



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**

**ANNUAL REPORT  
JANUARY 2020 TILL MARCH 2021**





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**

**ANNUAL REPORT  
JANUARY 2020 TILL MARCH 2021**

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

**Annual Report**

January 2020 till March 2021

**Project Investigators**

Ruchi Badola, Syed Ainul Hussain

© Ganga Aqualife Conservation Monitoring Centre, Wildlife Institute of India, Dehradun

This document is an output of the project Planning and Management for Aquatic Species Conservation and Maintenance of Ecosystem Services in the Ganga River Basin for a Clean Ganga sponsored by the National Mission for Clean Ganga, Ministry of Jal Shakti, Government of India, New Delhi.

**Editorial Support and Layout**

Shivani Barthwal, Anita Devi

**Text Compilation**

**Component 1:** Niladri Dasgupta, Anupam Srivastav, Zeeshan Ali, Goura Chandra Das, Richika Sah, Aftab Usmani, Ajit Kumar, Neeraj Mahar, Ravindra Nath Tripathi

**Component 2:** Sangeeta Angom, Aakash Mohan Rawat

**Component 3:** Pariva Dobriyal, Hemlata Khanduri, Sandhya Joshi, Deepika Dogra, Ekta Sharma, Malvika Pandey, Mohit Kashyap, Nidhi Singh

**Maps**

Zeeshan Ali, Aishwarya R. Chandran, Srijani Guha, Ashish Mani, Shatakshi Sharma

**Design**

Maheshanand Pandey

**Photo Credit**

NMCG Team

**Citation**

WII-GACMC (2020). Planning and Management for Aquatic Species Conservation and Maintenance of Ecosystem Services in the Ganga River Basin for a Clean Ganga. Annual Report January 2020 till March 2021. Ganga Aqualife Conservation Monitoring Centre, Wildlife Institute of India, Dehradun, India. Pp. 23

**Wildlife Institute of India**

Chandrabani, Dehradun - 248002, Uttarakhand, India





## ACKNOWLEDGEMENTS

### **Ministry of Jal Shakti (MOJS)**

Pankaj Kumar, Secretary

### **National Mission for Clean Ganga (NMCG)**

G. Asok Kumar, Director General

S. R. Meena, Deputy Director General

S. P. Vashishth, Executive Director (Admin)

Bhaskar Dasgupta, Executive Director (Finance)

Himanshu Badoni, Executive Director (Projects)

D. P. Mathuria, Executive Director (Technical)

Brijesh Sikka, Senior Consultant

Sandeep Behera, Biodiversity Consultant

Sunil Kumar, Assistant Engineer

### **Ministry of Environment, Forest & Climate Change (MoEFCC)**

**Uttarakhand Forest Department**

**Uttar Pradesh Forest Department**

**Bihar Forest Department**

**Jharkhand Forest Department**

**West Bengal Forest Department**

**Haryana Forest Department**

**Madhya Pradesh Forest Department**

**Rajasthan Forest Department**

**Nuclear Power Corporation of India Limited (NPCIL)**

**Narora Atomic Power Station (NAPS)**

**Ganga Task Force (GTF)**

**Nehru Yuva Kendra Sangathan (NYKS)**

**National Rural Livelihood Mission (NRLM)**

**State Rural Livelihood Mission (SRLM)**

### **Wildlife Institute of India (WII)**

Dhananjai Mohan, Director

G. S. Rawat, Former Director

Y. V. Jhala, Dean



# *contents*

## **01 BACKGROUND**

## **COMPONENT 1: SCIENCE-BASED AQUATIC SPECIES CONSERVATION AND MAINTENANCE OF ECOSYSTEM SERVICES IN THE GANGA RIVER BASIN**

---

- 05** Change Detection
- 05** Ecological Assessment
- 07** Active Adaptive Management Planning
- 08** Rescue, Rehabilitation, Release, and Research
- 09** Project Appraisal



## **COMPONENT 2: CAPACITY BUILDING OF THE FOREST DEPARTMENT AND OTHER STAKEHOLDERS IN MANAGING AQUATIC AND WETLAND RESOURCES**

- 10** Catch them Young - The Bal Ganga Prahari Programme
- 10** Spearhead Team

## **COMPONENT 3: DEVELOP COMMUNITY BASED AQUATIC SPECIES CONSERVATION AND OUTREACH PROGRAMMES FOR THE GANGA RIVER BASIN**

- 13** Stakeholder Identification
- 13** Vocal for Local - Ganga Prahari
- 14** Community Engagement in Ganga River and Biodiversity Conservation
- 15** Linking Conservation and Green Economy
- 17** Addressing COVID-19 Pandemic
- 17** Interpretation Centres
- 19** Meetings, Awards and Recognition
- 21** Publications and Outreach
- 22** In News
- 23** Accounts



# Background

The Ganga River Basin covers India's 26.3% landmass, which is spread across 11 states, viz. Himachal Pradesh, Uttarakhand, Uttar Pradesh, Delhi, Haryana, Rajasthan, Bihar, Jharkhand, Chhattisgarh, Madhya Pradesh, and West Bengal. In terms of temperature, geomorphology, soil, biogeography, culture, and socioeconomic structure, the basin exhibits a significant degree of heterogeneity. The Ganga River's drainage basin is an intricate network of rivers and streams of Himalayan and Peninsular origin that contribute to 60% of its water flow. Alaknanda, Ramganga, Gomti, Ghaghra, Gandak, and Kosi are among the major tributaries that enter Ganga's north-bank and have their origins in the Himalayas. While the Yamuna River, which has its source in the Himalayas, and the Son River, which has its source in Peninsular India, are the main south-bank tributaries. The Ghaghra River contributes 20% to Ganga's water, while the Yamuna River contributes 16%. Ghaghra-Gomti, Kosi-Mahananda, Gandak, Yamuna, Son, Chambal, and Ramganga drains water into the Ganga in decreasing order. The Ganga River splits in Farakka, West Bengal, into the Padma River, which flows towards Bangladesh, and the Hooghly River, which runs through West Bengal and joins the Bay of Bengal, forming the world's biggest delta, the Sundarbans. The Peninsular rivers, namely Ajay, Rupnarayan, and Kangsabati (Kansai) revitalise the drainage of the Hooghly River. Along with improving the flow of the Ganga, these tributaries provide vital breeding grounds and refuge for aquatic keystone species. For example, the Nayar River provides a breeding grounds for the Golden mahseer (*Tor putitora*), while the Chambal and Ramganga rivers are breeding grounds for the gharial (*Gavialis gangeticus*). Whereas, Yamuna, Kosi, and Gandak rivers have breeding populations of Gangetic dolphin (*Platanista gangetica*). However, tributaries such as the Yamuna also discharge significant pollutants into the Ganga River, which has a cumulative effect on interrupting the nitrogen cycle and the ecosystem's assimilative capacity. Reduced flow and riparian vegetation cover, increased siltation, wastewater inflow from rural and urban areas, and unsustainable resource extraction have resulted from land use and land cover changes surrounding these streams. These anthropogenic influences have modified the hydrological regime and biodiversity of these tributaries, disrupting the Basin integrity. Considering the unique cultural, social, economic, and ecological value of the River, the Government of India (GOI) has been working towards its conservation through the Prime Minister's flagship programme – *Namami Gange* to achieve “*Aviral and Nirmal Dhara*”, and to ensure its ecological and geological integrity.

