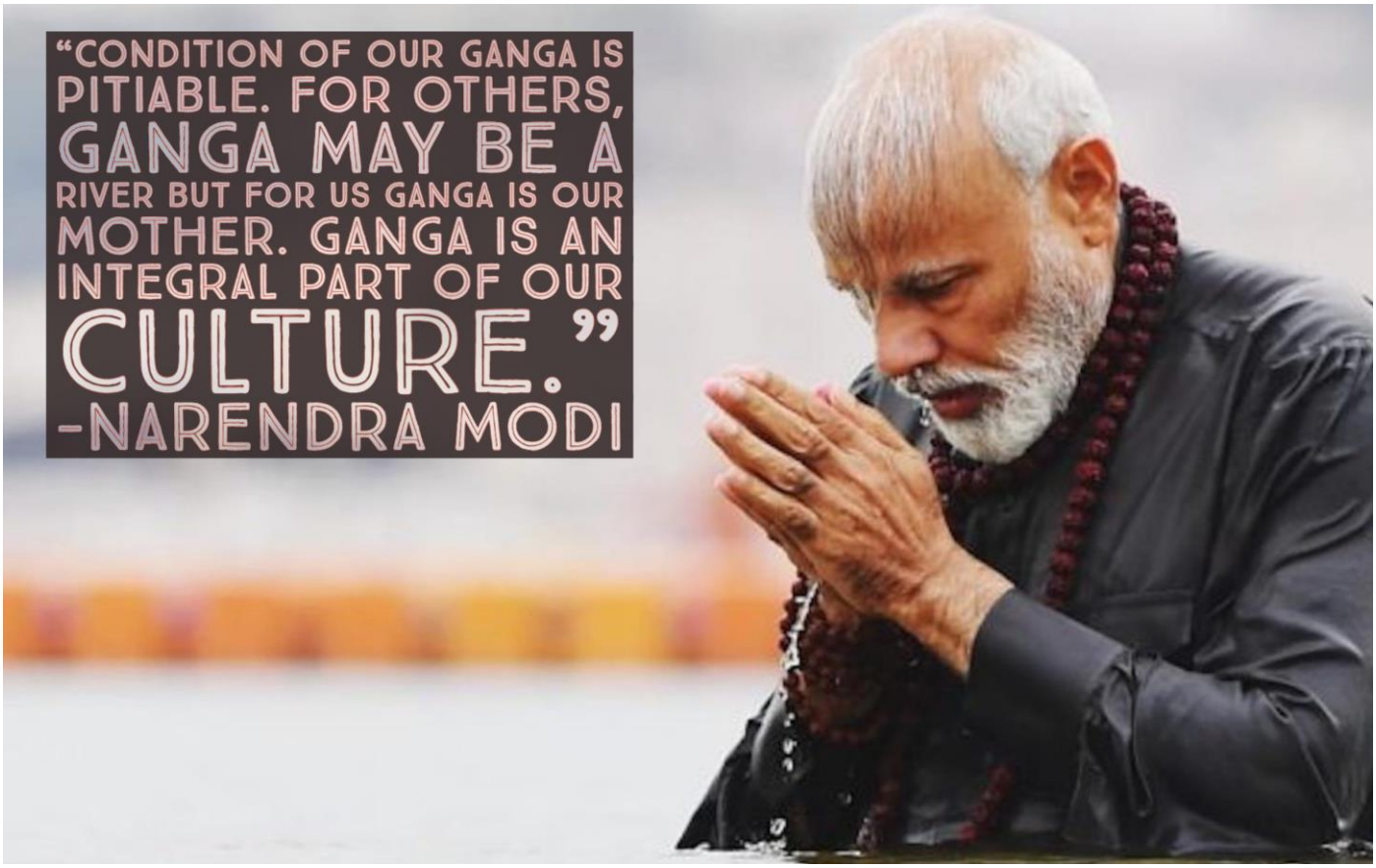
2020-2021

Blended Capacity Building Programme for Stakeholders of River Ganga under Namami Gange Programme

Indian Institute of Public Administration, New Delhi


"CONDITION OF OUR GANGA IS PITIABLE. FOR OTHERS, GANGA MAY BE A RIVER BUT FOR US GANGA IS OUR MOTHER. GANGA IS AN INTEGRAL PART OF OUR CULTURE."
-NARENDRA MODI

FOREWORD

Looking back on the year, a few important events and themes appear to jump out and characterise it. For my IIPA in 2020, fresh and ongoing complex events tested and confirmed our reaction systems, and we concentrated on creating capacity for school students and teachers, universities, researchers, scholars, and the like, as well as exploring the opportunities and difficulties posed. Perhaps while still dealing with the black swan event, COVID 19, my IIPA team delivered the project's huge success, "Blended Capacity Programme for Stakeholders for River Ganga under Namami Ganga Programme" sponsored by 'National Mission for Clean Ganga', Government of India by dispensing the first of its kind fully online. Outpacing the pandemic's challenges, the IIPA team held tall despite all obstacles and delivered the training via Virtual Internet Participation, which we have modestly labelled VIP. The stakeholders were also provided with a sense of ownership through personal logins for association with IIPA's learning management system an interactive online learning platform. I am delighted to present the Annual Report 2020-2021 that provides planning and execution of the deliverables for first year of the project. I hope that IIPA and National Mission for Clean Ganga will continue to collaborate to develop our collective capacities by learning from and with one another. Our connections with external groups, which reflect our values and goals and can contribute their experience and expertise, also strengthen us. We are constantly working to strengthen our accountability and transparency procedures across our network. The clients we serve are at the heart of what we do, and their commitment to improvement drives ours. We recognise that learning lessons is the key to progress. This entails interacting meaningfully with our beneficiaries and providing them with a voice through a variety of feedback options. We encourage a culture of sharing information and expertise throughout our network, which is supported by rigorous monitoring and evaluation. The feedback mechanism provides us the SWOT analysis and scope of improvement with each training. I would like to thank my IIPA team for their dedication and excitement in completing this project. This project has engaged over 9961 stakeholders from star states of Ganga Basin, and it has got an incredibly positive response and recognition from its participants. I wish the crew the best of luck in all their future undertakings. I anticipate that fresh chances will present themselves to us in the post-COVID age. I believe this has been a fantastic year. I am pleased with our organization's continued progress and look forward to the coming year with anticipation.

S.N. Tripathi IAS (R)
Director General, IIPA

ACKNOWLEDGEMENT

The project entitled “Blended Capacity Building Programme for Stakeholders of River Ganga under Namami Gange Programme” sponsored by National Mission on Clean Ganga, Department of Water Resources,River Development and Ganga Rejuvenation, Ministry of Jal Shakti, Government of India completed its first year successfully owing to the support and help of many hands. We would like to express our deepest gratitude towards National Mission of Clean Ganga, Government of India for entrusting us for an exclusive and worthy project and simultaneously guiding and supporting us throughout the year.

We convey our sincere gratitude, to Shri Rajiv Ranjan Mishra (IAS), Secretary and Director General, NMCG for providing their untiring support and active involvement in the capacity building workshop. We extend our sincere appreciation towards Shri Jagmohan Gupta, Advisor, NMCG; Shri Brijesh Sikka, Senior Consultant, NMCG and Mr. Neeraj Gahlawat, Project Officer (Technical), NMCG, Ms. Jyoti Verma, Support Engineer, TCE, PMC-NMCG and Ms. Bhawna Sharma, Young Professional, NMCG for the support and technical knowledge for project implementation. We are thankful to Ms. Priya Sikka and Namami Gange staff for providing data and assistance on time.

Our deepest thanks to Mr. S.N. Tripathi (IAS R), Director General, IIPA; Shri Rajiv Ranjan Mishra (IAS), Secretary and Director General, NMCG; Sh. C. K. Varshney, Former Dean JNU and Emeritus Professor; Sh. S. S. Satapathy, Former Director, Climate Change, MoEF&CC; Dr. J. S. Kamyotra, Former Member Secretary, CPCB for accepting our request to be part of the Project Advisory Committee and steering the activities all through the study.

We are extremely grateful to Mr. S.N. Tripathi (IAS R), Director General, Indian Institute of Public Administration, New Delhi for his inimitable guidance which stirred the pace of the project. Our sincere thanks to Mr. Amitabh Ranjan, Registrar, IIPA for helping us arrange the logistics for the project activities in the difficult terrains of Sikkim. Special thanks to Imran Ahmed and his team for field photography.

We are thankful to the IIPA Administration, Finance and Computer Department, and investing their time and efforts as and when required. Last but not the least, we would like to thank team IIPA Ms. Charu Bhanot, Research Officer; Ms. Imrana Akhtar, Research Assistant; Ms. Kanishka Sharma, Research Assistant; Ms. Kanika Garg, Research Assistant and Ms. Shobha Rathor, Web Developer for their support and assistance in completing the deliverables of this year.

Our acknowledgement would be incomplete without a mention towards the contribution of the teachers, school and college students and academia of five key states of river Ganga Basin for participating and engaging in the project with extreme enthusiasm.

(Vinod K. Sharma) (Shyamli Singh)

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INTRODUCTION TO PROJECT

Namami Gange Program

"बीते 5-6 वर्षों में अगर गंगाजल में अभूतपूर्व सुधार देखने को मिल रहा है तो इसके पीछे भी जनभागीदारी का बहुत महत्व है। माँ गंगा के प्रति आस्था और दायित्व का भाव आज अभूतपूर्व स्तर पर है।" - *Hon'ble Prime Minister Shri. Narendra Modi*

'Namami Gange Programme', is an Integrated Conservation Mission, approved as 'Flagship Programme' by the Union Government in June 2014 with budget outlay of Rs.20,000 Crore to accomplish the twin objectives of effective abatement of pollution, conservation, and rejuvenation of National River Ganga. Main pillars of the Namami Gange Programme are Sewerage Treatment Infrastructure, River-Front Development, River-Surface Cleaning, Bio-Diversity, Afforestation, Public Awareness, Industrial Effluent Monitoring and Ganga Gram.

One of the key missions under the program is Public Awareness. The mission has been ongoing in formats of series of activities such as events, workshops, seminars and conferences and numerous IEC activities were organized to make a strong pitch for public outreach and community participation in the programme. Various awareness activities through rallies, campaigns, exhibitions, cleanliness drives, competitions, plantation drives, and development and distribution of resource materials were organized and for wider publicity the mass mediums such as TV/Radio, print media advertisements, advertorials, featured articles and advertorials were published. Gange Theme song was released widely and played on digital media to enhance the visibility of the programme. NMCG ensured presence at Social Media platforms like Facebook, Twitter, You Tube etc.

Indian Institute of Public Administration and Namami Gange Program

For achieving desired objectives of the programme varied stakeholders has been looped in by NMCG for treating and managing Ganga basin. With this as a backdrop, NMCG entrusted a project "Blended Capacity Building Programme for Stakeholders of River Ganga" under Namami Gange Programme to Indian Institute of Public Administration (IIPA) for three years i.e., form 2020-2023.The main objective of the project is to convey the importance of river Ganga as well as the threats it is facing in the current scenario to the officials and the public at large. It is particularly important to convey to the Officials and public at large the importance of the river Ganga as well as the threats it is facing in the current scenario. Accordingly, this project aimed at conducting multiple Blended Capacity Building Programme, which is a blend of Face-

to-Face session i.e., classroom sessions and Virtual Internet Participation. In nutshell, it is a journey from desk to desktop.

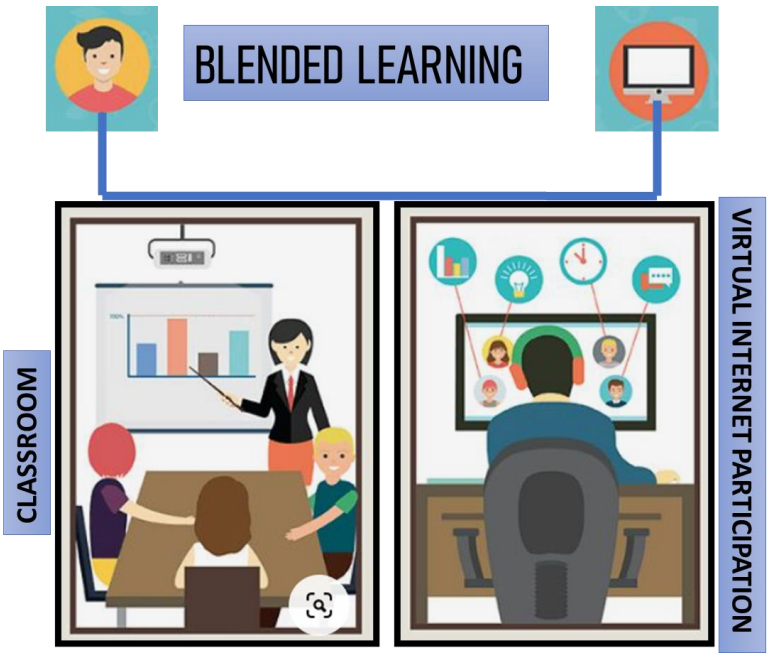


Figure 1: Illustration on Blended Learning Concept

WHAT IS BLENDED LEARNING?

