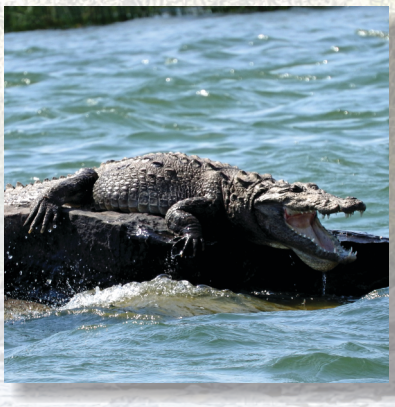
NMCG-WII GANGA
BIODIVERSITY CONSERVATION
INITIATIVE PHASE II

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 2020







नमामि गंगे

भारतीय वन्यजीव संस्थान
Wildlife Institute of India

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

Progress Report
January - June 2020

Project Investigators
Syed Ainul Hussain, Ruchi Badola

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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.

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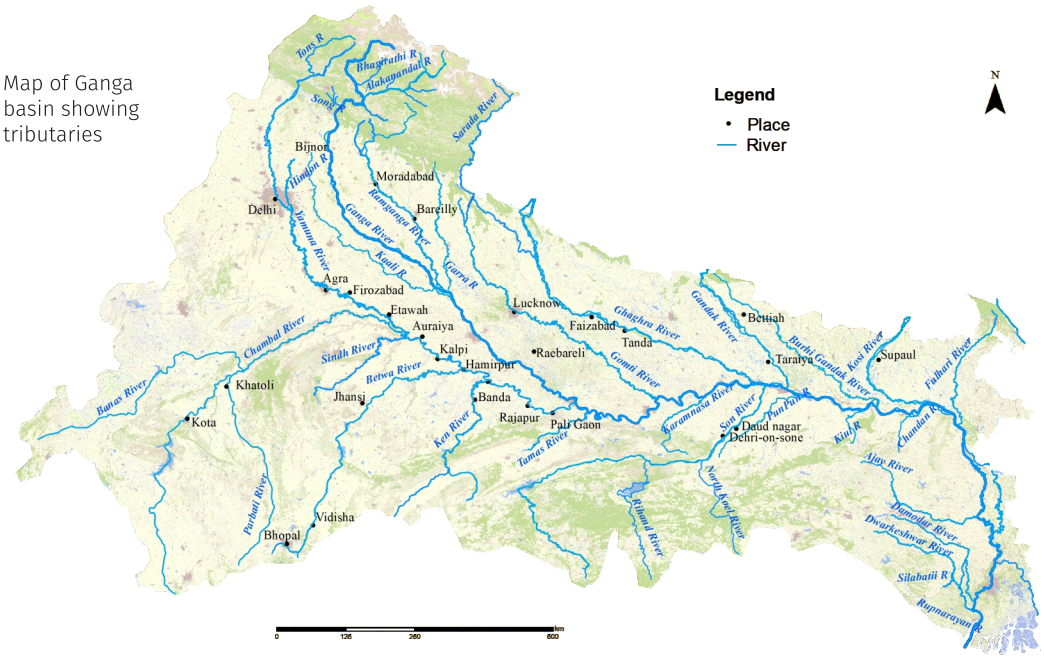
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COMPONENT 1