Conservation of both the Ganga River and its aquatic biodiversity thus has been one of the most important attributes of the *Namami Gange* programme. Given this, the National Mission for Clean Ganga (NMG) designated the Wildlife Institute of India (WII), an autonomous institute of the Ministry of Environment, Forest and Climate Change, Government of India as



the lead knowledge partner of NMCG and entrusted WII with the “Biodiversity Conservation and Ganga Rejuvenation” project to prepare a science-based aquatic species conservation plan for the Ganga River. WII as a lead knowledge partner and conservation planning body of NMCG created the Ganga Aqualife Conservation Monitoring Centre (GACMC) to spearhead the conservation of the Ganga River and its biodiversity.

GACMC has a repository of information on biodiversity and issues of the Ganga River. It continuously provides information on third-party queries to NMCG and Forest Departments of Ganga states. The spearhead teams comprising of the officials of the Forest Department of the Ganga basin states are carrying out training and ecological survey activities on their own such as Gangetic dolphin survey in Bihar, migratory bird survey at Sahibganj, Jharkhand, and training on ecological monitoring of rivers and wetlands in West Bengal. Stakeholders comprising personnel of the Forest and Veterinary departments, university professors, school teachers and students, religious groups, and local communities have been trained and sensitised. The rescue and rehabilitation centers established under the project enabled the Forest Department to scientifically tackle large consignments of confiscated aquatic animals, especially turtles of the Ganga River. The rescue team has successfully rehabilitated gharial, mugger, and more than 6,000 turtles back into the Ganga River, translocated muggers, and assisted in species restoration in the River. The trained cadre of forest staff, veterinarians, and a network of local communities and Ganga Praharis have improved the information network for poaching/entrapment/trade of the threatened aquatic species of the Ganga River. Livelihood and skill enhancement activities for local communities are aligning Ganga conservation with the green economy through livelihood centers, including the innovative mobile livelihood center “Jalaj”. Trained volunteers, “Ganga Prahari”, from riverside- communities are adopting sustainable livelihood practices and promoting sustainable use of natural resources, conducting cleanliness drives, plantation drives, biodiversity monitoring, and rescue operations, and actively participating in all NMCG activities. The specific skill set and the workforce of these Ganga Praharis are being recognised at the state as well as the national level inspiring more youth to join the cadre. Nature interpretation centers, "Ganga Darpan" and "Ganga Avlokan", are playing a major role in public outreach. The social media pages such as Facebook and Instagram, are followed by more than 3,000 people across the globe from all walks of life. The impact of the project is visible through the enhanced synergies between departments, agencies, and communities at local, national, and global scales, all committed to a cleaner Ganga River. Initial efforts made through the implementation of Phase I of the NMCG-WII Ganga biodiversity conservation initiative, the “Biodiversity Conservation and Ganga Rejuvenation” project, emphasised the urgent need for accounting basin scale natural and anthropogenic processes, and upscaling the present work to basin level to ensure sustainable and effective Ganga conservation actions.

In view of this, the second phase of the project “Planning and Management for Aquatic Species Conservation and Maintenance of Ecosystem Services in the Ganga River Basin for a Clean Ganga” aims to intensify conservation efforts in identified sites along the mainstem Ganga River and up-scale the conservation effort at basin level to ensure sustainability of the river conservation efforts. The project is being carried out in the major tributaries and the wetlands in the basin. Thus, Ramganga, Gomti, Ghaghara, Gandak, Kosi rivers, the north bank tributaries and Yamuna and Son, the south bank tributaries have been selected. Along with these tributaries the Chambal River is also being studied, since it homes a significant population of the critically endangered gharial, Endangered Gangetic dolphin and several species of birds, thereby contributing to the aquatic diversity of the Ganga basin. The Phase II of the project has initiated a systematic conservation planning of the Ganga River at the basin scale, incorporating cross-disciplinary coordination of water, land and related sectors through a structured framework.

The Phase II of the project was initiated on 1<sup>st</sup> January, 2020. The scientific baseline, stakeholder involvement and community support in the ground level, achieved during the Phase I gave a strong foundation for initiation of the Phase II. The project gained from strength to strength and attained some major accomplishments. The project progress during January to December 2020 is as follows.

# PHASE II

## Planning and Management for Aquatic Species Conservation and Maintenance of Ecosystem Services in the Ganga River Basin for a Clean Ganga.

### OBJECTIVES

01 Strengthen the aquatic biodiversity conservation measures at six identified biodiversity hotspots along the Ganga River and monitor status of other areas.

02 Explore the natural and assisted colonisation of species of conservation significance to other stretches of mainstem Ganga River.

03 Determine the current state of aquatic environment and biodiversity of the major tributaries and wetlands in Ganga basin.

04 Identify direct and indirect drivers affecting the integrity of the aquatic environment and biodiversity in the Ganga basin.

05 Pinpoint problematic areas and identify conservation priority zones.

06 Strengthen/establish rescue and rehabilitation centres at strategic locations for aquatic species in distress.

07 Involve communities and other stakeholders in the conservation process through capacity building, innovation and strengthening existing institutions.

08 Garner support for aquatic biodiversity and Ganga conservation through education and outreach programs.

09 Identify and analyse the hydro-socio-ecological relations in the river basin for efficient and targeted conservation action.

10 Prepare an action plan to minimise the negative impacts of the direct and indirect drivers on the aquatic environment and biodiversity of the select tributaries of the Ganga basin.

11 Develop a centralised facility of laboratories and resource centre for aiding in science based management of the Ganga River and its tributaries.