Blended Learning integrates the finest features of two different types of training environments: traditional face-to-face classroom instruction and high-tech eLearning. By covering both bases, you can engage all sorts of learners–those who thrive in a structured environment with face-to-face interaction with an instructor and others who thrive in a semi-autonomous, computer-based learning environment.

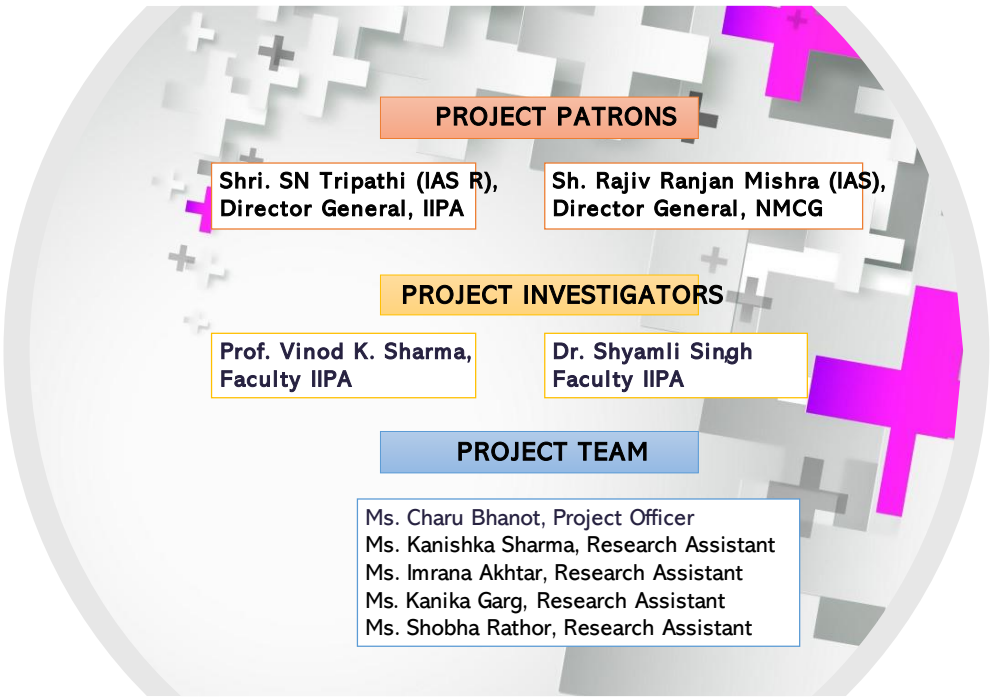
While the classroom enables role-playing with immediate face-to-face feedback, online learning enables personalized, self-paced learning using eLearning components that lend themselves to interactive media such as skill-building, games, videos, tutorials, quizzes, and social media components, all of which are accessible from the learner's home page in the Learning Management System (LMS).

WHY BLENDED LEARNING?

The perfect blended learning program includes web-based training for optimizing the achievement of learning objectives with the application of learning management systems

(LMS). The three-year long process is aimed at providing a Holistic approach on Ganga and its activities conducted under Namami Gange for making the river Aviral and Nirmal. The project provides an Online Platform to connect with masses achieving the two main pillars of Jan Ganga and Gyan Ganga. Participants can now learn and retain content through the new approach of Blended Learning with IIPA LMS platform.

ProjectTeam



Projectata Glance

1. OBJECTIVES

The broad project objectives were defined stepwise integrating identification of key stakeholders of Ganga River Basin. Further, preparation of tailor-made modules for each stakeholder separately in accordance with their role in Clean Ganga Mission. The final step is to disseminate the collected knowledge through blended learning programs. The learning programs are customised for different stakeholders with plethora of examples from their niche habitats to make it more understandable.

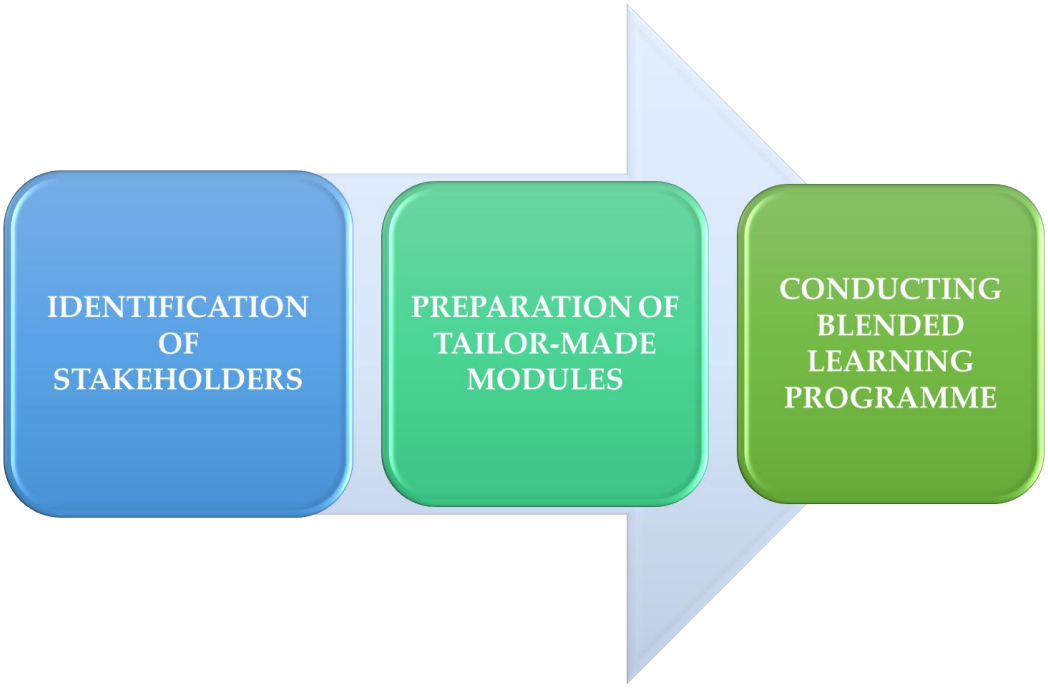


Figure 2: Objectives of the Project

2. PROJECT DELIVERABLES

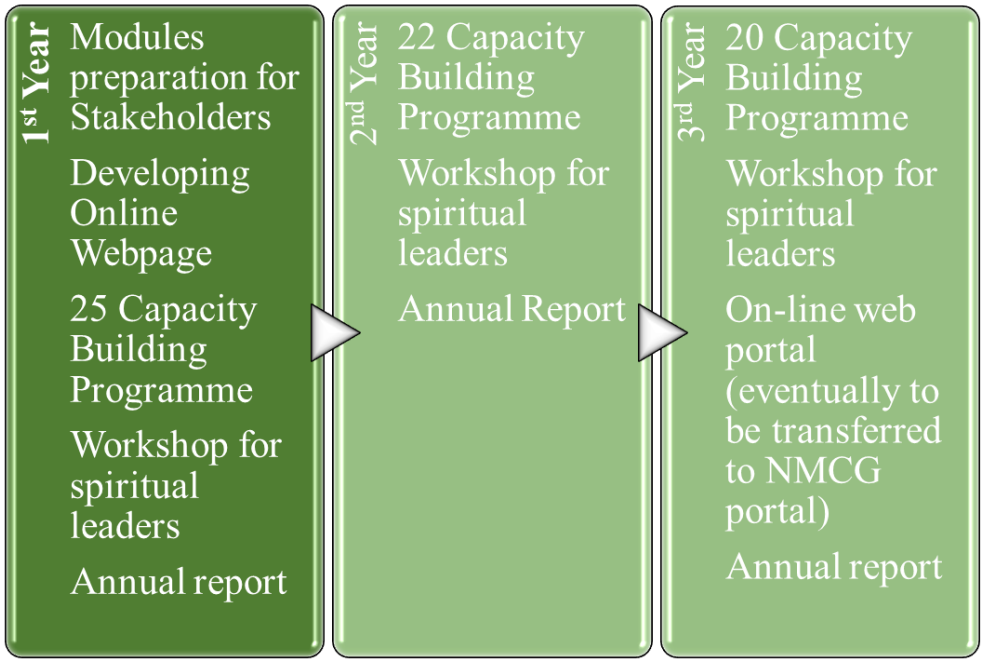


Figure 3: Three-year Project Deliverables

Highlights for the year 2020-21

Capacity building programme training for Stakeholders of river Ganga

MASTER TRAINERS: 672

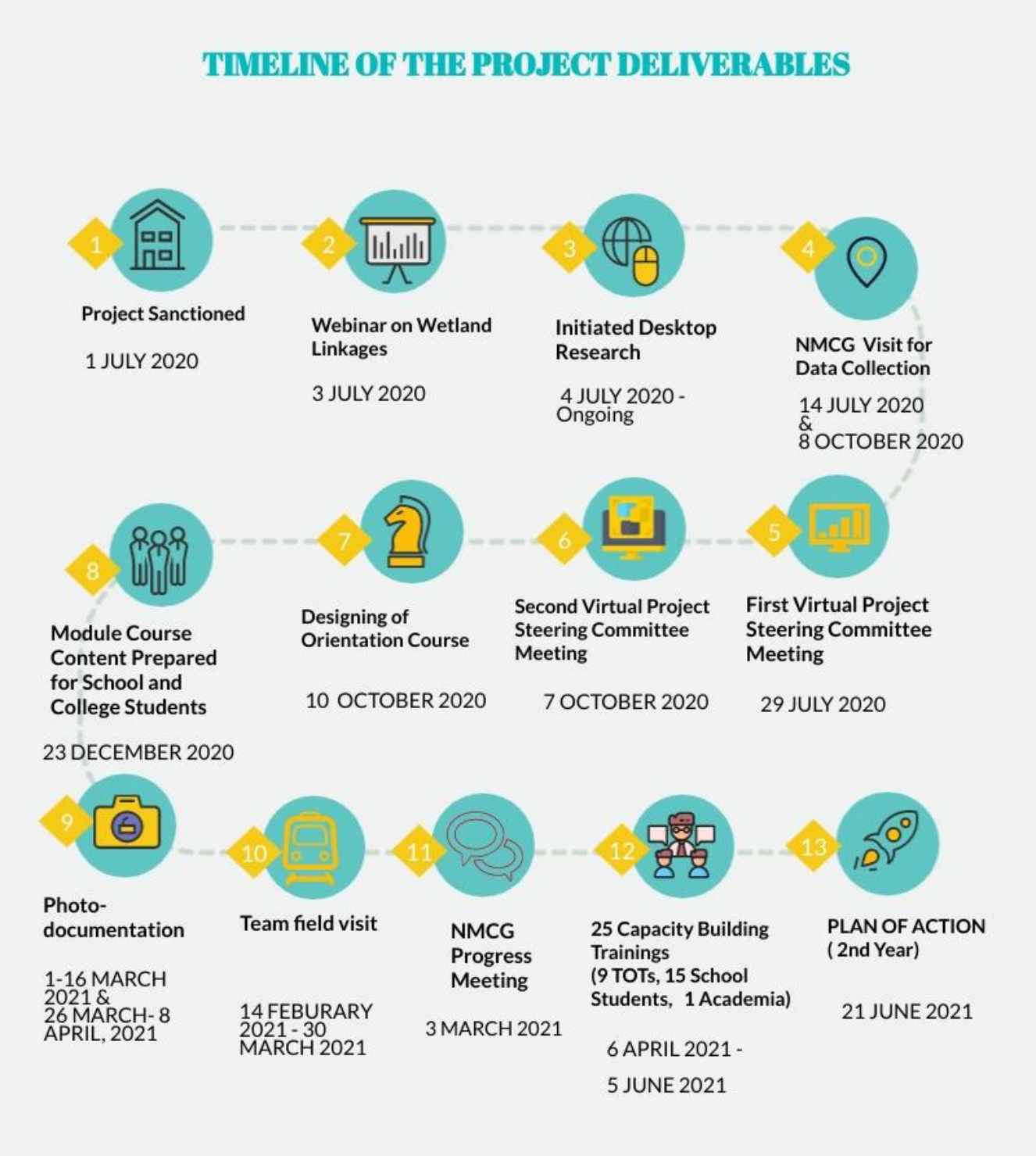
SCHOOL STUDENTS: 8639

GANGA AMBASSDOR (COLLEGE STUDENTS AND ACADEMIA): 650

Summary of Activities

Figure 4: Major Activities during July 2020-June 2021

Timeline (Year July 2020- June 2021)



DETAILS OF DELIVERBLES ACHEVIED

CHAPTER 1: RESEARCH AND MEETINGS

Secondary Literature Review

The main objective of the project is to conduct capacity building programmes for diverse stakeholders. The capacity building programmes will be blend of Face-to-face (f2f) and Virtual Internet Participation (VIP). The tailor-made modules will be developed for wider population of different stakeholders.