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

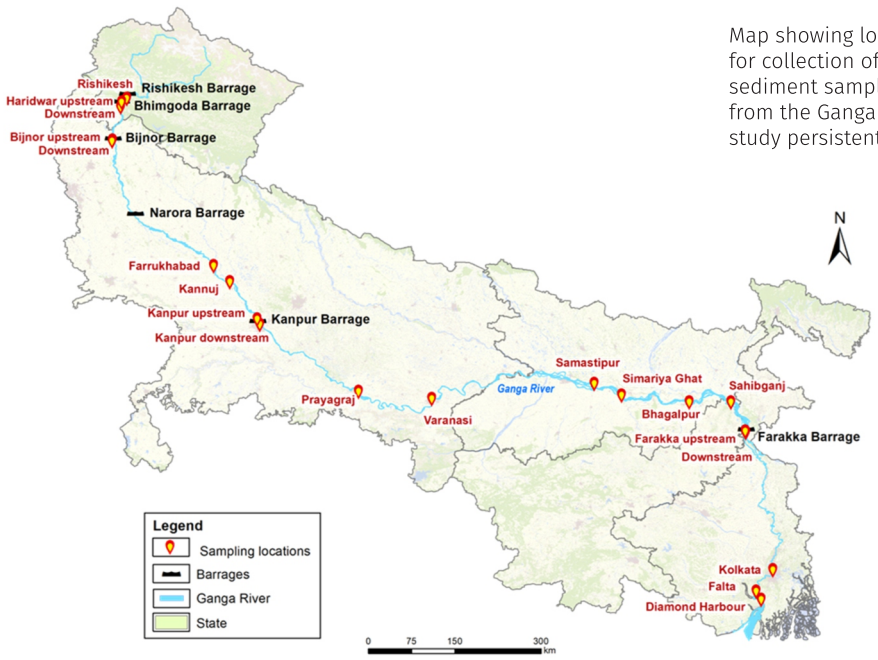
Habitat modification, fragmentation, invasive species, overexploitation, pollution and climate change are some of the looming threats to freshwater diversity. In addition, persistent xenobiotics, nano-particles and micro-plastics pose a toxicological risk to the freshwater ecosystem. This component aims 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.

- Literature was studied to assess the distribution of the key aquatic species in the Ganga basin.
- 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 from January to February 2020. Six teams, including 15 WII researchers and 11 Ganga Praharis, conducted the surveys within a span of 30 days, covering 3,300 km. The ecological assessment revealed that the Gangetic dolphins are distributed in most tributaries. The presence of smooth-coated otters was recorded from the Ramganga, Chambal, Kosi and Ghaghra rivers. Gharials were recorded from the Chambal, Yamuna, Son, Ramganga, Ghaghra and Gandak rivers. Muggers were sighted from the Chambal, Yamuna, Son, Ramganga, Gomti, Ghaghra and Gandak rivers.
- The species distribution was mapped on the spatial domain, which revealed that the Protected Areas (PAs) are the repository of key aquatic fauna and reconfirmed the significant role played by the PAs in species conservation.



Map of Ganga basin showing tributaries

- Amongst the threats, sand mining, fishing, agriculture, and untreated discharge were seen throughout the surveyed rivers.
- 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).
- To strengthen the conservation measures, management planning for the select priority areas along the mainstem Ganga River was done. Prepared the draft Management Plan for the Kachhua Wildlife Sanctuary, Prayagraj, Uttar Pradesh. The management plan was prepared after ecological assessment, stakeholder meetings, focal group discussions, and need-based livelihood training assessment.
- During the 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.



Map showing locations for collection of water and sediment samples from the Ganga River to study persistent pollutants

- An online course, 'Basics of Rescue and Rehabilitation of Freshwater Macro-fauna in Ganga Basin with special reference to Chelonians and Crocodilians' was conducted between 5th June and 4th July 2020. A total of 1,774 participants from five countries (India, Nepal, Canada, United States and the United Kingdom) and 29 Indian states participated in this course. More than 50% of the participants (n=939) achieved 50% marks in the assessment conducted at the end of the course.
- Technical support was provided to Bihar Forest Department for the establishment of a rescue and rehabilitation facility at Bhagalpur.
- 712 hatchlings of *Batagur dhongoka* were hatched at the centre in June 2020.
- 706 turtles were released in Ganga River near Sarnath on 15th April, 2020 with the help of Uttar Pradesh Forest Department.
- '*Ganga ki Baat*', the second series of the 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 short educational movies on the aquatic diversity of the Ganga River for the National Museum of Natural history. These movies are hosted on the museum's YouTube page (Link: https://www.youtube.com/channel/UCxPcH4v9xEi1nTOLErg8zow/videos).
- First roundtable meeting on Initiation of a blueprint for measuring Gross Environment Product (GEP) was held at WII on 5th 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 was prepared for GEP assessment.



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

COMPONENT 2

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

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.

- During Water Conclave in Roorkee, about 1,000 students were sensitised to the Ganga River biodiversity and its conservation values. On the occasion of World Turtle Day, International Day for Biological Diversity and World Environment Day, online painting, slogan writing, essay writing and photography competitions were organised for the school students. Around 400 children participated and were sensitised.