# AIM

To intensify the conservation efforts in identified sites along the mainstem Ganga River and up-scale the conservation effort to basin level for aquatic biodiversity conservation and maintenance of ecosystem services for a clean Ganga.

This report provides component wise information on the work done during January - December 2020.

## COMPONENT

01

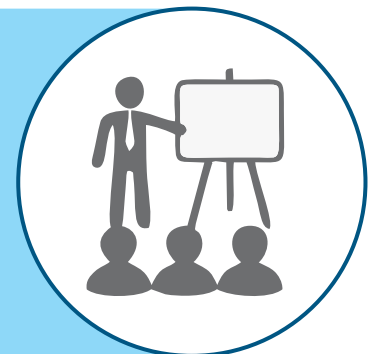
SCIENCE-BASED AQUATIC SPECIES CONSERVATION AND MAINTENANCE OF ECOSYSTEM SERVICES IN THE GANGA RIVER BASIN



## COMPONENT

02

CAPACITY BUILDING OF THE FOREST DEPARTMENT AND OTHER STAKEHOLDERS IN MANAGING AQUATIC AND WETLAND RESOURCES



## COMPONENT

03

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



# COMPONENT

# 1

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

Habitat modification, fragmentation, invasive species, overexploitation, pollution and climate change are some of the looming threats to freshwater diversity. In addition, persistent xenobiotics, nano-particles and micro-plastics pose a toxicological risk to the freshwater ecosystem. This component aims to document the aquatic diversity of the Ganga River basin and the threats to them, for science-based aquatic species conservation planning. Such documentation would aid in the decision-making process and can facilitate the prediction of future impacts under various scenarios. In addition, the loss of individuals as a result of accidental trapping in fishnets, injury by crafts, and poaching also contribute to the decline in the population of the priority species, viz. Gangetic dolphin, otters, gharial and mugger. To address such emergent situations and to abate the loss of individuals, rescue and rehabilitation centres are being strengthened/upgraded at strategic locations along the Ganga River, through this component. Such efforts would aid in effective rescue and subsequent rehabilitation of the rescued individuals.

### CHANGE DETECTION

To determine the distribution of the major aquatic species in the Ganga River basin, secondary data from literature review of earlier studies were obtained and compared with the primary data gathered during the ecological assessment of the Ganga River and its select tributaries. The findings indicate that the populations of umbrella species such as the Gangetic dolphin, otters, gharials, and muggers have become extensively fragmented as a result of loss of longitudinal and lateral connection and habitat degradation.

### ECOLOGICAL ASSESSMENT

#### A systematic approach to river and biodiversity conservation planning

The first ever continuous and simultaneous ecological survey of major tributaries of the Ganga River, viz., Yamuna, Ramganga, Gomti, Ghaghra, Gandak, Kosi, Son and Chambal rivers was carried out during January - February 2020. Six teams including 15 WII researchers and 11 Ganga Praharis conducted the surveys within a span of 30 days, covering 3300 km. Post monsoon ecological surveys for 10 tributaries viz. Ramganga, Gomti, Ghaghra, Gandak, Kosi, Yamuna, Chambal, Son, Ajay and Rupnarayan is being carried out from November onwards, where five teams comprising of 15 Researchers and 17 Ganga Praharis will be covering 5,152 km of the rivers.

## Preliminary Estimates

Initial findings suggest that in the Ramganga River, 32% from Sahabad to Dataganj (130 km) has good biodiversity. Whereas, Kalagarh and Harewali barrages reduced flow of the river, 45% shallow stretch from Harewali to Dhakuriya (180 km). In the Gomti River, 9% from Sitapur to Lucknow (90 km) has good water regime and biodiversity. 17% of the river from Madhav Tanda to Sitapur (170 km) has intermittent dry zone and shallow pool, high agricultural, pollution, and poor biodiversity. The Gandak River show high biodiversity in 64% stretch from Luvkush Ghat to Dhekhwah (205 km) with good sightings of Gangetic dolphin and gharial. 35% of the river from Dhekhwah to Hajipur (115 km) has high fishing, agriculture, sand mining. The Yamuna River show good biodiversity (Sennagar to Aseba, Bhareh to Prayagraj) in 72% in two stretches (905 km). There are six barrages reduce flow and there is '0' flow between Hathnikund and Tajewala (5 km). 26% of the river in two stretches (330 km) has high pollution, sand mining and poor biodiversity (Mandewala to Wazirabad, Delhi to Sennagar). The Chambal River is a model river in terms of biodiversity. It has high biodiversity throughout, in terms of Gangetic dolphin, gharial, mugger, turtle and waterbirds, despite 4 multipurpose dams reducing the flow. 43% of the river from Kuno confluence to Pinahat (190 km) has high fishing and sand mining coinciding with high biodiversity area. The Ajay and Rupnarayan rivers have good waterbird diversity and act as refuge for Gangetic dolphin. Fishing and sand mining are predominant in the rivers.



The Ganga basin

## Important insights from the ecological assessment



Gangetic dolphin (*Platanista gangetica*) in Chambal River



Swamp deer (*Rucervus duvaucelii*) and waterbirds in Ramganga River



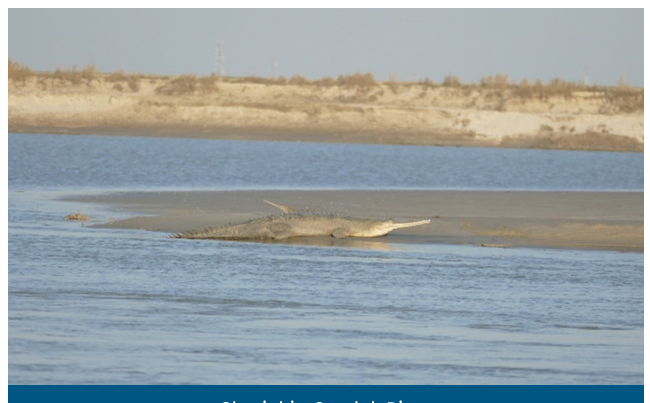
Greater adjutant stork (*Leptoptilos dubius*) in Yamuna River