Accordingly, intensive data collection and literature review work has been initiated from the first month of project inception. Content analysis is the most critical step in the instructional design process, and it is also pre-requisite for developing specific learning objectives and the curriculum outline. If the researcher does not include accurate and relevant content, then there is little value in finding the best instructional methods and media to transfer the information to learners. The modules for capacity building programmes will be based on secondary data that will be collected from various organizations and their websites working for the rejuvenation of River Ganga.

To start with, the team of research officers visited NMCG on 14th July 2020 to get the background of the Namami Gange Programme and interacted with a concerned officer regarding the key interventions of the programme. The team gathered hardcopies of literature which will be helpful in having an idea about ongoing activities under the programme and these can be referred in the future to explore possibilities of further synergies with other experts/agencies/institutes from respective fields. The team thoroughly studied the materials and online portal was further explored for available literature (**Annexure I**).

Webinar on River Wetland Linkages

Indian Institute of Public Administration (IIPA) has been imparting training and capacity building to various stakeholders since 1954. Even in pandemic situation IIPA has adapted well to new normal while meeting its objectives of knowledge dissemination. With this as a backdrop, IIPA initiated a Webinar series on various themes for reaching out to a large audience. Accordingly, IIPA conducted a webinar on "River Wetland Linkages: Nature-based approach for sustainable water management and rejuvenation of Ganga basin" on 3rd July 2020. Sustainable water

management is very dynamic issue. The main emphasis is to maintain Nirmal and Aviral Dhara of river Ganga. The lead speaker was Sh. Rajiv Ranjan Mishra, IAS, DG, NMCG who briefed the attendees regarding the importance of river Ganga and key intervention under Namami Gange Programme. Prof. C. K. Varshney further elaborated about river, water linkages and its importance in the overall conservation aspect. The webinar was attended by many participants pan India.

At the onset, Prof. Vinod K. Sharma welcomed all dignitaries, speakers, and digital attendees of the programme. He highlighted the importance of river, and the initiatives government has been taking. National Mission for Clean Ganga has been working with states and district authorities to implement various projects for Ganga River basin management. Sh. Ram Mohan Mishra, IAS, pointed out that, "There is a continuous need to consider the junction between government, society, and academia to maintain the *Aviral Dhara* of River Ganga. Ganga flow is maintained by glacial flow and ground water flow therefor while managing the river, importance should be given to ground water and river interface".

Sh. Rajiv Ranjan Mishra, DG, NMCG briefed the participants regarding interventions under *Namami Gange Project* under four main categories: Pollution Abatement; Ecological flow; People River Connect and Research, policy & knowledge management. Sh. S. N. Tripathi, Director, IIPA applauded the initiatives by NMCG, and he remarked that the collaborative work of the Mission with varied stakeholders including community participation is crucial for meeting ambitious targets for clean ganga.

Prof. C. K. Varshney briefed the participants regarding wetlands, related biodiversity and its importance. He also explained multiple connecting pathways of river wetland linkages. It is time to take challenges of catchment area into consideration for maintaining ecological flow of river Ganga. The Webinar concluded of vote of Thanks.

Virtual Project Steering Committees

A. FIRST VIRTUAL PROJECT STEERING COMMITTEE (PSC)- 29th JULY 2020

The first Virtual Project Steering Committee (PSC) meeting was held on 29th July 2020 at noon at the Samiksha Hall, IIPA, New Delhi. The main aim of the PSC was to provide strategic

guidance and support to the project coordinators and project team in shaping very meaningful inception of the project.

The following Agenda items was discussed in the First Project Steering Committee of Blended Capacity Building Programme for the stakeholders of River Ganga.

- Project Presentation: An overview
- Recruitment of Project Staff
- Plan of action for the next six months
- Chalk out the plan for content development (Agency Hiring)
- Any other item

Project Steering Committee members are from different fields of work, with expertise and experience that shall benefit the project in various dimensions. The meeting was facilitated by Prof. V. K. Sharma and Dr. Shyamli Singh, Project Investigators. The minute of the meeting is placed and Member profiles in **Annexure II.**

MEMBERS OF THE PROJECT STEERING COMMITTEE (PSC)

Shri. SN Tripathi, Director, IIPA

Sh. Rajiv Ranjan Mishra, Director General, NMCG

Prof. C.K. Varshney (Member), Emeritus, School of Environmental Sciences, Jawaharlal Nehru University (JNU), New Delhi.

Mr. J.S. Kamyotra, Former Member Secretary, CPCB (Special Invitee)

Dr. S. Satapathy (Special Invitee), Director, Climate change, Ministry of Environment, Forest and Climate Change

Figure 5: First Virtual Project Steering Committee Meeting at IIPA

B. SECOND VIRTUAL PSC MEETING: 7th OCTOBER 2020

The second project steering meeting was convened through Video Conferencing on 7th October 2020 at Indian Institute of Public Administration (IIPA) under the chairmanship of Sh. S.N. Tripathi, Director, IIPA. The deliberations held during the meeting is attached in **Annexure III.**

The agenda of the meeting is as follows:

- To discuss the progress of the project
- To finalise the content development firm
- To reflect on the next plan of action
- Any other item with the permission of the chair

Following members attended the meeting:

- Sh. S. N. Tripathi, Director, IIPA (Chairperson)
- Sh. C. K. Varshney, Former Dean JNU and Emeritus Professor (Special Invitee)
- Sh. S. S. Satapathy, Former Director, Climate Change, MoEF&CC (Special Invitee)
- Dr. J. S. Kamyotra, Former Member Secretary, CPCB (Special Invitee)
- Ms. Priya Sikka, National Mission for Clean Ganga (NMCG representative)
- Prof. V. K. Sharma, Project Investigator, IIPA
- Dr. Shyamli Singh, Project Investigator, IIPA
- Ms. Ishupinder Kaur, Research Officer, IIPA

- Ms. Charu Bhanot, Research Assistant, IIPA
- Ms. Kanishka Sharma, Research Assistant, IIPA

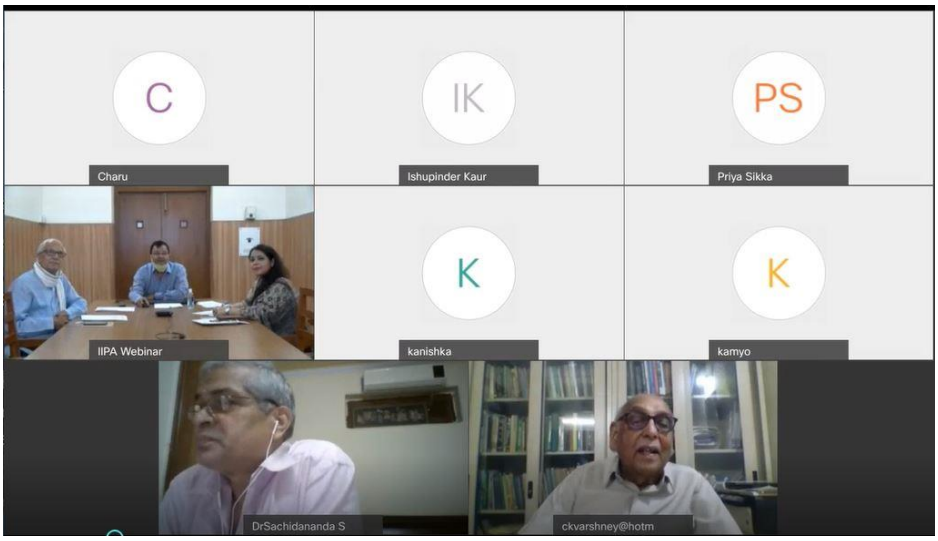


Figure 6: Second Virtual Project Steering Committee Meeting

Project Briefing to NMCG

The IIPA Team informed the project progress to Director General, NMCG and Namami Gange Team on 2nd March 2021 at office of NMCG in New Delhi. The meeting included discussions on objectives and deliverables of NMCG. Minutes of the meeting enclosed in **Annexure IV.**

Figure 7: Meeting with DG, NMCG for Project Briefing

Field visits

The field visit was conducted in four-star states of Namami Gange i.e., Uttar Pradesh, Uttarakhand, Bihar, West Bengal. The objectives of the filed visits aimed at various aspects required as a pre-requisite for the team have been mentioned below:

- School survey for the capacity building training
- Photographic documentation of the major themes of Namami Gange
- Understanding people's perspective on Namami Gange programme
- Visits to the local industries, religious places and ghats
- Meetings with the District Magistrates of each district visited.
- Training information and slot confirmation
- Identification of case studies
- To arrange a workshop with spiritual leaders
- To understand the requirements for training rural communities

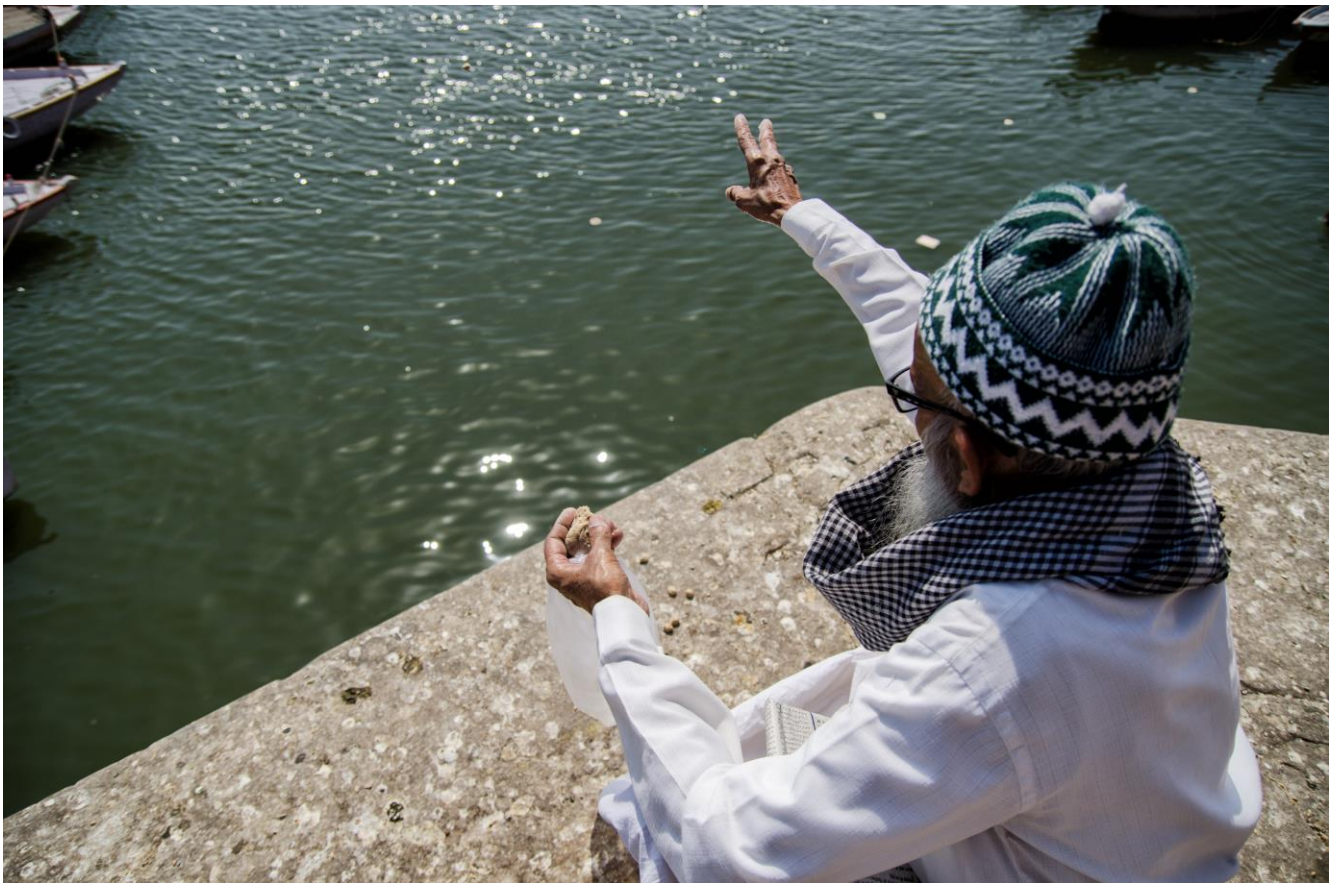


Figure 8: Feeding birds along the ghats of Varanasi

Table 1: Summary of field visits along with dates

City	Dates	Activities
KANNAUJ	14-16 February, 2021	Meeting with Shri. Gajendra Kumar, Additional District Magistrate (ADM FR); Meeting with Sh. Shakti Vinay Shukla, Director at Fragrance and Flavour Development Centre; Visited local schools around the city; Perfume industry with documentation of ITR formation through ancient *deg bhapka* method.
KANPUR	17-19 February, 2021	Meeting with Sri. Atul Kumar, PCS, Additional District Magistrate (City); Visited Bithoor for cultural aspects; Discussion with local traders of leather industry at Jajmau; Visited local schools around the city; Photo documentation of NMCG work at Ganges Barrage, Atal Ghat.
PRAYAGRAJ	20-22 February, 2021	Documentation of Kumbh, Triveni Sangam, Khusro Bagh, Allahabad Fort, New Yamuna Bridge; Visited local traders of Moonj Grass basket at Naini area. Visited local schools around the city;
VARANASI	23-27 February, 2021	Documentation of major ghats along river Ganga, evening Ganga Aarti, Shri Kashi

