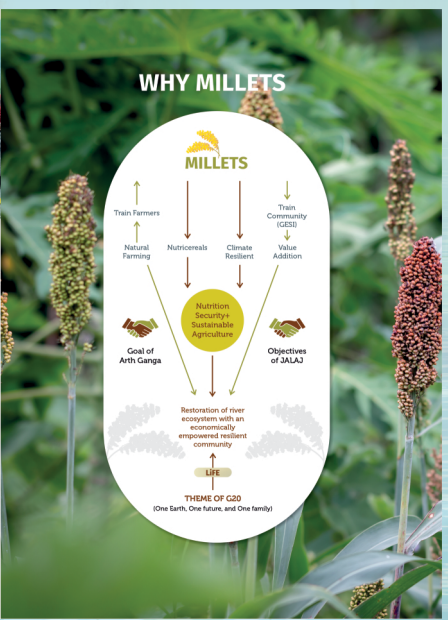
Millet Brochure



LiFE Report



Millet Brochure



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De, K., Singh, A. P., Sarkar, A., Singh, K., Siliwal, M., Uniyal, V. P., & Hussain, S. A. (2023). Local and species contribution to the beta diversity and rarity of riparian spider community of the Ganga River, India. *Community Ecology*, 1-11.

Gangaiamaran, P., Usmani, A. A., Vishnu, C. S., Badola, R., & Hussain, S. A. (2023). Westward range extension of Burmese Python *Python bivittatus* in and around the Ganga Basin, India: a response to changing climatic factors. *Journal of Threatened Taxa, 15*(4), 23061-23074.

Panda, A. K., Katdare, S., Gawan, S., Sharma, S. P., Badola, R., & Hussain, S. A. (2023). Population status and factors influencing the distribution of Critically Endangered gharial (*Gavialis gangeticus*) in a regulated unprotected river system in India. *Global Ecology and Conservation*, 46, e02547.

Khanduri, M., Sah, R., Ramachandran, A., Hussain, S. A., Badola, R., Candolin, U., & Hölker, F. (2023). Spatial-temporal expansion and determinants of light pollution in India's riparian habitats. *Environmental Impact Assessment Review*, 98, 106952.

IN NEWS



दैनिक भास्कर भागलपुर 22-03-2023

पेंटिंग प्रतियोगिता में 55 बच्चे हुए शामिल

भास्कर न्यूज | नवगछिया

पर्यावरण जागरूकता अभियान के तहत नवगछिया में पेंटिंग प्रतियोगिता हुई। इसमें 55 बच्चों ने भाग लिया।

भारतीय वन्य जीव संस्थान के गंगा प्रहरी राहुल कुमार राज ने बताया कि प्रतियोगिता का मुख्य उद्देश्य सभी प्रकार के वनों के महत्व के बारे में जागरूकता बढ़ाना है। पेड़ों के महत्व के बारे में लोगों को जागरूक कर वर्तमान और आने वाली पीढ़ियों के लाभ के साथ समुदायों के बीच मूल्यों के चक्र को संतुलित करने के लिए आयोजन किया गया। कार्यक्रम में जोनी कुमारी की अगुवाई में पेंटिंग प्रतियोगिता हुई। इसमें दीपक कुमार, राजकुमार चंदन कुमार, सिपकु कुमार, रंजन कुमार, मनीष कुमार सहित 55 प्रतिभागियों ने हिस्सा लिया।

दैनिक भास्कर भागलपुर 18-06-2023

विश्व मगरमच्छ दिवस • एक साथ देती है 20 से 80 अंडे, 3 माह अंडों की करती है देखभाल

चंबल नदी में सबसे ज्यादा मगरमच्छ इनकी औसत आयु होती है 70 साल

भास्कर न्यूज | नवगछिया

भारतीय वन्य जीव संस्थान के तत्वावधान में इस्माइलपुर प्रखंड में गंगा प्रहरी राहुल कुमार राज के नेतृत्व में विश्व मगरमच्छ दिवस मनाया गया।