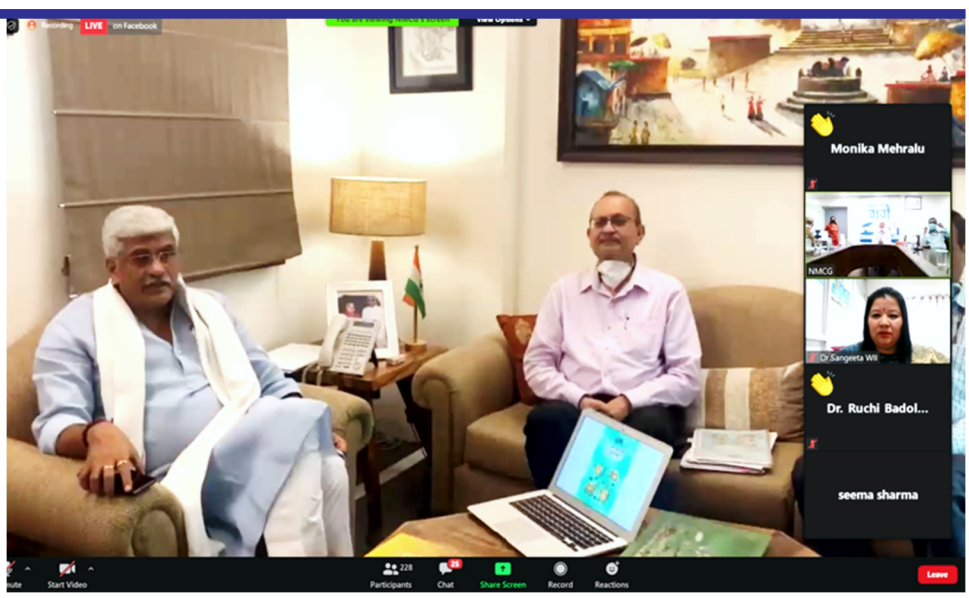
- Fifty Ganga Praharis from Uttarakhand, Uttar Pradesh, Bihar, Jharkhand and West Bengal were selected as the first spearhead team of the local communities. These selected Ganga Praharis underwent training at the Wildlife Institute of India, Dehradun, from 3rd to 10th February 2020. These trained members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



National Training Workshop for Spearhead Team of Ganga Praharis

- The Bal Ganga Prahari programme was initiated in the Ganga Basin. 67 Schools were enrolled in the Bal Ganga Prahari Programme, in which the students and teachers were sensitised about the Ganga and its biodiversity through various awareness activities and programmes.
- Six 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. A total of 205 participants from various stakeholder groups attended these workshops.
- A storybook on turtles and their role in 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.





A storybook "*Bin Vetan ke Kare Safai*" was released by
Hon'ble Minister of Jal Shakti, Shri Gajendra Singh Shekhawat

COMPONENT 3

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

River conservation decision is a societal one, owning 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 biodiversity. 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.

- A cadre of 1,290 Ganga Praharis created in Phase-I was adopted into Phase-II, and an additional 299 Ganga Praharis from ten tributaries of the Ganga River were added. The Ganga Praharis have a presence in 32 districts across five Ganga basin states, Uttarakhand, Uttar Pradesh, Bihar, Jharkhand and West Bengal.
- A cadre of 107 Ganga Prahari Mentors created in Phase I, was adopted into Phase II, and additional 179 Ganga Prahari Mentors were identified. The first orientation programme 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.



- WII was felicitated for participating in the Ganga Amantran Abhiyan on 13th 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.

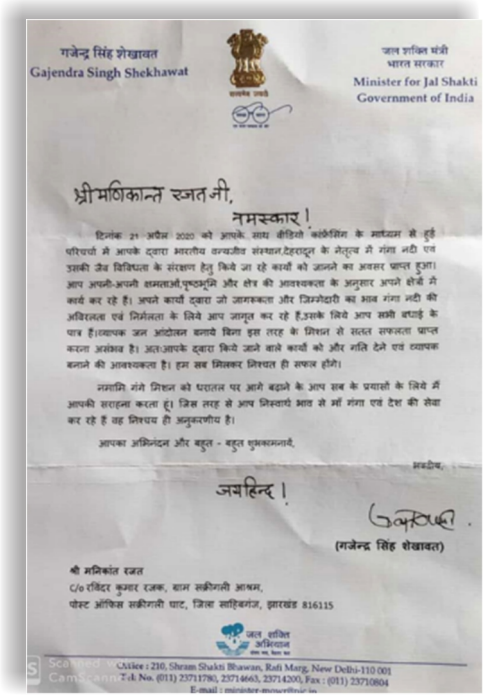


Wildlife Institute of India felicitated during Ganga Amantran Abhhiyan Flag-in ceremony by Hon'ble Minister of Home Affairs, Shri Amit Shah at New Delhi