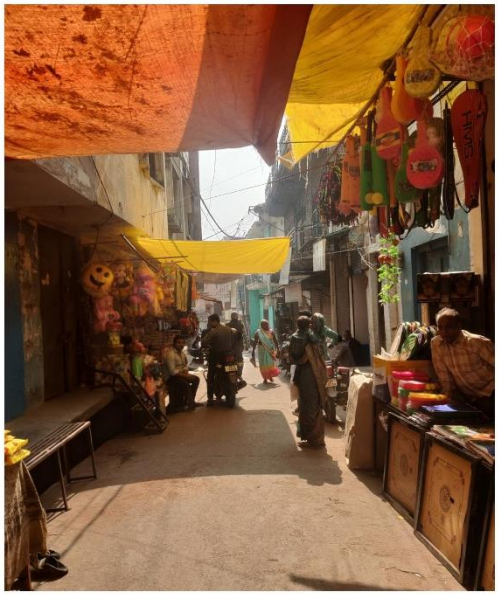
		Vishwanath temple, Dhamek Stupa, Tibetan Temple, Sarnath and Rajghat. Survey of local traders for Banarsi silk weavers through handloom and powerloom in Pilikothi. Visited academia of BHU and took student opinion on Ganga was discussed. Visited local schools around the city;
KOLKATA	8-10 March, 2021	Documentation of ghats, temples, Howrah Bridge, along Hoogly river; Visited local schools around the city; Visit to the East Kolkata Wetlands (Ramsar Site), Local traders of Tant saree and Tussar silk for understanding the value chain at the Dakshinapan Shopping Centre launched by the Kolkata Improvement Trust (KIT).
HOWRAH	11 March, 2021	Visited local schools around the city
GAYA	12-16 March, 2021	Meeting with Shri Abhishek Singh, IAS, District Magistrate, Gaya. Documentation of various site like Vishnupad, Bodhgaya, MahaBodhi Temple, Falgu River Visited local schools and charity schools in the city; The power handloom industry workers were surveyed for their cotton-based product and reachability.

PATNA	17-20 March, 2021	Documented Ghats rejuvenation under Namami Gange; Visited local schools around the city; Cluster workers of Tikuli Painting; Reginal handloom houses for understanding the value chain Madhubani Painting on fabrics, Bhagalpuri silk.
DEHRADUN	21-23 March, 2021	Visited local schools around the city. Meeting with Dr. Manisha Thapliyal, 'Scientist F', Forest Research Institute. Documentation in Rajpur Village, Ghantaghar, Mussoorie Lake
RISHIKESH	24-26 March, 2021	Visited local schools around the city. Meeting with Ganga Nandini Ji Paramarth Niketan Ashram Documented Lakshman Jhula, Ramjhula, Seeta Ghat, Rajaji National Park, Beatles Ashram, Tapovan
HARIDWAR	27-29 March, 2021	Meeting with Mr. Himanshu Singh, District Youth Officer from Nehru Yuva Kendra, Haridwar. Surveyed Ms. Swati Kalra, Research Fellow, Uttarakhand Pollution Control Board. Ghats documentation for NMCG efforts at Har Ki Pauri Ghat, Asthi Visarjan Ghat, Chandi Ghat

A

B

C

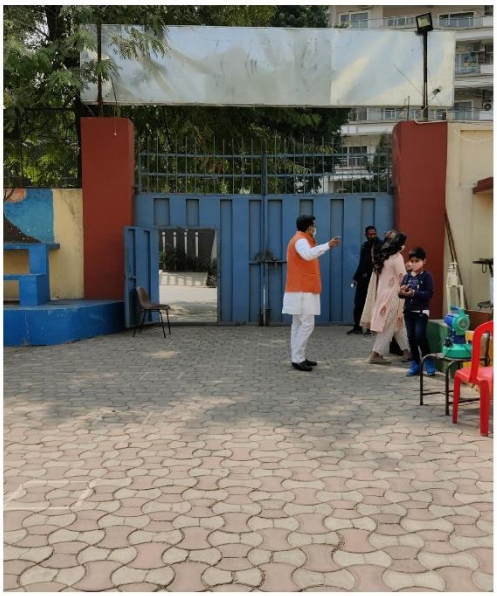


D

Figure 9: Kannauj (A) Fragrance and Flavour Development Centre, Kannauj; (B) Regional School Visit; (C) ITR formation through ancient deg bhapka method; (D) City Market Visit

A

C



B

D

Figure 10: Kanpur (A; B) Regional School Visit; (C) Local Nehru Yuva Kendra; (D) Local Market Visit

A

C

B

D

Figure 11: Bithoor (A; B) Patthar Ghat ; (C) Bithoor Mandir; (D) Regional Boatsmen

A

B

C

D

Figure 12: Prayagraj (A) Allahabad Fort; (B) Triveni Sangam; (C) Moonj Grass; (C) Naini Bridge

A

B

C

D

Figure 13: Varanasi (A) Handloom Artisan; (B) City vendors; (C) Evening Aarti; (D) Power loom

A

B

C

D

Figure 14: Kolkata (A) East Kolkata Wetlands Ramsar Site; (B) Water Pumping Stations; (C) Kolkata Bridge; (D) Belur Math

A

B

C

D

Figure 15: Gaya (A) MahaBodhi Temple; (B) Giant Buddha; (C) School Visit; (D) District Magistrate Office

A

B

C

D

Figure 16: Haridwar (A) Forest Research Institute; (B) Parmarth Niketan; (C) Kumbh 2021; (D) Elderly woman selling offering for Ganga Mata

Feedback

Each training program had feedback forms. We also received mails and messages on the success of the program.

- Student Feedback Form **(Annexure V)**
- Training of Trainers Feedback **(Annexure VI)**
- Academia Feedback **(Annexure VII)**

CHAPTER 2: MODULES FOR STAKEHOLDERS

The modules serve as an introduction to the Namami Gange approach and its application to capacity development. It illustrates the River Basin Management Approach in a straightforward, coherent, and accessible manner for the benefit of development practitioners both within and outside the system. The modules give a practical guidance to real-world based examples and knowledge that can be used to build and contribute to national capacity development. It focuses on smart institutions, visionary leadership, access to knowledge, and public accountability mechanisms as capacity change drivers, drawing on data and strategies throughout the basin and combining country-led experiences and institutional lessons. The Primers provide access to various resources, but do not profess to encompass all information, perspectives, and practices in this vast field of Ganga Rejuvenation. Further, modules or aspects of interaction have been tailor-made to the relevant stakeholder. However, we believe it serves as a convincing and intriguing introduction to areas of work and practice that is critical to achieving long-term human development achievements.

Modules for School Students

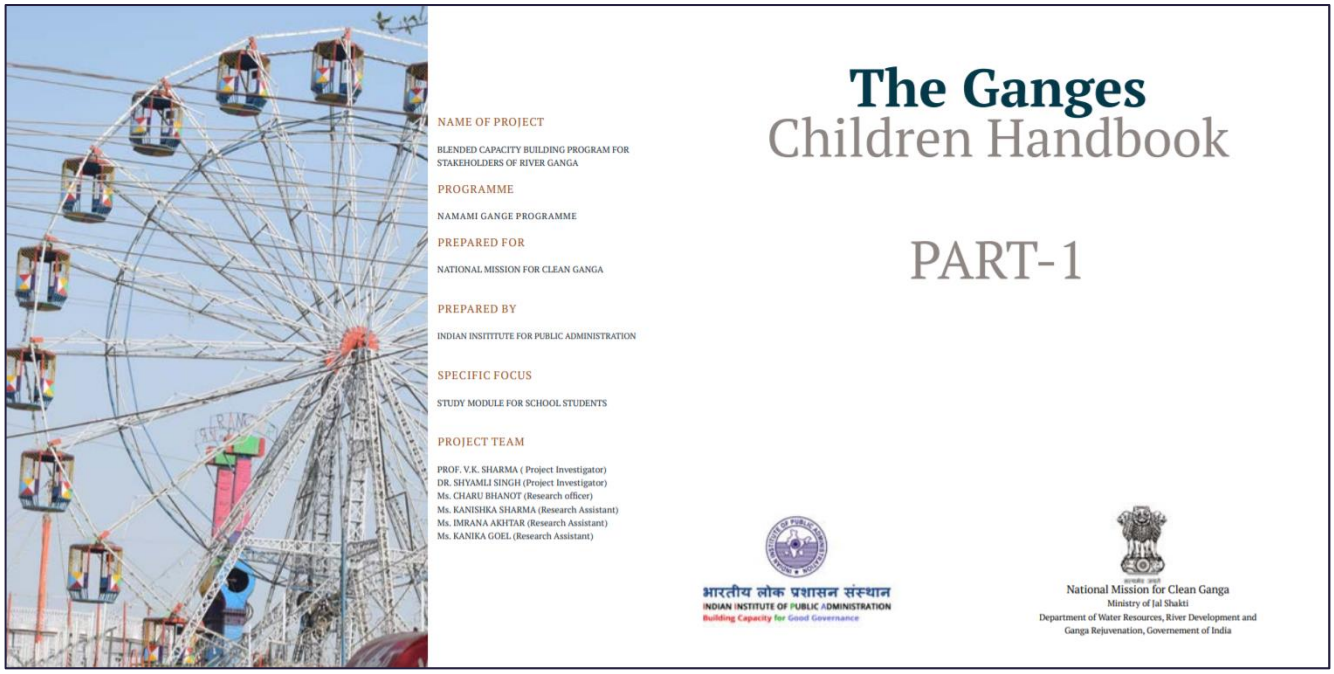


Figure 17: Cover page of part 1 School Student Module

The handbook encompasses a holistic view of the river Ganga and its various aspects, the 'Ganges -Children Handbook' consists of four sub modules for the ease of understanding as well as delivering the sessions. The first sub module's theme is about the identity of the river that describes the journey of Ganga from Gangotri to Ganga Sagar, its historical mentions, glorious legends attached to river Ganga, touches on cultural and economic significance of the national river, and covers the landmark, cities, World Heritage Sites and Ghats. At the end, children engage in activities on the related to factual portions covered. The second sub module explains the faith-the intangible form of revering Ganga describing traditions, cultural practices, religious and pilgrimage sites, stories about social practices, the sixteen samskaras and festivals celebrated on the banks of river Ganga. After the session students-trainers engage in storytelling session about their experiences with the river Ganges. The third sub module describes Ganga ecosystem's where in forests, wetlands, aquatic life, flora, and fauna are covered. Protected areas like biospheres reserves, national parks, Wildlife sanctuaries, Tigers reserves, RAMSAR sites and other natural and sub-natural habitats for biodiversity are discussed. After the module, there are two important activities for students to interact regarding identification of flora and fauna of the river. The fourth sub module about Ganga Rejuvenation discusses about the timeline various efforts by government, shift towards Basin Based Approach, inception of NMCG, Missions of NMCG and some initiatives under the Namami Gange Programme. The module ends with discussion on the role of children in conservation and rejuvenation activities of the National River-Ganga.

Figure 18: Interactive outlook of School Student Module

After the going through the handbook students would be able to explore various aspects, facts, and diversity about Ganga, discover River Ganga through dialogues, bring forward new ideas and innovation, keep the Ganga and other water resources in their surroundings clean and become green ambassadors as a skilled workforce for the nation development by carrying forward knowledge with new seed of knowledge implanted in them.