राहुल कुमार राज ने बताया कि हिन्दू धर्मग्रंथों में देवी गंगा का वाहन मगरमच्छ है जो जलीय प्राणियों में सर्वाधिक शक्तिशाली और परम वेगवान माना गया है। मगरमच्छ एक प्रतीक है जो बताता है कि हमें जल में रहने वाले हर प्राणी की रक्षा करनी चाहिए। उसकी अनुपस्थिति में पारिस्थितिक तंत्र के लिए महत्वपूर्ण है। उसकी अनुपस्थिति में मगरमच्छ उभयचर, क्रस्टेशियन, मोलस्क, पक्षी, सरीसृप और स्तनधारियों को खाते हैं। मादा मगरमच्छ हर साल 20 से 80 अंडे देती है। 3 माह तक इन अंडों की देखभाल करती है। लेकिन इनमें से 99% मगरमच्छ बड़े होने के पहले ही मर जाते हैं या फिर किसी जानवर का शिकार हो जाते हैं। अंत में गंगा प्रहरी राहुल कुमार राज ने बताया कि अगर इंसान कभी मगरमच्छ की चपेट में आ जाते हैं तो मगरमच्छ के जबड़े की पकड़ से बचने के लिए उसकी आंखों को अपने अंगूठे से दबाएं यह आपको तुरंत छोड़ देगा। इस कार्यक्रम में सुबोध कुमार, दिलकुश कुमार, जोनी कुमारी, गौतम कुमार, दीपक कुमार सहित युवा मौजूद थे।

विश्व मगरमच्छ दिवस पर जानकारी लेतीं छात्राएं।

अंतरराष्ट्रीय योग दिवस की पूर्व संध्या पर योगाभ्यास

सन्मार्ग/नवगछिया। भारतीय वन्यजीव संस्थान देहरादून के तत्वावधान में इस्माइलपुर गंगा घाट पर गंगा प्रहरी राहुल कुमार राज के नेतृत्व में अंतरराष्ट्रीय योग दिवस की पूर्व संध्या पर विभिन्न जगहों पर योगाभ्यास कार्यक्रम आयोजित किया गया। इस बाबत राहुल कुमार राज ने बताया कि नियमित योग करने वाले व्यक्तियों के लिए योगाभ्यास एक बहुत ही अच्छा अभ्यास है। यह स्वस्थ जीवनशैली तथा बेहतर जीवन जीने में हमारी काफी सहायता करता है। वहीं उन्होंने कहा कि योग वह क्रिया है, जिसके अन्तर्गत शरीर के विभिन्न भागों को एक साथ लाकर शरीर, मस्तिष्क और आत्मा को संतुलित करने का कार्य करता है। यह तनाव कम करने में मदद करता है। तनाव का होना इन दिनों एक आम बात है, जिससे शरीर और मन पर विनाशकारी प्रभाव पड़ता है। तनाव के कारण लोगों को सोते समय दर्द, गर्दन का दर्द, पीठ दर्द, सिरदर्द, तेजी से दिल का धड़कना, हथेलियों में पसीने आना, असंतोष, क्रोध, अनिद्रा और ध्यान केंद्रित करने में असमर्थता जैसी गंभीर समस्याएं पैदा होती हैं। समय गुजरने के साथ इन प्रकार की समस्याओं का इलाज करने में योग वास्तव में प्रभावी है। यह एक व्यक्ति को ध्यान और साँस लेने के व्यायाम से तनाव कम करने में मदद करता है और एक व्यक्ति के मानसिक कल्याण में सुधार करता है। नियमित अभ्यास मानसिक स्पष्टता और शांति बनाता है। इससे मन को आराम मिलता है। मौके पर वार्ड सदस्य पंकज कुमार यादव, डुबेश रॉय, मिथिलेश कुमार मिट्ठू, छोटू कुमार, संदीप कुमार, दीपक कुमार और राज कुमार सहित दर्जनों युवा मौजूद थे।

समारोह पूर्वक मनाया गया विश्व मगरमच्छ दिवस मनाया गया

सन्मार्ग/नवगछिया। भारतीय वन्य जीव संस्थान के तत्वावधान में इस्माइलपुर प्रखंड में गंगा प्रहरी राहुल कुमार राज के नेतृत्व में विश्व मगरमच्छ दिवस समारोहपूर्वक मनाया गया। मौके पर राहुल राज ने बताया कि हिन्दू धर्मग्रंथों में देवी गंगा का वाहन मगरमच्छ है, जो जलीय प्राणियों में सर्वाधिक शक्तिशाली और परम वेगवान माना गया है। मगरमच्छ एक प्रतीक है, जो बताता है हमें जल में रहने वाले हर प्राणी की रक्षा करनी चाहिए। उसकी अनुपस्थिति में पारिस्थितिक तंत्र बिगड़ जाएगा। कार्यक्रम में सुबोध कुमार, दिलकुश कुमार, गौतम कुमार, जोनी कुमारी, दीपक कुमार और राजकुमार सहित दर्जनों युवा मौजूद थे।