Sarus crane (*Antigone antigone*) in Gomti River



Gharial (*Gavialis gangeticus*) in Chambal River

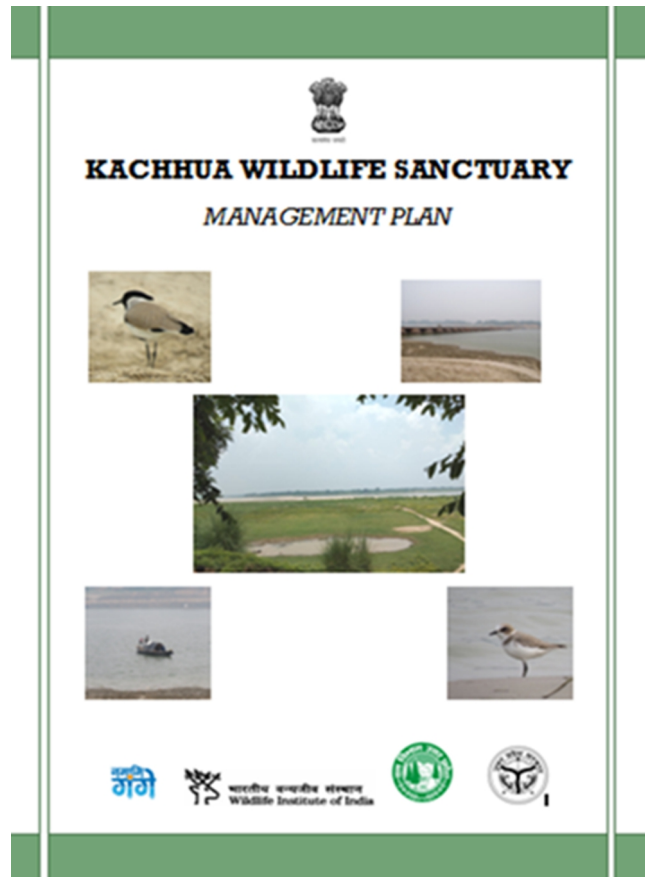


Gharial in Gandak River

## ACTIVE ADAPTIVE MANAGEMENT PLANNING

### Priority areas to strengthen the conservation measures

Carried out Management Planning for Kachhua Wildlife Sanctuary, Prayagraj and Haiderpur wetland, Bijnor, Uttar Pradesh. The management plans were prepared after ecological assessment, stakeholder meetings, focal group discussions, need-based livelihood training assessment.



Draft Management plans for Haiderpur wetland and Kachhua Wildlife Sanctuary

## RESCUE, REHABILITATION, RELEASE, AND RESEARCH

### Four R's to strengthen conservation measures

- Technical support was provided to Bihar Forest Department for establishment of rescue and rehabilitation facility at Bhagalpur. The Spearhead Team of Uttar Pradesh Forest Department, along with Ganga Praharis rescued more than 600 turtles at Varanasi. These rescued turtles were taken to the Ganga Aqualife Rescue and Rehabilitation Centre, Sarnath and were successfully rehabilitated in the identified stretch within the High Biodiversity Zone III identified by WII along the Ganga River.
- 712 hatchlings of *Batagur dhongoka* were hatched at the centre in June 2020. 706 turtles were released in Ganga River near Sarnath on 15<sup>th</sup> April, 2020 with the help of Uttar Pradesh Forest Department.
- An online course 'Basics of Rescue and Rehabilitation of Freshwater Macro-fauna in Ganga Basin with special reference to Chelonians and Crocodylians' was conducted between 5<sup>th</sup> June and 4<sup>th</sup> July 2020. A total of 1,774 participants from five countries (India, Nepal, Canada, United States and United Kingdom) and 29 Indian states participated in this course. More than 50% of the participants (939) achieved 50% marks in the assessment conducted at the end of the course.
- Carried out winter management of the animals at Kachhua Punarvaas Kendra, Sarnath, Varanasi. The team also carried out assessment of maintenance needs of enclosures of the centre.



## PROJECT APPRAISAL

### Monitoring project implementation

- First Roundtable Meeting on Initiation of a blueprint for measuring Gross Environment Product (GEP) held at WII on 5<sup>th</sup> March 2020, in the gracious presence of Prof. K. Vijay Raghavan, Principal Scientific Adviser, Government of India, and *Padma Bhushan* Dr. Anil P. Joshi. Indicators were defined and a road map prepared for GEP assessment.
- The fourth meeting of the Monitoring Committee was held under the Chairmanship of former Director General NMCG, Shri Rajiv Ranjan Mishra, on 15<sup>th</sup> September 2020, via video conferencing. The meeting was chaired by former Director General, NMCG, Shri Rajiv Ranjan Mishra, and under the leadership of Director, Wildlife Institute of India, Dr Dhanajai Mohan. The Committee members Padam Bhushan Dr Anil Prakash Joshi, Dr B K Das, Director, CIFRI, Prof. R. J. Rao, Vice Chancellor, Barkatullah Vishwavidyalaya, Prof. Jamal Ahmad Khan, Aligarh Muslim University, Prof. Rajiv Sinha, IIT Kanpur, Dr Arun Kumar, Dolphin Institute appreciated the efforts put in by the NMCG-WII team to carry the project activities amidst the COVID-19 pandemic and congratulated the team.
- Participated in the Fourth expert group meeting on Biodiversity and Wetland Conservation in reference to the Arth Ganga on 23rd December, 2020 with senior officials of MoEFCC, Director- Rivers Wetlands and Water Policy-WWF, Central Inland Fisheries Research Institute (ICAR-CIFRI), Advisor (Fisheries), and sector experts from Indian Institute of Management (IIM) and Indian Institute of Technology (IIT) under the Chairmanship of Director General, NMCG. Prepared and presented activities and intervention taken for promoting Biodiversity and Wetland Conservation in Ganga basin with reference to the Arth Ganga concept, during the Phase I and II of the project. The draft minutes of the meeting were also prepared.



Participants of the First Roundtable Meeting on Initiation of a blueprint for measuring Gross Environment Product (GEP), March 2020

### Collaborative efforts

- A scientific assessment of terrestrial flora and fauna was conducted in 25 districts of Uttar Pradesh along the Ganga River by 11 Ganga Praharis, in a collaborative effort by WII and Global Tiger Forum (GTF).

# COMPONENT

# 2

## CAPACITY BUILDING OF FOREST DEPARTMENT PERSONNEL AND OTHER STAKEHOLDER

Successful implementation of the conservation action plan will depend on the capacity of the stakeholders trained in monitoring of aquatic biodiversity, management planning of wetland, rescue and rehabilitation protocols. Further, to detect any changes in habitat features and species assemblage in future, the capacity of different stakeholders including forest departments, animal husbandry departments, veterinarians and volunteers from concerned areas will be extremely critical. With this background, this component aims to developing capacities of stakeholders for effective conservation of the Ganga.