Modules for College Students

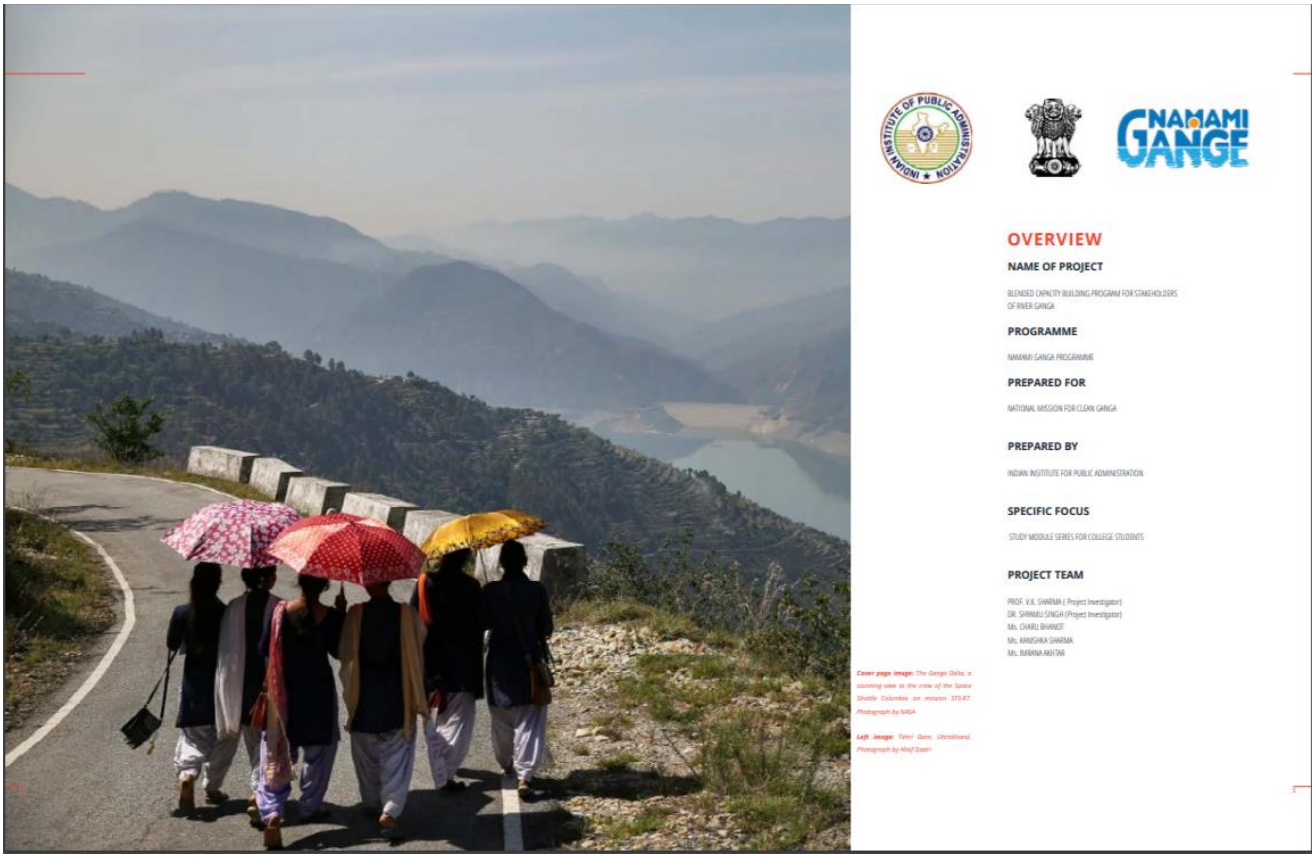


Figure 19: Title page for College Module

Technical briefs on major aspects of river Ganga are designed for the college students with many branches of information into a condensed form for better understanding of varied subjects. All of them were designed on a singular same format and features for quick access of data to refer to. Detailed research was conducted to prepare and design the six advanced study modules. Some of features include maps, infographics, terminology explanations, factual notes, quotations, case examples, on-site observations, present condition photographs, detailed cross referencing of data, recall exercise and scan codes for additions readings on most of the topics discussed.

The first module briefs about journey of Ganga, network of its tributaries and distributaries, Ganga River Basin, the scientific phenomena of the origin of Ganga and features of Ganga

River system like hydrology, geology, wetlands, and Lifeforms. The second module discusses about significant spaces and places of Ganga, prehistoric sites along the riverbank, UNESCO recognized World Heritage sites, intangible cultural heritage of humanity in River Ganga Basin and the Ghats along the river Ganga. In the Third brief on life lifeforms on river ganga describes about important ecological habitats of Ganga River Basin, the lifeforms in them and leading threats, diversity forests that co-exist in Ganga River Basin, the sixteen important wetlands, several ecologically sites that are protected by laws which have many endemic and threatened species, ecosystem roles of biodiversity along the ganga, factors disturbing the ecological integrity and some exciting case studies, stories and facts. The fourth module on ecological and economic aspects covers ecosystem services, economics, grossly polluting industries like tanneries, paper pulps, sugar mills, textile bleaching and dyeing. The choking condition of river as a result of improper sewage disposal, mass rituals activities, hydro projects, disposal of excess plastic and excess water abstraction along the banks of Ganga. The fifth module briefs on faith in Ganga describes Ganga as holy river, religious places of significance in the Ganga basin, manifestation of faith in festivals and events, depiction ancient art/ iconography- association of animals with God and Goddess along Ganga, Significance of Ganga River, need for sustainable religious practice with case examples, other faiths and Ganga's identity in different countries across Indian sub-continent.

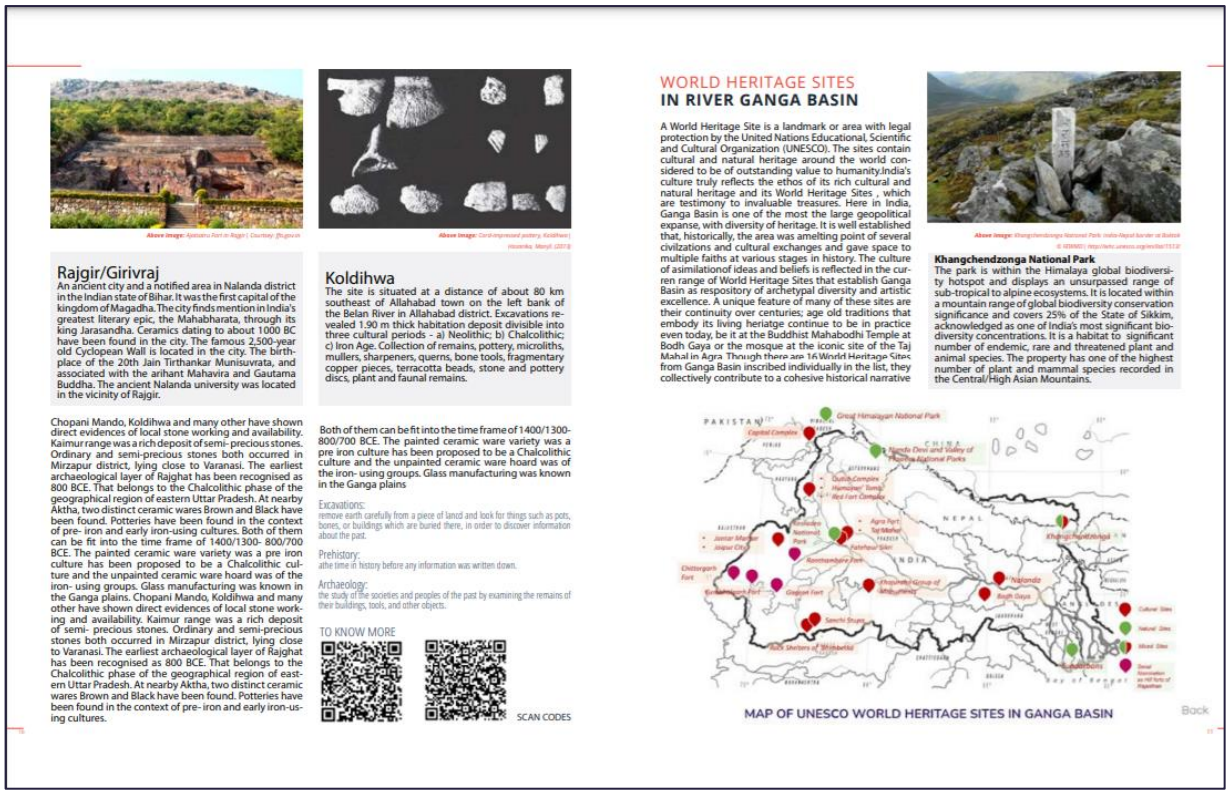


Figure 20: Modules snap showing interactive sections.

the sixth module on ganga's rejuvenation discusses rejuvenation of River Ganga, Ganga Action Plan (GAP), National River Conservation Plan (NRCP),National Ganga River Basin Authority (NGRBA),Basin-Based Approach, visions and missions of National Mission for Clean Ganga (NMCG) and thrust areas of Namami Gange Programme, Projects under Namami Gange Mission covers short term, medium term and long-term activities and the progress so far.

Orientation course

The orientation course has been key strategy for capacity-building that aims to reduce reliance on outside specialists as sources of information, resources, and solutions to community problems. Capacity building encourages stakeholders to understand and act on key issues by preventing a dependency connection with outsiders from growing. The course will help develops a sense of ownership and empowerment among community partners, allowing them to take more control over their own development.

Objective of the orientation course:

- Develop a cohort of local youth who are trained and motivated to participate in project activities.
- Raise awareness and educate target audiences about the hazards and implications of a polluted Ganga.
- Sensitize and gather support from people from all walks of life for the mitigation of pollution towards conservation of the Ganga and its tributaries.
- Provide information on existing government programmes for clean Ganga.

The IIPA will be developing 10 Modules of 30 minute each on Ganga and its sub-themes. We have developed three videos and rest seven are in scripting and editing stage. The themes for the courses are:

- Mythology and History
- History
- Ecology
- Culture and Religion
- Urbanization
- Commerce and Economics
- Pollution
- Sociology
- Legal

- Reformation

Virtual Gallery: Ganga Darshan

In this digital exhibition, the team employs technology for self-expression and self-exploring to actively engage the users in active discussions while explaining about the spaces and places of in River Ganga Basin. In making visible both the restrictions and the freedoms of digital culture, students explore about various World Heritage Sites, Ramsar Sites, Ghats, Festivals, Prehistoric sites, Prehistoric industries that were created, transformed, or celebrate life around Ganga. For some, technology is a means to access: a religious place, an archaeological exploration, a perspective view of monuments and sites. Others interrogate the power relations of nature and culture, from a national site like Kanchenjunga National Park to Nanda Devi National Park and other internationally crucial that wetlands that serves as a habitat for life to inhabit those places.

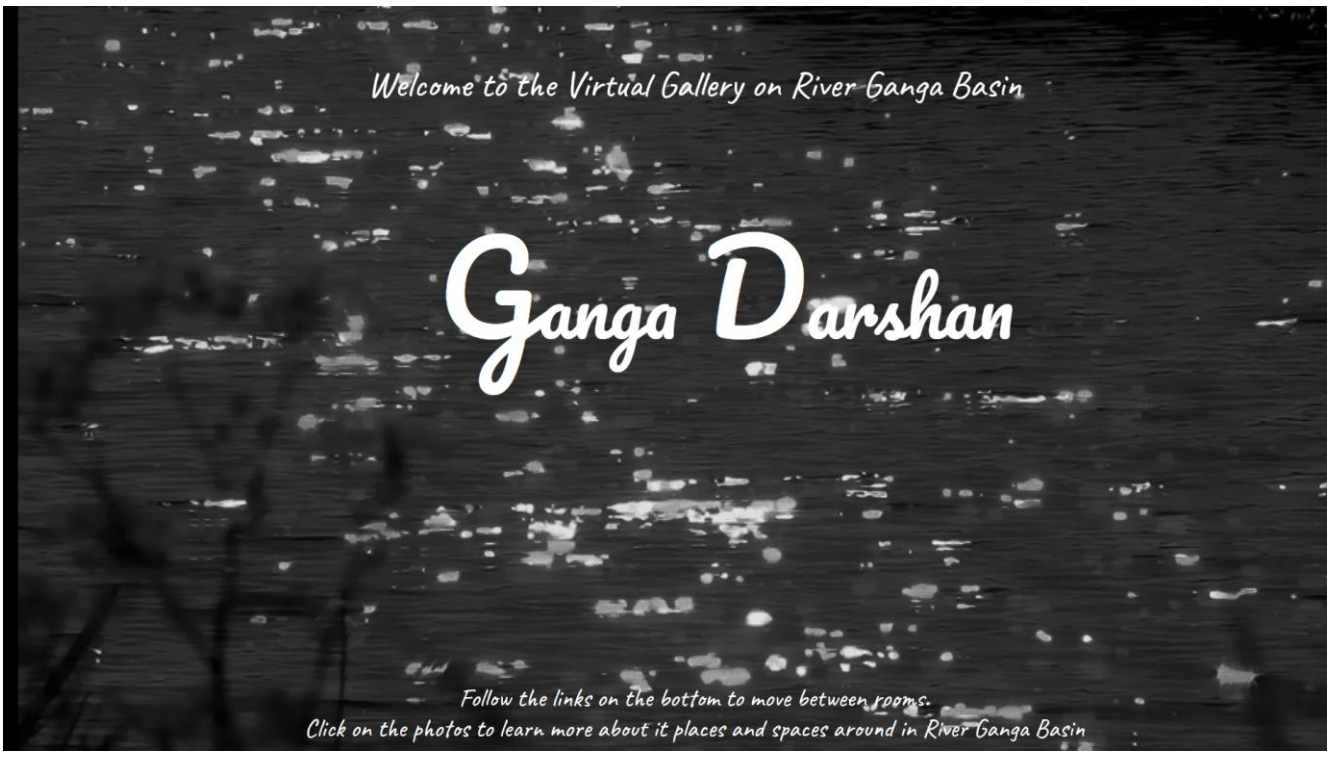


Figure 21: Cover tile of Ganga Darshan

The next two themes describe about the famous Ghats of Ganga and festivals celebrated that area celebrate with great zeal on the banks of Ganga. The last two themes touch the relatively lesser-known facts about the archaeological sites and their trade significance. In this manner, team appropriate technologies to narrate, explore visuals, or engage their identities and

histories. As one strolls through the digital rooms, one has opportunity to click on any given artefact in digital rooms and the description provides the statement of significance collected from various authoritative data resources.