इस्माइलपुर में योगाभ्यास कार्यक्रम आयोजित

नवगछिया : भारतीय वन्यजीव संस्थान देहरादून के तत्वाधान में इस्माईलपुर प्रखंड में गंगा प्रहरी राहुल कुमार राज के नेतृत्व में अंतरराष्ट्रीय योग दिवस की पूर्व संध्या पर इस्माईलपुर घाट सहित विभिन्न जगहों पर योगाभ्यास कार्यक्रम का आयोजन किया गया। कार्यक्रम में पंकज कुमार यादव, डुबेश राय, मिथिलेश कुमार मिट्टू आदि थे। (संसू)

दैनिक जीवन के बदलाव में प्रर्यावरण संरक्षण की भूमिका अहम गंगा प्रहरी दर्शन निषाद

वाराणसी नई सड़क बेनियाबाग पार्क में युवा खिलाड़ियों के साथ स्केटिंग

आज वाराणसी के नई सड़क स्थित बेनियाबाग पार्क में युवा खिलाड़ियों के साथ बालगंगा प्रहरी, एवं अभिभावकों के साथ पर्यावरण संरक्षण को स्वच्छ बोधी लगाने के लिए सार्वजनिक स्थान को स्वच्छ रखने के लिए जल संरक्षण एवं पर्यावरण संरक्षण के लिए अपने दैनिक जीवन में बदलाव लाने हेतु जागरूक किया गया अपाय भी दिलाया गया कि पर्यावरण को स्वच्छ रखोगे पर्यावरण के अनुकूल आदतों और व्यवहारों के महत्व के विषय में सतत रूप से एक दूसरे को प्रेरित करेगे आज के इस कार्यक्रम में मोहम्मद सईद काशी स्केटिंग क्लब, स्टेट मीडिया, के लोगो की भी उपस्थिति सरहानीय रहा मोहम्मद सईद ने कहा कि हम गंगा प्रहरी के कार्यो से काफी प्रेरित होते हैं पर्यावरण अच्छा लगता क्षेत्र में इनके साथ मिलकर कार्य करना अच्छा लगता है। हम सभी पेड़ लगाएं और इनका संरक्षण भी करें। गंगा प्रहरी दर्शन निषाद द्वारा सबको डॉल्फिन संरक्षण पर्यावरण संरक्षण गंगा स्वच्छता अपाय रवि केसरी ,गुफरान जावेद, मोहम्मद आरिफ ,अंकित केसरी ,ईशान चौरसिया, शीना ,मोहिनी गुप्ता, हेमंत रस्तोगी, ने बड़-चढ़ कमलेश कुमार गुप्ता, बसीम अहमद की रिपोर्ट हिस्सेदारी किया।

मगरमच्छ के जबड़े से बचने के लिए अंगूठे से दबाएं उसकी आंख को : राहुल

संसू, नवगछिया : भारतीय वन्य जीव संस्थान के तत्वाधान में इस्माईलपुर प्रखंड में गंगा प्रहरी राहुल कुमार राज के नेतृत्व में विश्व मगरमच्छ दिवस मनाया गया। राहुल कुमार राज के नेतृत्व में कि हिंदू धर्मग्रंथों में देवी गंगा का वाहन मगरमच्छ है, जो जलीय प्राणियों में सर्वाधिक शक्तिशाली और परम वेगवान माना गया है। मगरमच्छ एक प्रतीक है, जो बताता है हमें जल में रहने वाले हर जीव की रक्षा करनी चाहिए।

11:07 AM

लेख को चुनें

लुधियाना पुलिस ने साइबर क्राइम हेल्प डेस्क की की शुरूआत, पुलिस कमिश्नर लोगों को साइबर ठगों से बचने संबंधी की अपील

संत प्रमुख का गंगा सेवा 40 वर्ष पूर्ण होने पर गंगा प्रहरी वाराणसी किया स्वागत

एडलवाइस टोकियो लाइफ की जिंदगी एक्सप्रेस अंगदान के प्रति जागरूकता बढ़ाने के लिएपटना पहुंची

जीवन बीमाकर्ता अपनी अंगदान पहल के रूप में पूरे भारत में 5,500 किलोमीटर की यात्रा करेगा