- Hon'ble Minister Jal Shakti, Shri Gajendra Singh Shekhawat interacted via video conferencing with Ganga Praharis on 21st April 2020 in the presence of the Secretary, Ministry of Jal Shakti, DG, NMCG and other officials from NMCG. Thirty-one Ganga Praharis received a letter of appreciation from the Hon'ble Minister for their outstanding efforts in Ganga and biodiversity conservation.



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



गजेन्द्र सिंह शेखावत
Gajendra Singh Shekhawat

जल शक्ति मंत्री
भारत सरकार
Minister for Jal Shakti
Government of India

श्रीमणिकान्त रजत जी,

नमस्कार !

दिनांक 21 अप्रैल 2020 को आपके साथ वीडियो कांफ्रेंसिंग के माध्यम से हुई परिचर्चा में आपके द्वारा भारतीय वन्यजीव संस्थान,देहरादून के नेतृत्व में गंगा नदी एवं उसकी जैव विविधता के संरक्षण हेतु किये जा रहे कार्यों को जानने का अवसर प्राप्त हुआ। आप अपनी-अपनी क्षमताओं,पृष्ठभूमि और क्षेत्र की आवश्यकता के अनुसार अपने क्षेत्रों में कार्य कर रहे हैं। अपने कार्यों द्वारा जो जागरूकता और जिम्मेदारी का भाव गंगा नदी की अविरलता एवं निर्मलता के लिये आप जागृत कर रहे हैं,उसके लिये आप सभी बधाई के पात्र हैं।व्यापक जन आंदोलन बनाये बिना इस तरह के मिशन से सतत सफलता प्राप्त करना असंभव है। अतःआपके द्वारा किये जाने वाले कार्यों को और गति देने एवं व्यापक बनाने की आवश्यकता है। हम सब मिलकर निश्चित ही सफल होंगे।

नमामि गंगे मिशन को धरातल पर आगे बढ़ाने के आप सब के प्रयासों के लिये मैं आपकी सराहना करता हूं। जिस तरह से आप निस्वार्थ भाव से माँ गंगा एवं देश की सेवा कर रहे हैं वह निश्चय ही अनुकरणीय है।

आपका अभिनंदन और बहुत - बहुत शुभकामनायें,

भवदीय,

जयहिन्द !

(गजेन्द्र सिंह शेखावत)

श्री मनिकांत रजत
C/o रविंदर कुमार रजक, राम सकीगली आश्रम,
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E-mail : minister.mowr@nic.in

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

- A total of 99 activities related to awareness programmes, cleanliness drives, plantation drives, sensitisation workshops, consultative meetings, livelihood trainings, cultural activities, ecological surveys and rescue activities were conducted by WII with about 5,087 participants from the local community representatives, especially Ganga Praharis. These Ganga Praharis rescued 24 individuals, including Gangetic dolphins, otters, crocodiles and turtles.





Aquatic animals rescued and rehabilitated

- Two hundred and seventy-one COVID-19 relief activities were conducted by the Ganga Praharis. These activities included sanitization of villages, awareness, food distribution, Ganga Prahari training, management of quarantine centre, making and distribution of masks and sanitiser in collaboration with local administration. These activities were conducted across five states and more than 50,000 people benefited from these activities.