One can visit the gallery by clicking (https://docs.google.com/presentation/d/1WW6bEIssdL-BrIAV15edmPIEOeoveVo43jPrqpMJTaY/edit?usp=sharing)

Figure 22: Room tile of Ganga Darshan

The idea of individual context, of experiential relativity, threads together the works in this exhibition, and structures its form and its content. The visitor is invited to travel a branching, non-linear, virtual path through themes who explore the transformation of individual identity that digital tools and internet connectivity have co-produced in our lives as an escape directly to outside world.

Photo Documentation

The photographer consultants and their multidisciplinary team of technical specialists have been outlined of the assignment. The outputs expected from the assignment for the project of 'Blended Capacity Building programme for Stakeholders of river Ganga' under Namami Gange Scheme were laid in the TOR.

The documenting team has been gathering photos and stories. For the photos, they have been collecting a variety of shot types - e.g., extreme close-ups, close-ups, mid shot, long shot, staged shots, and action shots. In addition to a variety of shot types, it would be important to gather photos that showcase people (especially if they have provided a quote), process/es, technological innovation, working experience with government stakeholders, local communities are highly desirable in this consultancy.

There will be component of photo stories:

- Location (where): Name the place/city, where the picture was made.
- Date (when): Provide the date the photo was made using the format YYYY-MM-DD
- Description: What is occurring --the action --in the photo? Or what are we seeing?
- Explain the purpose or reason why this is occurring, the context if you will.
- People: Who is in the photograph?

The team has been working on required to produce a package of photographs/clips to illustrate the following aspects on Ganga.

- Major cities (as listed above) and its historical, cultural, social, and economic aspects.
- Biodiversity profile of Ganga with protected areas demarcated by government.
- Major industries along river ganga (distillery, sugar, pulp, paper, tannery, and textile)
- River basin management for areas of ecology and water quality (Interviews of experts)
- People directly dependent of Ganga for their livelihood's interactions with ganga river like fishermen, pandits.
- Historical sites and places of interest of tourists along river ganga as listed the IIPA team.
- Demonstration of riverfront development, river surface cleaning, afforestation, ganga gram as listed by IIPA team.
- Local level stories on tradition knowledge system, defence system, water networks, pilgrimage routes.

Figure 23: The photo-documentation team at Banaras

SOME GLIMPSES OF PHOTODOCUMENTATION ASSIGNMENT

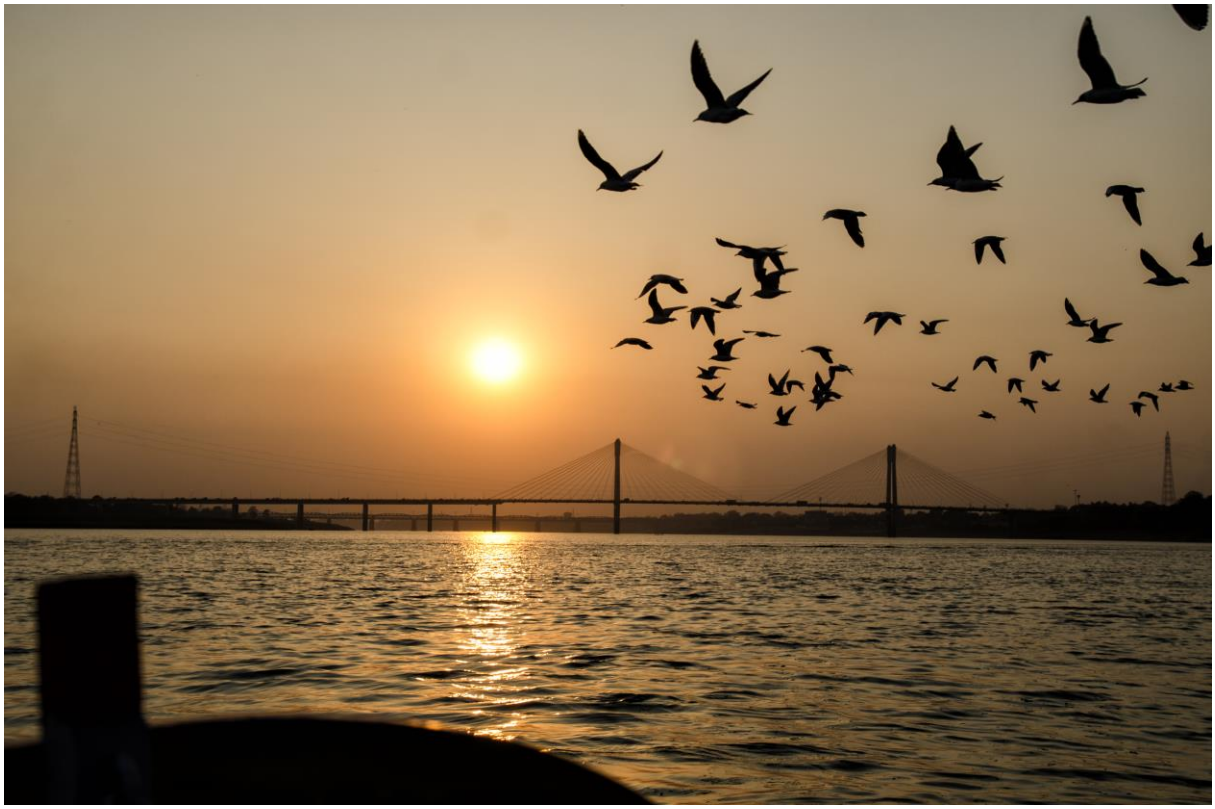


Figure 24: Sunset at Prayagraj, Uttar Pradesh

Figure 25: Boating at Prayagraj, Uttar Pradesh

Figure 26: : Evening aarti at Dashashwamedh Ghat, Varanasi

Figure 27: Auto Harp player at banks of river Ganges in Varanasi

Figure 28: Evening sunset at Varanasi

Figure 29: People and livelihood in Varanasi

Figure 30: Flower shower offering to Ganga Mata at evening Aarti

Figure 31: Rituals performed along Ganga

Knowledge Products

A. Ganga Anecdote

The IIPA has started initiatives with academia for Ganga Anecdote for collaborating case studies of Ganga Basin from various sub themes in mentioned **Annexure VIII**

Ganga Anecdote

Competition invites contribution Case studies on Ganga basin for the mentioned focal themes from the Target Group. The case studies shall be submitted in provided submission layout will only be accepted. Each entry should have Title, Author names, Affiliation, Address for correspondence, Emails of authors with four to five keywords on any one or more of the sub-themes. Authors are expected to submit their write ups on the link given in registration details.

The "Ganga Anecdote" will be judged on the following criteria:

- **Relevance with Focal theme**
- **Originality**
- **Structure and Writing**

B. Ganga Sahita

IIPA is also creating a School-Student Interaction repository for Ganga Basin Management under the umbrella of Sustainability & Environment. The approach will recognize the multifaceted societal challenges we face that we believe can be best addressed by full involvement of the people who hope to benefit from knowledge repositories. It is an opportunity for the stakeholders towards learning from the best practices and examples from schools. The personal level collaboration of students will make them directly connected with the program and its objectives in a more practical and hands on manner.

The categories are made in broader understanding any relevant focus area for Ganga River Basin Management not mentioned below is also invited to increase the respective domain knowledge. Details in **Annexure IX.**

SUBMISSION CATEGORIES

Figure 32: Submission categories for Case studies from School Students

CHAPTER 3: CAPACITY BUILDING PROGRAM

Capacity building is one of the key activities undertaken by IIPA to strengthen an organization's operations and to help it achieve its mission by integrating people's participation. Identifying the urgent need to develop capacity of stakeholders who can work together as a community to strengthen the Conservation and Rejuvenation of River Ganga, NMCG entrusted IIPA with a task of its own kind.

As part of a true collaboration with young minds as development actors, youth are involved in the first phase of the programme cycle of the capacity-building of other youth through peer-to-peer trainings, NMCG supports a series of significant trainings that provide a variety of capacity building choices for young people in order to guarantee that they are well-equipped to achieve the goal of Clean Ganga. The IIPA brings the concept of youth as drivers of change.

Further, capacity building programmes are designed to meet the training needs of every teacher. The programmes were created to bring out the best in them and inspire them to take things from a fresh perspective. Generation Y and Generation Z have quite different learning techniques. Learners today are motivated by those who have made a reputation for themselves in society, particularly on digital platforms, and who are willing to share what they know. As a result, education is no longer confined solely to bookish notions or to completing a textbook. It is the goal of modern education to make students aware of their surroundings and prepare them for the future by honing their skills and knowledge.

Keeping the above idea in mind IIPA built training modules for school and college students, IIPA embarked on the journey of conducting training programmes for the identified stakeholders. To boost learner's efficiency and adjust to the times, a mixed route of training was rolled out to avoid the limitations of distance and to build engagement simultaneously. This was considered as a safer solution to impart knowledge and skill during the unprecedented times.

Figure 33: : Elaborate detail on School training Session

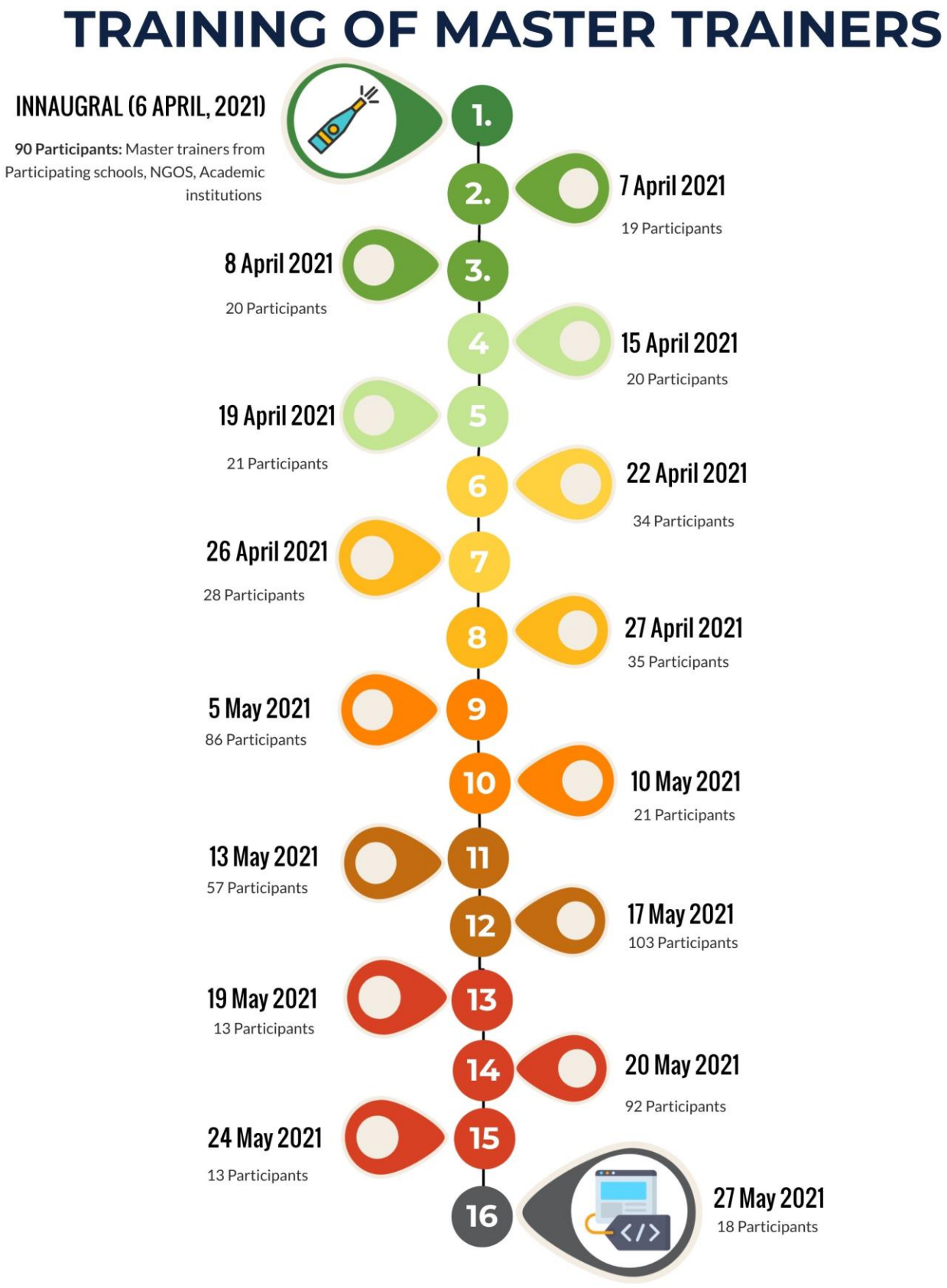


Figure 34: Elaborate details on training of Master trainers

Capacity Building Programme for School Students

To create a multilevel approval process, mails were sent to schools of the star states that provided them the information about the programme. Along with that, a consent form to receive their formal affirmation and to obtain their details for coordination was given. To enhance the visibility of the programme and to bring in transparency, the research team visited the schools to clear out the apprehensions, if any.