### CATCH THEM YOUNG — THE BAL GANGA PRAHARI PROGRAMME

#### Linking Bal Ganga Prahari with conservation

- The Bal Ganga Prahari programme has been initiated in the Ganga Basin. About 115 schools from Uttarakhand, Uttar Pradesh and New Delhi have enrolled in the Bal Ganga Prahari Programme. A total 12,000 students and 141 teachers were sensitised about the Ganga and its biodiversity through various awareness activities and programmes.
- As part of the "Bal Ganga Prahari Winter Vacation Programme" a skill and development programme was organised from 28<sup>th</sup> to 30<sup>th</sup> December, 2020 at Wildlife Institute of India, Dehradun. The students created wonderful pieces on the biodiversity theme, using quilling technique. A total of 23 students from different schools of Dehradun participated in the event.

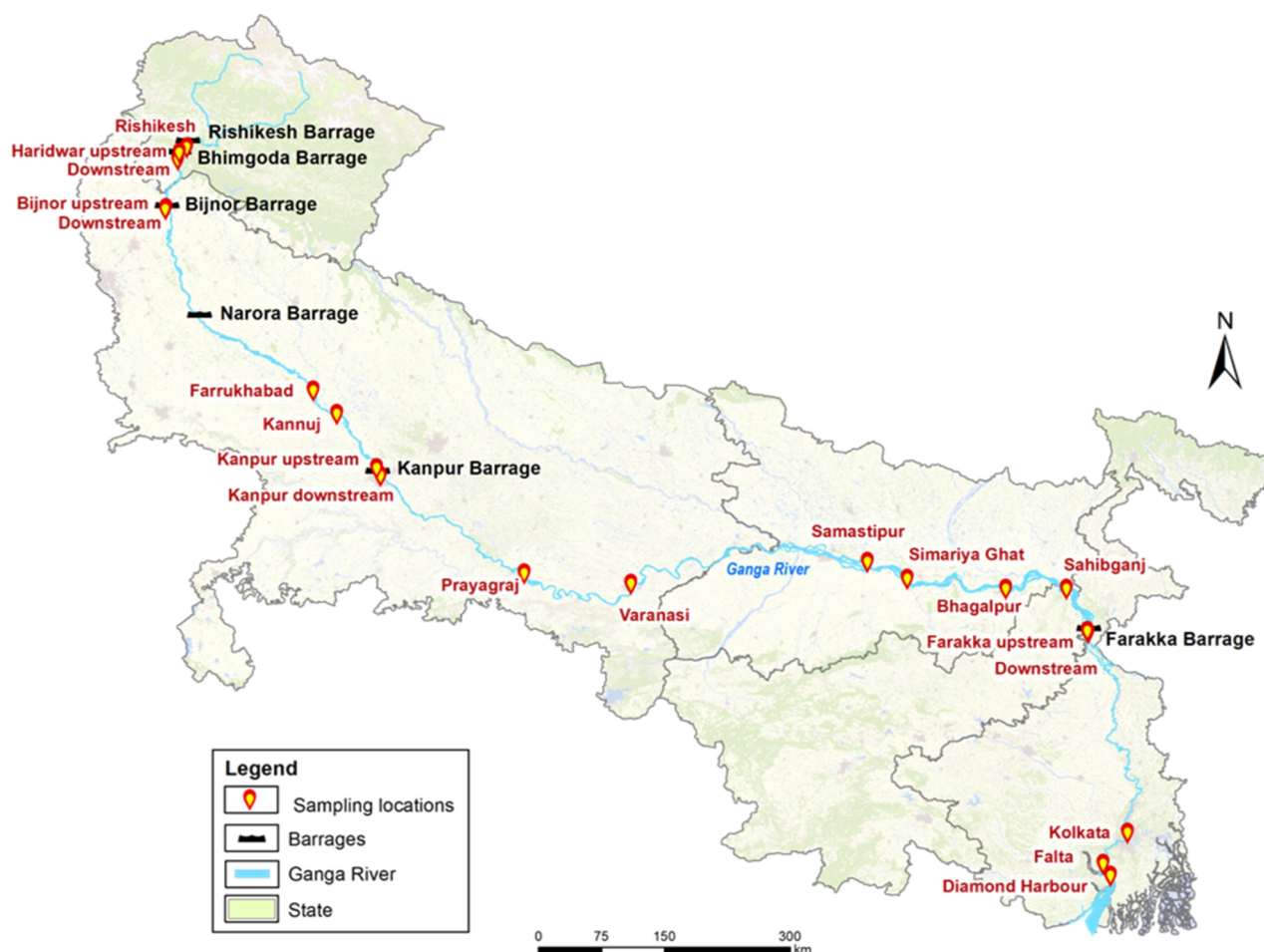
### SPEARHEAD TEAM

#### To promote and expedite the conservation efforts

- 50 Ganga Praharis from Uttarakhand, Uttar Pradesh, Bihar, Jharkhand and West Bengal were selected as the first spearhead team of the local communities. These selected Ganga Praharis underwent training at the Wildlife Institute of India, Dehradun from 3-10 February 2020. These trained members of the Ganga Prahari spearhead teams are leading the biodiversity conservation activities along the mainstream Ganga and its selected tributaries.

## Trainings and Workshops

- Fourteen online training workshops on advanced monitoring techniques, ecological survey, biodiversity conservation, management planning of wetlands, rescue and rehabilitation protocols, community engagement, and conservation education were organised. These workshops were attended by 754 participants from various stakeholder groups.
- During national lockdown an online training workshop on "Sampling Guidelines for collection of abiotic samples (water and sediment) for monitoring of toxic contaminants" was conducted on 17th May 2020, in which Ganga Praharis were trained. Thirty of these trained Ganga Praharis from five Ganga states, collected water and sediment samples in June 2020, at 17 locations along the Ganga River. The analysis is being carried out for persistent pollutants.



Locations for collection of water and sediment samples from the Ganga River, to study persistent pollutants

- Conducted training workshops for youth on "Conservation of Biodiversity and Wetland" and "Tourist Guides" in Bijnor, between 21<sup>st</sup> and 26<sup>th</sup> September 2020. Seventy-one youth from the local communities were trained in these workshops.
- Ganga Prahari Mentor and Faculty orientation exposure tour at Rajaji National Park on 5<sup>th</sup> to 6<sup>th</sup> December, 2020. A total of 33 participants attended the programme. As part of the programme, a street play on the topic clean and conserve the aquatic species of Ganga River was demonstrated at Ganga Avlokan, Haridwar on 5<sup>th</sup> December, 2020. On 6<sup>th</sup> December, a field visit was organised at Rajaji National Park, Chilla, Rishikesh, Uttarakhand.
- In coordination with forest department, Dudhwa Tiger Reserve and Ganga Praharis, installed safety signage boards at Dudhwa Tiger Reserve, Uttar Pradesh. The main purpose of appropriate signs is to communicate information for safety of terrestrial and aquatic species while crossing the corridors and to provide instruction to vehicles for emergency situations.