दैनिक भास्कर भागलपुर 21-06-2023

योग दिवस की पूर्व संध्या पर इस्माइलपुर में निकाली रैली

भास्कर न्यूज | नवगछिया/बिहपुर

भारतीय वन्यजीव संस्थान देहरादून के तत्वाधान में इस्माइलपुर में गंगा प्रहरी राहुल कुमार राज के नेतृत्व में विश्व योग दिवस की पूर्व संध्या पर रैली निकाली गई। वहीं घाट सहित विभिन्न जगहों पर योगाभ्यास किया गया। राहुल कुमार राज ने बताया कि नियमित योग करने से स्वस्थ जीवन शैली तथा बेहतर जीवन जीने में सहायता मिलता है। योग वह क्रिया है, जिसके अन्तर्गत शरीर के विभिन्न भागों को एक साथ लाकर शरीर, मस्तिष्क और आत्मा को सन्तुलित करने का कार्य किया जाता है। योगाभ्यास से तनाव भी कम होता है। तनाव का होना इन दिनों एक आम बात है जिससे शरीर और मन पर प्रतिकूल प्रभाव पड़ता है।कार्यक्रम में पंकज कुमार यादव, डुबेश रॉय, मिथिलेश कुमार मिट्ठू, छोटू कुमार, संदीप कुमार, दीपक कुमार, राजकुमार आदि उपस्थित थे। वहीं क्रीड़ा भारती के तत्वाधान में बिहपुर के सोनवर्षा गल्र्स हाईस्कूल के मैदान पर [illegible]वार को योग प्रशिक्षण शिविर का आयोजन [illegible]। इसमें सभी आयुवर्ग के लोग हिस्सा लेंगे। [illegible] भारती के संयोजक निलेश कुमार ने बताया [illegible] शविर को लेकर तैयारी [illegible]

प्रभात खबर

सिटी बाइट्स

राहुल कुमार राज के नेतृत्व में विश्व मगरमच्छ दिवस मनाया गया

नवगछिया. भारतीय वन्य जीव संस्थान के तत्वावधान में इस्माइलपुर प्रखंड में गंगा प्रहरी राहुल कुमार राज के नेतृत्व में विश्व मगरमच्छ दिवस मनाया गया. राहुल कुमार राज ने बताया कि हिन्दू धर्मग्रंथों में देवी गंगा का वाहन मगरमच्छ है. जो जलीय प्राणियों में सर्वाधिक शक्तिशाली और परम वेगवान माना गया है. मगरमच्छ एक प्रतीक है, जो बताता है हमें जल में रहने वाले हर प्राणी की रक्षा करनी चाहिए, क्योंकि जल में रहने वाला हर प्राणी पारिस्थितिक तंत्र के लिए महत्वपूर्ण है और उसकी अनुपस्थिति में पारिस्थितिक तंत्र बिगड़ जायेगा. चंबल नदी में मगरमच्छ देश में सबसे ज्यादा पाये जाते हैं. मगरमच्छ की औसत आयु 70 साल होती है. मगरमच्छ ज्यादातर मछली, उभयचर, क्रस्टेशियन, मोलस्क, पक्षी, सरीसृप और स्तनधारियों को खाते है. मादा मगरमच्छ एक साथ 20 से 80 अंडे देती है और तीन माह तक इन अंडों की देखभाल करती है. इनमें से 99% मगरमच्छ बड़े होने के पहले ही मर जाते हैं या फिर किसी जानवर के शिकार हो जाते हैं. अंत में गंगा प्रहरी ने बताया कि अगर इंसान कभी मगरमच्छ की चपेट में आ जाते हैं, तो मगरमच्छ के जबड़े की पकड़ से बचने के लिए उसकी आंखों को अपने अंगूठे से दबाएं, वह आपको तुरंत छोड़ देगा. इस कार्यक्रम में सुबोध कुमार, दिलकुश कुमार, गौतम कुमार, जोनी कुमारी, दीपक कुमार, राज कुमार उपस्थित रहे.

भागलपुर बना प्रवासी पक्षियों का बसेरा, हर साल पहुंच रहे 174 प्रजाति के पक्षी

विश्व प्रवासी पक्षी दिवस

जरूरत पड़ने पर पक्षियों का हुए • सौजन्य : दे आर्टिस्ट

क्या कहते हैं पक्षियों के जानकार



NMCG

National Mission for Clean Ganga
Department of Water Resources, River Development & Ganga Rejuvenation, Ministry of Jal Shakti, Major Dhyan Chand Stadium, India Gate, New Delhi - 110001

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