A total of 79 schools offered their support and cooperation for sensitizing the students and teaching staff pertaining to the issues related to River Ganga. 16 Slots were made for the entire month of April and May to adjust to the schedule of schools. As per their convenience and availability, the slots were confirmed. Teachers volunteered for the role of master trainers. They took the responsibility to serve as an awareness guide and later reference for trainees. Students from standard 6^{th}-12^{th} gave their names to the nodal teachers who helped a great deal in coordinating the training programme. Many schools however, dropped out at the end even after getting their slot fixed because of the pandemic situation getting worse.

Accordingly, the team geared up to prepare resource material for teachers as well as students. Presentations were made, games and quizzes were built to gain maximum interaction from the stakeholders. The participating schools are enlisted in table 1.

Table 2: List of Participating schools

1. Delhi Public School, Uttar Pradesh	2. Shri Dashmesh School, Uttarakhand
3. Holy Kids International School, Bihar	4. Shri Mahaprabhu Public School, Uttar Pradesh
5. Amrita Vidyalayam, West Bengal	6. Sunbeam School, Uttar Pradesh
7. Indian Public School, Bihar	8. Athenia High School, Uttar Pradesh
9. Prarambhika School, Bihar	10. PSN Sr. Sec. School, Uttarakhand

11. Maharishi Vidya Mandir, Uttar Pradesh	12. LJD Public School, West Bengal
13. Jawahar Navodaya Vidyalaya, Uttarakhand	14. Sri Sri Academy, West Bengal
15. Bharat Academy and Sciences, West Bengal	16. Bakshi Memorial Public School, Uttar Pradesh
17. DAV Model School, West Bengal	18. Doon convent School, Uttarakhand
19. Children's Academy, Uttar Pradesh	20. Badrinath Tiwari Inter College, Uttar Pradesh
21. Delhi Public School, Patna	22. Dehra Public Inter College, Banjarwala
23. GD Goenka Public School, West Bengal	24. Griffins International School, West Bengal
25. R.A.N Public School, Uttarakhand	26. S.R. Vidyapeeth, Bihar
27. Sughar Singh Academy, Uttar Pradesh	28. Sanskar Public School, Uttar Pradesh
29. Bal Bharati Public School, Bihar	30. The Mount School, Bihar
31. Techno India Group Public School, West Bengal	32. Delhi Public School, West Bengal
33. Dharma International School, Uttarakhand	34. Delhi Public School, Uttar Pradesh
35. Tagore Public School, Uttar Pradesh	36. Delhi Public School, Firozabad, Uttar Pradesh
37. DAV Centenary Public School, Uttar Pradesh	38. Delhi Public School, NTPC, Uttar Pradesh
39. C L Gupta World School, Uttar Pradesh	40. Delhi Public School, Haldwani, Uttarakhand

In line with the master trainers, interactive sessions were held on the other two consecutive days to prepare the children and make them eager to cooperate, share their ideas and experiences regarding River Ganga and its preservation. For this, children were shown videos and presentations to understand the deeply knitted workings of the river system and the environment at large.

In compliance with the most recent changes in the environment, Dr. Shyamli Singh reflected on the key aspects of River Ganga that were to be discussed in the upcoming days. Besides, Prof. Vinod K. Sharma engaged with the students and motivated them to take part in the cause.

Ms. Imrana, Project Assistant, briefed the journey of River Ganga along with its cultural, spiritual and economic significance through the training modules. Afterwards, Ms. Charu Bhanot, Project Officer, introduced the participants to the learning management system (LMS) to locate the tailor-made modules and videos and go through them at their own pace. This also enabled the participants to mark their attendance for the day. Ms. Kanishka Sharma, Project Assistant, exhibited Ganga Darshan: Virtual Art Gallery to showcase different places and spaces in and around Ganga. Additionally, the ways in which the Ganga's ecosystem provides services to us along with the government's efforts in rejuvenation of River Ganga were traced.

Students were engaged in time-based quizzes and were given a chance to exchange their thought-provoking ideas relating to cleanliness, water conservation and waste management. Brilliant ideas were given by students and taken note of by the trainers. It was followed up by a query and feedback session.

Among school children, Moulik Arora- a 7th Standard student of Athenia Public School, Uttar Pradesh - reflected his excitement when he interacted with the project investigators on the valedictory session of his training. He deemed the entire programme "wonderful" and thanked entire Ganga team for contributing to his knowledge.

Alongside, students were given the activity to make posters on the theme 'Save Ganga'. The winners of the competition were announced by Shri S.N. Tripathi, Director General, IIPA on the valedictory session. Three best posters from each school were given cash prizes. DG, IIPA appreciated the efforts of the students and applauded them for being a part of the programme. Moreover, he emphasized on the need for improving the quality of life by taking care of the environment The valedictory came to a close with the Vote of thanks delivered by Prof. Vinod K. Sharma as he thanked DG, IIPA for gracing the event with his presence. He also thanked all the participants and the whole IIPA team for their constant effort and help to take the programme to a whole new level of success. A sum total of 8,527 students participated in the training programme. (**Annexure XI**)

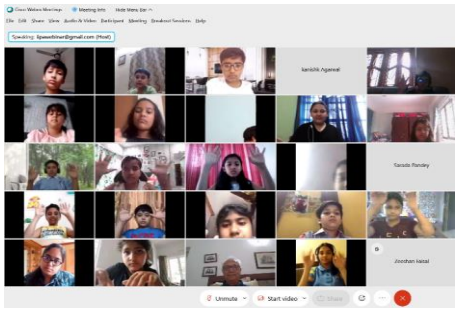
Nodal teachers at the concerned schools were constantly in touch with the IIPA team. The nodal teachers of Bharat Academy and Sciences informed the PI that the students of their school were a bit hesitant in taking part in the programme. For this, a special introductory session was arranged for Bharat Academy and Sciences, West Bengal, to inform them about the significance of the programme. This cleared out their initial hesitance and they enthusiastically participated in the programme.

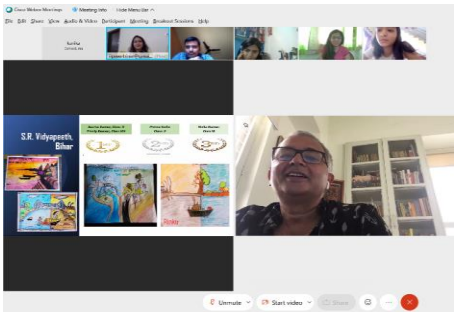
"The webinar was very knowledgeable and was fantastic. We could learn many new things from it and also motivated me to take an initiative to save rivers especially river GANGA which is one of the 10 endangered rivers of the world. The efforts that the IIPA organization put were really praise-worthy and the different ways they used to make an interactive and easy learning and for understanding am very thankful to the school that they conducted this webinar for us.

-Khushi Agarwal, Student, RAN Public School

Figure 35: Blended training for School Students by the Project investigators

Some glimpses from the student capacity building programme





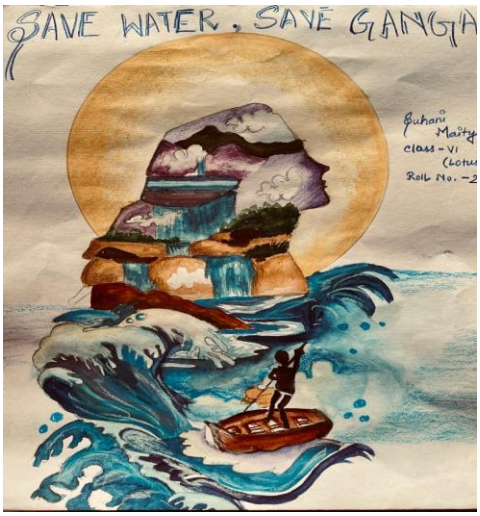
"Our school children are contented with the programme and were attentively present all the three days. I express my sincere appreciation for the programme. We were familiar with a few things, but the way the team has covered all the details of the River is commendable."

-Ms. Hemanti Nayak, Teacher, Prarambhika School

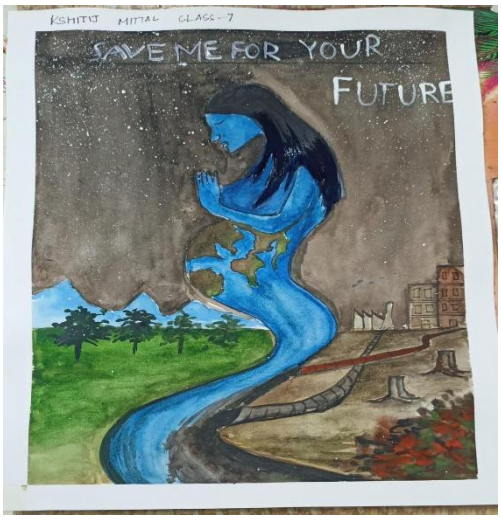
Posters as submitted by students on theme 'Save Ganga'

Sarthak Bharti,
Class VI
Prarambhika School,

Deepika Lohani,
Class XI
Doon Convent School,



Suhani Maity,
Class VI
Techno India Group Public



Kshitij Mittal,
Class VII
Sri Sri Academy, Siliguri,

Sanidhya Rawat,
Class IX
R.A.N. Public School,

Rohit Thakur,
Class X
Mother Teresa

The journey of training school children for the first year came to an end by urging them reflect on the efficient ways to cement the received knowledge. To reinforce learning and bring out the practical outcome of the training, trainees were asked to implement behavioral change. Besides reflecting their idea of River conservation through posters, children also shared their

revolutionary insights on protecting the river and the linked environment through other mediums.

Shohil Prakash, a student from DPS Patna cited an example from Japan that he believed could help in cleaning the river if implemented in our country. A Japanese man named Marino Morikawa has come up with a bubbling Nano-system which consists of adding a microbubble solution to contaminated waters and using biofilters. “The micro-Nano bubble has an electromagnetic field of positive and negative ions that works like a magnet. On the way to the surface of the water, it attracts viruses and bacteria, kind of like catching them in a spider’s web”. The tiny bubbles trap and paralyze bacteria, and the filters contain clay that retains inorganic pollutants. In just 15 days, Morikawa was able to revive the wetlands and wildlife came back to the area. With this technology,

Two students from Prarambhika School – Abhirav and Ayush Mishra, shared their accidental experiment that turned out effective in controlling the pollution on the river side. The two of them found a solution of controlling the excessive deposition of Styrofoam plates, as they are excessively used in Dhabas and parties. They shared a video with IIPA in which they provided a solution to get rid of the used disposable cups and plates. The experiment shared that 100ml of Lemon oil/orange oil can easily help dispose 2 kg of Styrofoam. Though the idea has been doing rounds already but

Additionally, the schools shared their eco-club activities with IIPA and encouraged the students to participate in water conservation and waste management.

A student from Shri Dashmesh School on “Water, Biodiversity & Waste.

Students of Pauri Garhwal school took part in plantation drive.

Capacity Building Programme of Master Trainers

IIPA launched the blended training programme on 6th April 2021, which continued its course in April and May 2021.

Shri Rajiv Ranjan Mishra Ji, Secretary and DG, NMCG, honored the participants virtually with his presence for the launch of the programme. On the very first day, participants were familiarized with the functioning of IIPA (implementing agency) and NMCG (sponsoring agency). DG, NMCG reflected on the need of the programme by making the trainers aware on how the river doesn't need a lot of management, it is we who need management in our own behavior. "The best and the easiest way for River conservation is to become efficient in the way we use water", he said.

He highlighted the need to join hands with schools to make Ganga "Nirmal" and "Aviral". He simplified the terminologies for students to better understand the approach taken by the government and reflected on the involvement of children in the holistic approach.

Shri S.N. Tripathi, DG, IIPA presided the programme by engaging with the master trainers. He interacted with the teaching staff particularly emphasizing on the need to inculcate habits that would not only lead to the conservation of the river but of all the natural resources and environment at large.

At the outset, Dr. Shyamli Singh, Project Investigator, heartily welcomed the teaching staff and the students of the concerned schools. Master trainers were familiarized with the functioning of IIPA and the importance of training in the session.