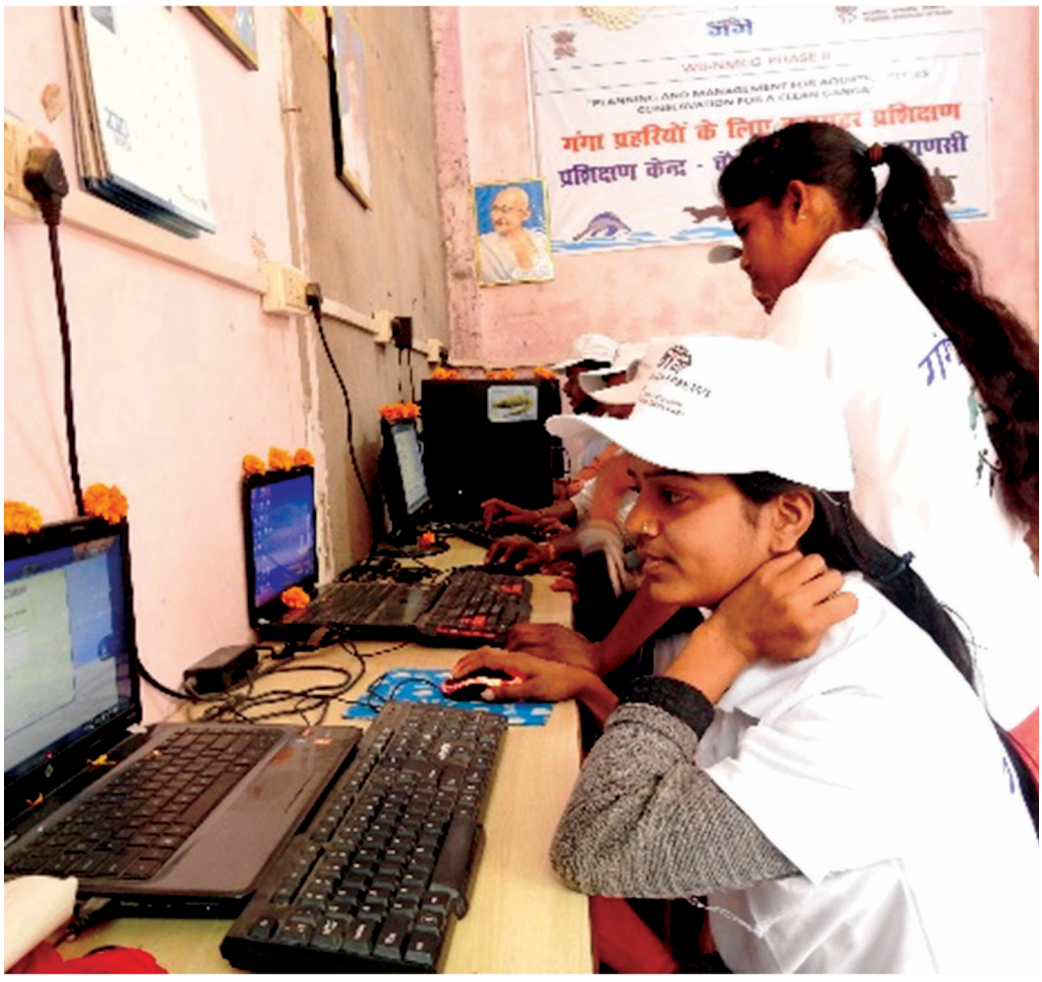






COVID awareness and actions of Ganga Praharis in emergent situations

- Awareness campaign cum exhibition conducted on various days for spreading the biodiversity conservation message. Exhibited the information on Ganga's biodiversity at Dehradun during Uttarakhand State Geo-informatics Meet on 10th February 2020. More than 200 school children participated in the "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 the inaugural of Antariksh Bhawan, Uttarakhand Space Application Centre, Dehradun.
- An online training session on "Youth Participation in Namami Gange Programme" was conducted at the regional level training workshop organised by Nehru Yuva Kendra Sangathan in Lucknow. A total of 41 participants attended the session.
- In coordination with the forest department, Dudhwa Tiger Reserve and Ganga Praharis installed safety signage boards at Dudhwa Tiger Reserve, Uttar Pradesh. The signages communicate information for the safety of terrestrial and aquatic species while crossing the corridors and provide instruction to vehicles in emergency situations. Painting on walls in villages was done in Uttarakhand to create awareness about the biodiversity of the Ganga and its importance.
- Three livelihood centres were established in Uttar Pradesh. During livelihood trainings in these livelihood centres, Ganga Praharis were trained in sewing and stitching and basic computer science. 225 start-ups by trained Ganga Praharis are realizing the Hon'ble Prime Minister's "Vocal for Local" campaign to achieve the goals of '*Aatmanirbhar Bharat*'. Additional engagement opportunities were created for Ganga Prahari by collaborating with 37 institutions/organisations at the national level.