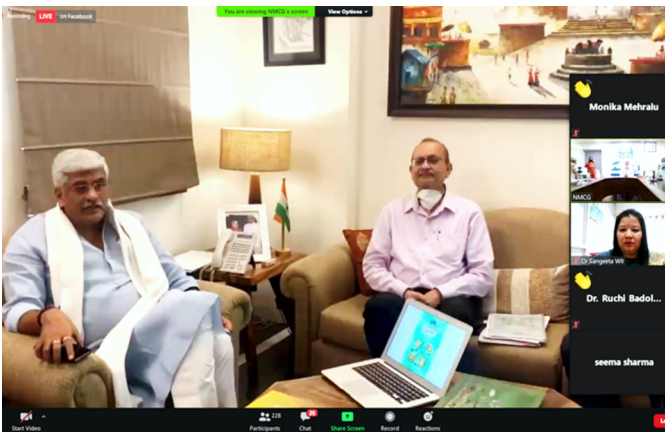
Participants of Bal Ganga Prahari programme at IIT Roorkee



National Training Workshop for Spearhead Team of Ganga Praharis



Community members participating in Catch the rain Campaign



A story book "Bin Vetan ke Kare Safai" being released by Hon'ble Minister of Jal Shakti, Shri Gajendra Singh Shekhawat



- A story book on turtles and their role cleaning the rivers 'Bin Vetan ke Kare Safai' was released by Hon'ble Minister of Jal Shakti, Shri Gajendra Singh Shekhawat on the occasion of World Turtle Day.

# COMPONENT

# 3

## COMMUNITY BASED AQUATIC SPECIES CONSERVATION AND OUTREACH IN THE GANGA RIVER BASIN

River conservation decision is a societal one, owing to trade-offs between competitive use of river's resources between maintaining ecological integrity as well as for sustaining the communities. Aligning local livelihoods with conservation goals is known to create a larger constituency of support for conservation, for which site-specific strategies needs to be developed. These communities should also be made aware about the role of an ecologically intact Ganga basin in enhancing the quality of life. The local communities residing along the banks of the Ganga River have high interests in conservation of the Ganga and its aquatic diversity. These local communities have shown their support to conservation initiatives for the Ganga River and some of the members of communities are now part of the Ganga Prahari cadre of trained volunteers. This component aimed to extend this trained cadre at the basin scale. The component also develops high-quality, science-based awareness and outreach material on Ganga River conservation.

### STAKEHOLDER IDENTIFICATION

- Stakeholders were identified through consultative meetings, awareness programmes, cleanliness drives, plantation drives, sensitisation workshops, cultural activities, in Uttarakhand, Panjab, Uttar Pradesh, Bihar, Jharkhand and West Bengal
- 436 activities such as consultative meetings, livelihood trainings, awareness programmes, cleanliness drives, plantation drives, sensitisation workshops, cultural activities, ecological surveys and rescue activities were conducted by WII in Uttarakhand, Panjab, Uttar Pradesh, Bihar, Jharkhand and West Bengal with participation from 23,301 local community representatives, especially Ganga Praharis.

### VOCAL FOR LOCAL — GANGA PRAHARI

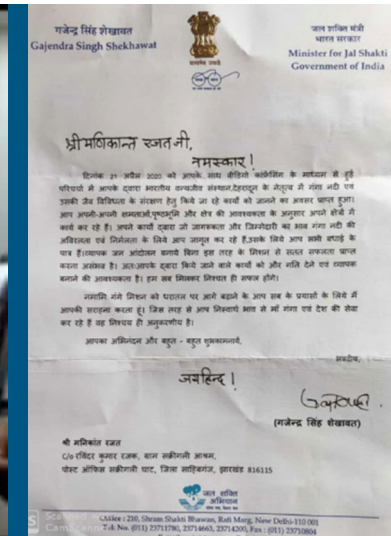
#### Local community involved in Ganga River conservation initiatives

- Cadre of 1,290 Ganga Praharis created in Phase I were adopted into Phase II and additional 599 Ganga Praharis in the tributaries have been added. The Ganga Praharis have presence in 55 districts across eight Ganga basin states. Cadre of 107 Ganga Prahari Mentors created in Phase I have been adopted into Phase II and additional 186 Ganga Prahari Mentors have been identified.

- Additional engagement opportunities created for Ganga Prahari by collaboration with 37 institutions/organisations at national level.
- The first orientation program for Pravasi Ganga Praharis and Ganga Prahari Mentors was organised at the UNESCO C2C in WII in February 2020. It was attended by 50 participants.
- Hon'ble Minister Jal Shakti Shri Gajendra Singh Shekhawat interacted with Ganga Praharis on 21<sup>st</sup> April, 2020 in presence of Secretary, Ministry of Jal Shakti, DG, NMCG and other officials from NMCG. 31 Ganga Praharis received letter of appreciation from the Hon'ble Minister for their outstanding efforts in Ganga and biodiversity conservation.



Hon'ble Minister of Jal Shakti, Shri Gajendra Singh Shekhawat interacting with Ganga Praharis through video conferencing



Letter of appreciation by Hon'ble Minister of Jal Shakti to Ganga Praharis

## COMMUNITY ENGAGEMENT IN GANGA RIVER AND BIODIVERSITY CONSERVATION

Ganga Praharis rescued 55 individuals of eleven species, including the Gangetic dolphin, otter and turtles.



Aquatic animals rescued and rehabilitated



Participation in plantation drive

## LINKING CONSERVATION AND GREEN ECONOMY

### A community-based approach

- Established 19 livelihood centres in Uttarkashi, Pauri Garhwal, Bijnor, Muzzafarnagar, Bulandshahr, Praygraj, Varanasi and Sahibganj districts. A total of 68 trainings were conducted, through which 1,261 Ganga Praharis were trained in sewing & stitching, Ladoo prasad & incense stick making, lutebag making, Value addition to local crops, specially millets, Health & wellness, eco-tourist guide, nursery development & vermicomposting, handicraft, fruit processing & value addition, basic computer science, electrician & LED bulb making, mat and basket weaving.



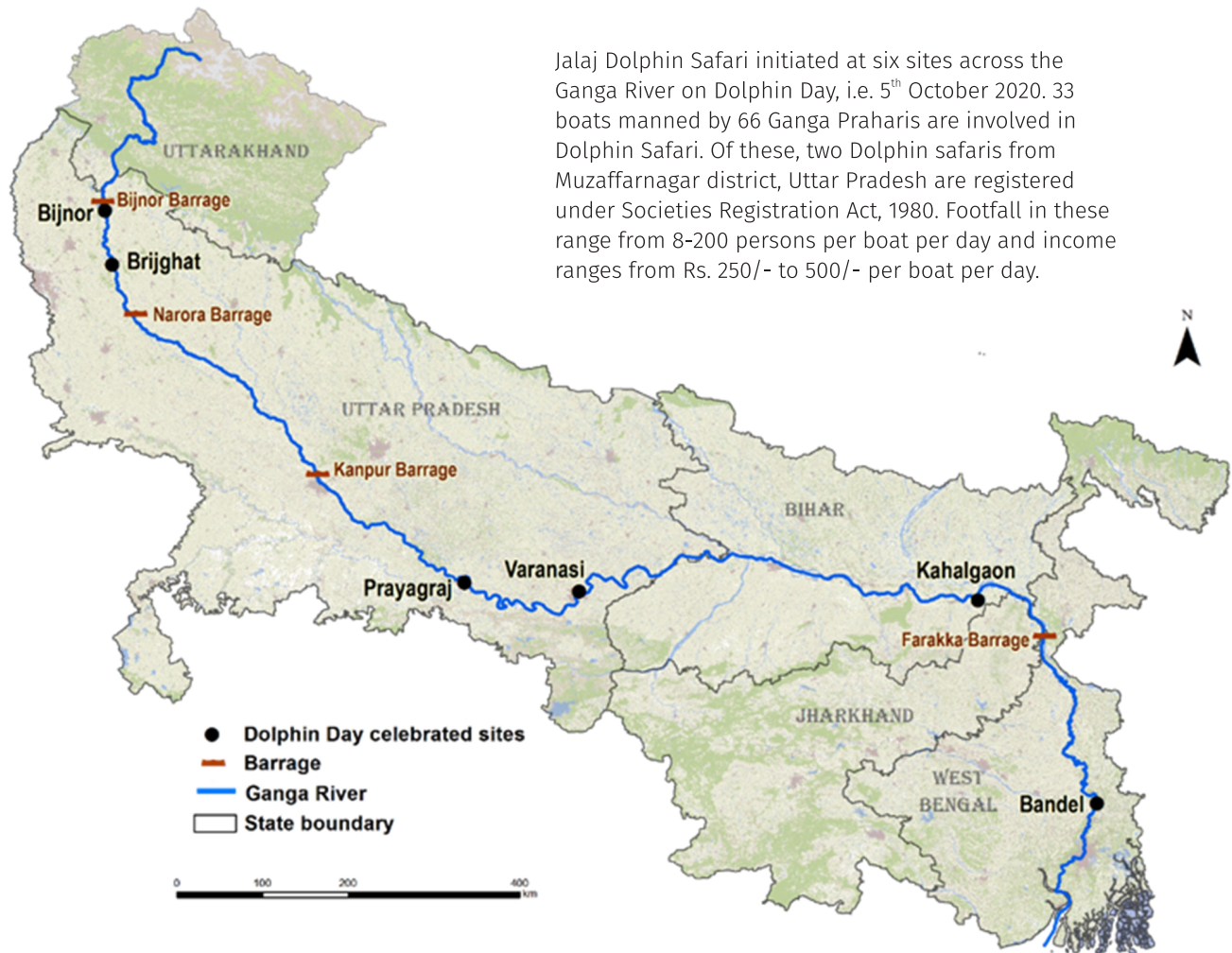
Presence of Ganga Praharis in the Ganga basin

- 754 start-up by trained Ganga Praharis are realising Hon'ble Prime Minister's "Vocal for Local" campaign to achieve the goals of 'Aatmanirbhar Bharat'. Two SHGs "Ganga Prahari Swayam Sahayata Samuh" at Matli, Uttarkashi and Ganga Bhogpur, Pauri Garhwal, Uttarakhand formalised with bank linkages.



## JALAJ

### Connecting river and people to realise Arth Ganga



Jalaj Dolphin Safari initiated at six sites across the Ganga River on Dolphin Day, i.e. 5<sup>th</sup> October 2020. 33 boats manned by 66 Ganga Praharis are involved in Dolphin Safari. Of these, two Dolphin safaris from Muzaffarnagar district, Uttar Pradesh are registered under Societies Registration Act, 1980. Footfall in these range from 8-200 persons per boat per day and income ranges from Rs. 250/- to 500/- per boat per day.

Location of Jalaj Dolphin Safari along the mainstem Ganga



Jalaj Dolphin Safari providing livelihood to riverside communities

## ADDRESSING COVID-19 PANDEMIC

About 303 activities for COVID-19 relief were conducted by the Ganga Praharis. These activities included sanitisation of villages, sensitisation, distribution of masks and food packets, making hand sanitiser in collaboration with local administration. These activities were conducted across five states and 50,000 people were benefited from these activities. The effort of Ganga Praharis was recognised and they were honored as Corona Warrior by local administration.



COVID awareness and actions of Ganga Praharis in emergent situations

## INTERPRETATION CENTRES

### Promoting river and biodiversity conservation

In association with NMCG, a Ganga museum "Ganga Avlokan" was established at Chandi Ghat, Haridwar dedicated to Ganga River, its biodiversity, landscape and vibrant culture. The museum was being set up by ITDC Event, a Government of India undertaking. WII is the knowledge partner in the development of the museum. The facility was inaugurated by Hon'ble Prime Minister Shri Narendra Modi.



Ganga Avlokan inaugurated by Hon'ble Prime Minister Shri Narendra Modi



Ganga Avlokhan – A museum and the Souvenir shop at Chandi Ghat, Haridwar

- An online training session on "Youth Participation in Namami Gange Program" was conducted at the regional level training workshop organised by Nehru Yuva Kendra Sangathan in Lucknow. A total of 41 participants attended the session.
- Painting on walls in villages was done in Uttarkashi, Uttarakhand, Bijnor, Uttar Pradesh and Hooghly, West Bengal to create awareness about the biodiversity of Ganga and its importance.