Ganga Praharis participating in livelihood trainings

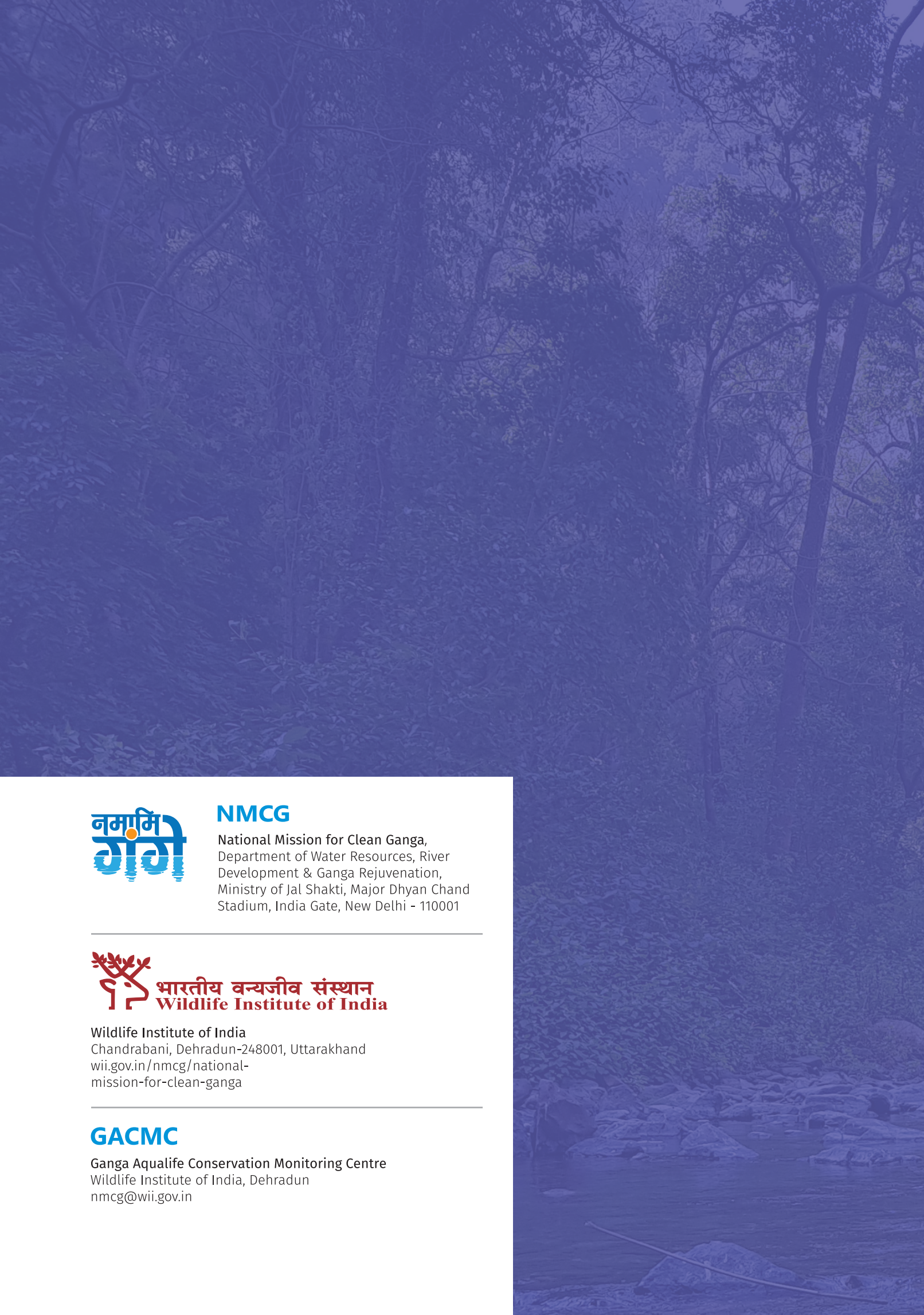


Ganga Praharis participating in livelihood trainings

- Showcased the project activities at 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'.



Showcasing Ganga Prahari Programme at COP 13 in Gujarat



NMCG

National Mission for Clean Ganga,
Department of Water Resources, River Development & Ganga Rejuvenation,
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