## MEETINGS, AWARDS AND RECOGNITION

- Participated in the monthly District Ganga Protection Committee meeting at Haridwar with Departmental Officers and Nominee Members to discuss the upcoming action plan for Kumbh Mela 2021 at Collectorate Bhawan, Haridwar, Uttarakhand under the chairmanship of the District Magistrate.
- Participated in the Conference of the Parties to the Convention on the Conservation of Migratory Species of Wild Animals (CMS COP13) at Gujarat and presented a session on 'Mainstreaming biodiversity conservation in local livelihood'.
- WII was felicitated for participating in the Ganga Amantran Abhiyan on 13<sup>th</sup> March, 2020 during the Flag-in ceremony at New Delhi. Sixty Ganga Praharis interacted with Ganga Mitra, Ganga Task Force, Nehru Yuva Kendra, in the presence of Hon'ble Minister of Home Affairs Shri Amit Shah, Hon'ble Minister of Jal Shakti Shri Gajendra Singh Shekhawat, Secretary, Ministry of Jal Shakti Shri U.P. Singh and Director General, NMCG, Shri Rajiv Ranjan Mishra.



Wildlife Institute of India felicitated during Ganga Amantran Abhiyan Flag-in ceremony by Hon'ble Minister of Home Affairs Shri Amit Shah at New Delhi

Showcasing Ganga Prahari Programme at COP 13 in Gujrat



- Awareness campaign cum exhibition conducted on various days for spreading biodiversity conservation message. Exhibited the information of Ganga's biodiversity at Dehradun during Uttarakhand State Geo-informatics Meet (10<sup>th</sup> February 2020). More than 200 school children participated in World Wetland Day celebration at Surajpur Wetland and Asan Barrage. Exhibitions on Ganga and its biodiversity were displayed in Haridwar during Makar Sankranti, Sur Sarovar, Agra and during inaugural of Antariksh Bhawan, Uttarakhand Space Application Centre, Dehradun.
- Online Painting, Slogan writing, Essay writing and Photography competitions were organised for the school students on the occasion of World Nature Conservation Day, National Teacher's Day and World Rivers Day. Around 350 children participated and were sensitised. During catch the rain campaign from 29<sup>th</sup> to 30<sup>th</sup> September 2020, 554 people participated.
- Organised online slogan/poem writing competition "Kavya Ganga" for school students of three groups, i.e. classes 5-8, classes 9-10 and classes 10-12. Received over 80 entries from all over the country.
- Online Painting, Slogan writing, Essay writing and Photography competitions were organised for the school students on the occasion of World Turtle Day, World Environment Day and World Nature Conservation Day. More than 2,000 children participated and were sensitised.



Awareness programmes conducted on special days

## PUBLICATIONS AND OUTREACH

- Published the book "Rowing Down the Ganges", which showcases glorious journey of the Ganga river from its origin in Guamukh to Sunderbans. The book was released through video conferencing by Hon'ble Prime Minister Shri Narendra Modi on 29<sup>th</sup> September 2020.
- 'Ganga ki Baat' a second series of talk show was broadcasted by All India Radio, Dehradun at 100.5 MHz. Nine episodes, covering issues of biodiversity and Ganga basin conservation were aired.
- Developed eleven short educational movies on aquatic diversity of the Ganga River for the National Museum of Natural history. These movies are hosted on the museum's YouTube page: <https://www.youtube.com/channel/UCxPcH4v9xEi1nTOLERg8zow/videos>



Rowing Down the Ganges – the book released by Hon'ble Prime Minister Shri Narendra Modi



## NMCG PHASE-II EXPENDITURE STATEMENT FROM JANUARY 2020 TO MARCH 2021

Comp.	Total Funds Allotted	Ist Installment Received (02.08.2019)	Total Funds Received	Expenditure January 2020 to March 2021	Total Expenditure	F.A + T.A Outstanding	Total Expenditure Including Committed & Advances	Balance Available
C-1A	₹ 354,403,129.00	₹ 114,450,600.00	₹ 114,450,600.00	₹ 30,360,271.00	₹ 30,360,271.00	₹ 100,000.00	₹ 30,460,271.00	₹ 83,990,329.00
C- 1B	₹ 122,128,942.00	₹ 28,648,400.00	₹ 28,648,400.00	₹ 17,815,472.00	₹ 17,815,472.00	₹ 2,134,000.00	₹ 19,949,472.00	₹ 8,698,928.00
C- 1C	₹ 66,014,662.00	₹ 13,692,800.00	₹ 13,692,800.00	₹ 5,549,942.00	₹ 5,549,942.00	₹ 132,573.00	₹ 5,682,515.00	₹ 8,010,285.00
C- 2	₹ 96,663,134.00	₹ 17,966,300.00	₹ 17,966,300.00	₹ 6,765,969.00	₹ 6,765,969.00	₹ 1,504,618.00	₹ 8,270,587.00	₹ 9,695,713.00
C- 3A	₹ 384,147,807.00	₹ 67,345,300.00	₹ 67,345,300.00	₹ 22,963,596.00	₹ 22,963,596.00	₹ 2,172,415.00	₹ 25,136,011.00	₹ 42,209,289.00
C- 3B	₹ 116,570,914.00	₹ 21,146,400.00	₹ 21,146,400.00	₹ 5,756,705.00	₹ 5,756,705.00	₹ 259,000.00	₹ 6,015,705.00	₹ 15,130,695.00
<b>Total</b>	<b>₹ 1,139,928,588.00</b>	<b>₹ 263,249,800.00</b>	<b>₹ 263,249,800.00</b>	<b>₹ 89,211,955.00</b>	<b>₹ 89,211,955.00</b>	<b>₹ 6,302,606.00</b>	<b>₹ 95,514,561.00</b>	<b>₹ 167,735,239.00</b>

\*Expenditure for the period of January 2020 to March 2021





## 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



भारतीय वन्यजीव संस्थान  
Wildlife Institute of India

Wildlife Institute of India  
Chandrabani, Dehradun-248001, Uttarakhand  
[wii.gov.in/nmcg/national-mission-for-clean-ganga](http://wii.gov.in/nmcg/national-mission-for-clean-ganga)

## GACMC

Ganga Aqualife Conservation Monitoring Centre  
Wildlife Institute of India, Dehradun  
[nmcg@wii.gov.in](mailto:nmcg@wii.gov.in)