Prof. Vinod K. Sharma, Project Investigator, introduced the training programme and laid down the expected outcomes of it. He referred to the would-be master trainers and gave them the responsibility to take forward the knowledge pertaining to the river.

In accordance with the most recent environmental changes, major concerns surrounding the river were raised to help the participants evaluate the current situation of the river. At the end, they took the Namami Gange Pledge to abide by cleanliness and water conservation practices.

The programme saw a phenomenal response. About a total of 670 master trainers were given the responsibility, some of which were from NGOs, Universities, and other institutes. **(Annexure XI).** What made the entire endeavor worthwhile were the words of encouragement that the participants left us with.

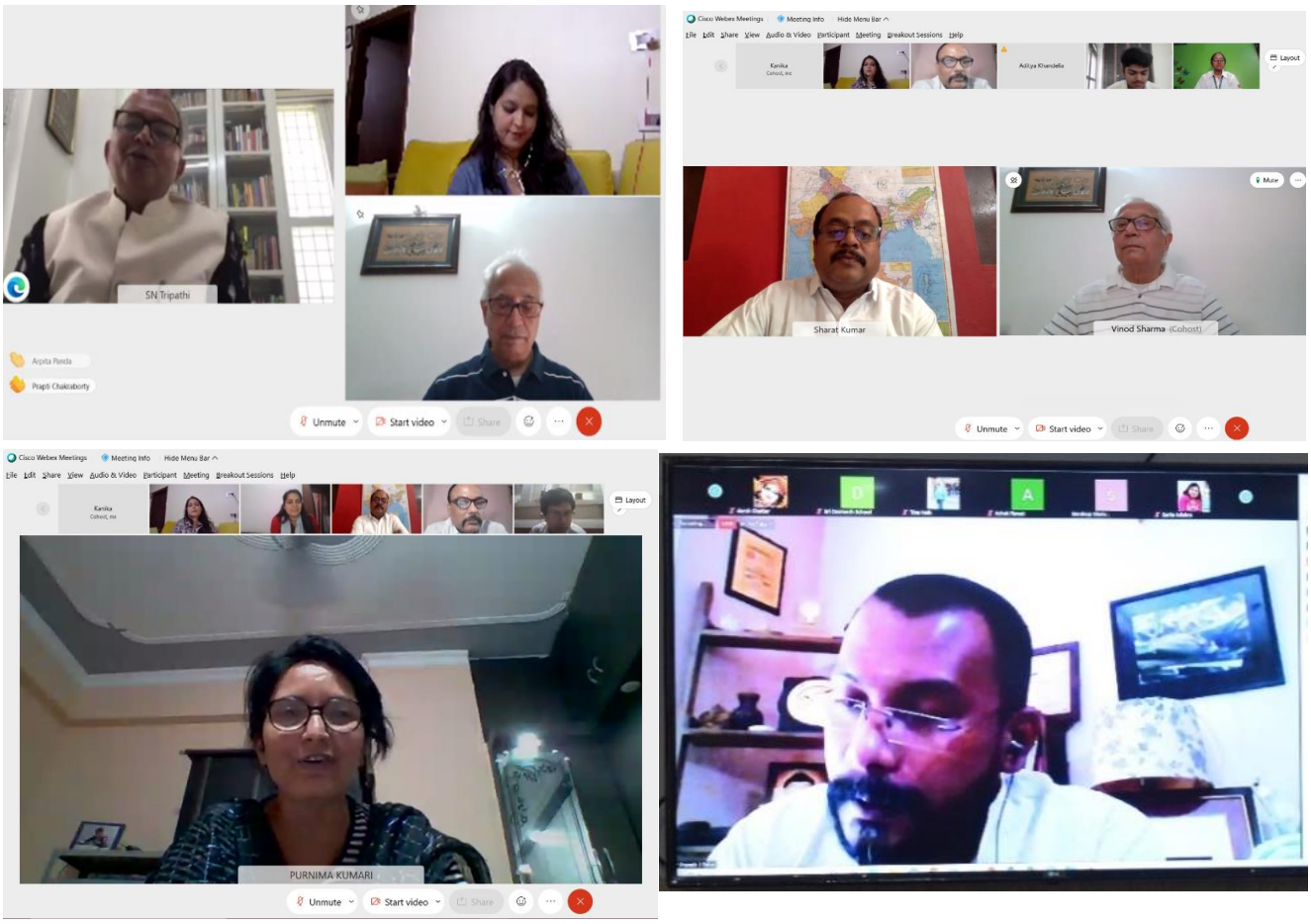


Figure 36: Glimpse of Capacity Building for Master Trainers

Capacity Building Programme for College

On the occasion of World Environment Day 2021, a two-day training programme was conducted for college students, by the name of Ganga Samvad. The colloquy blended interaction with the academia, undergraduate, post-graduate students and budding researchers. There was a total of 650 participants **(Annexure XII)** of the following levels.

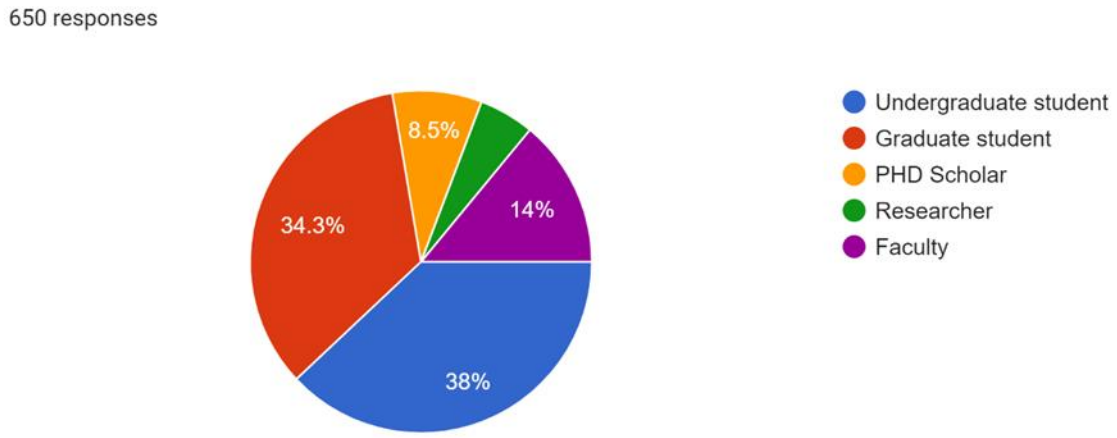


Figure 37: Representation of the participants in the college training

The training focused primarily on environmental engineering. Students were familiarized with the effects of human and other activity on the environment. They were also engaged with resilient and sustainable ways of living in accordance with the environment. The goal of the training was to address the challenges of today and those that will emerge in the future for River Ganga by looking out for ways to tackle the same.

The design of the two-day training programme was driven by the consent of the learner, the tone of which was set by Shri Surendra Nath Tripathi, DG, IIPA. He reflected to switch the idea of creating a better planet for our children with creating better children for our planet. Prof. Vinod K. Sharma, PI, expressed his views on the programme and welcomed all the participants by appreciating the partnership of Benaras Hindu University, Dev Sanskriti Vishwavidyalaya, and TERI for taking the programme to next level of success.

The modules designed for college students were briefed by Dr. Shyamli Singh. Prof. Vinod K. Sharma gave a brief introduction of the Ganga River system by reflecting on the uniqueness of its ecological system. Challenges faced by the river were further demonstrated to the students.

The programme was graciously honored by the presence of Mr. Jagmohan Gupta, who suggested to include other universities apart from basin coverage to join hands with the cause. He encouraged the entire team.

Besides reflecting on the sustainable ways of Ganga River Management, the cultural and historical aspect of the River Ganga were covered through videos and presentations. The government's effort in tackling the challenges were traced and a practical approach inviting community participation was demonstrated in the programme.

Further, Ganga Ambassador course was introduced to help identify the knowledge gaps and to improve future trainings. Additionally, IIPA invited collaboration for case studies to bring the knowledge and research pertaining to River Ganga into public domain. Participants were given

access to the IIPA's Learning Management system to retrieve the resource material and add to the knowledge and experience of the team.

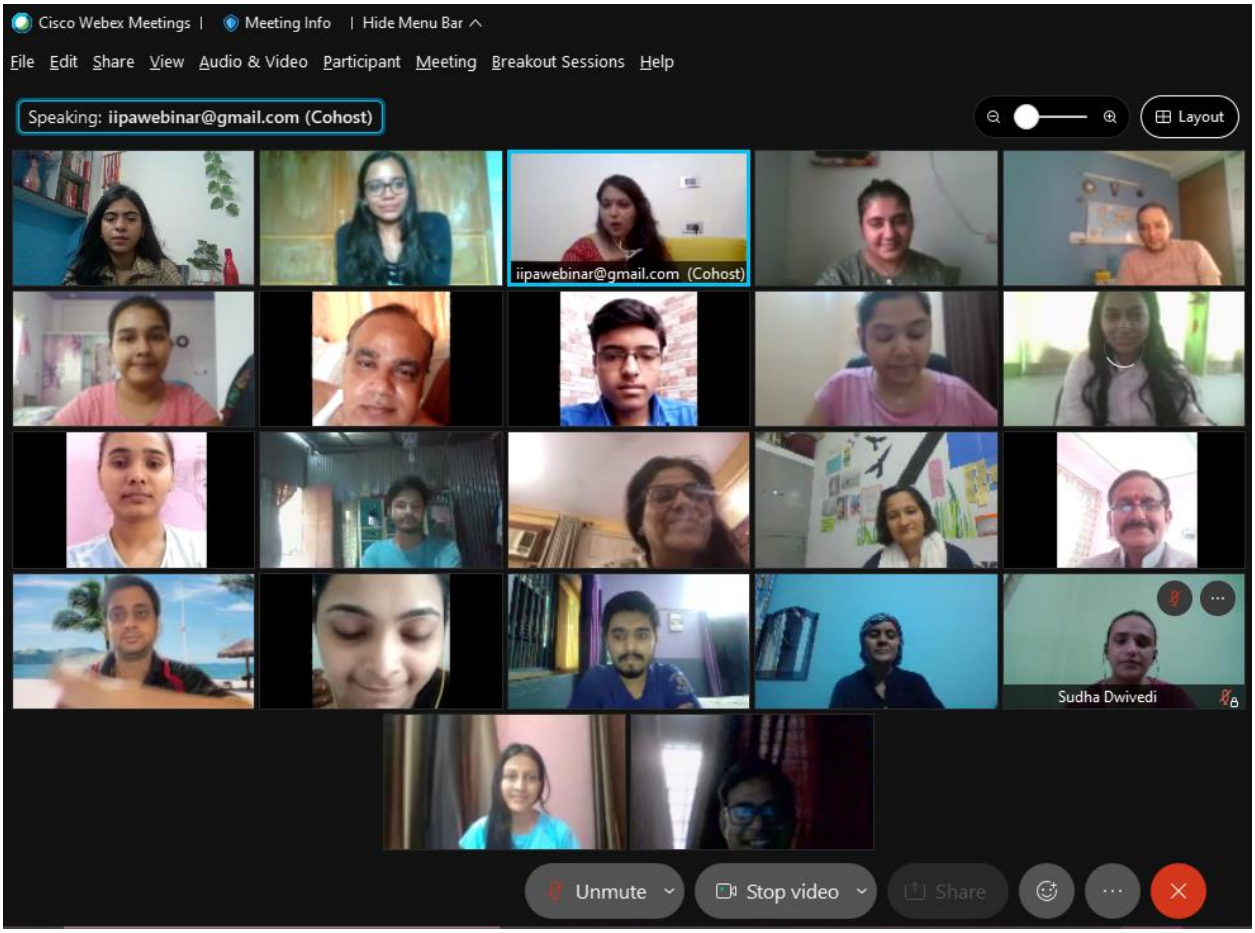


Figure 38: College training on 4th June 2021, an Interactive session

Day 2 of the training programme was honored by the presence of eminent experts from various institutes. Prof. Eklabya Sharma, Vice Chancellor, TERI SAS and Dr. Chinmay Pandya, pro-vice chancellor, Dev Sanskriti Vishwavidyala marked the inception of the 2nd day with their kind words of encouragement. The emphasized on the importance of the river system.

Prof. Akhilesh Singh Raghubanshi, Benaras Hindu University, addressed the challenges faced in River restoration and opportunities that arise from the same. Prof. Venkatesh Dutta, Babasaheb Bhimaro Ambedkar presented his case study of Gomti River Basin. In his deliberation, he reflected on the sustainability of ground water resources. Prof. C.K. Varshney, Prof. Emeritus, JNU added to the restoration of floodplain wetlands for Rejuvenation of River Ganga. One of the speakers, Mr. Sidharth Agarwal, Founder, Veditum India Foundation could not connect due to technical failure. With the theme of ecosystem restoration, he asked everyone to find out the watershed they are living in. It gave the message of taking charge and

protecting it through political, collective, and personal action. The speakers' knowledge and experience sharing were lauded by the participants who further interacted with the participants on resolving their queries.

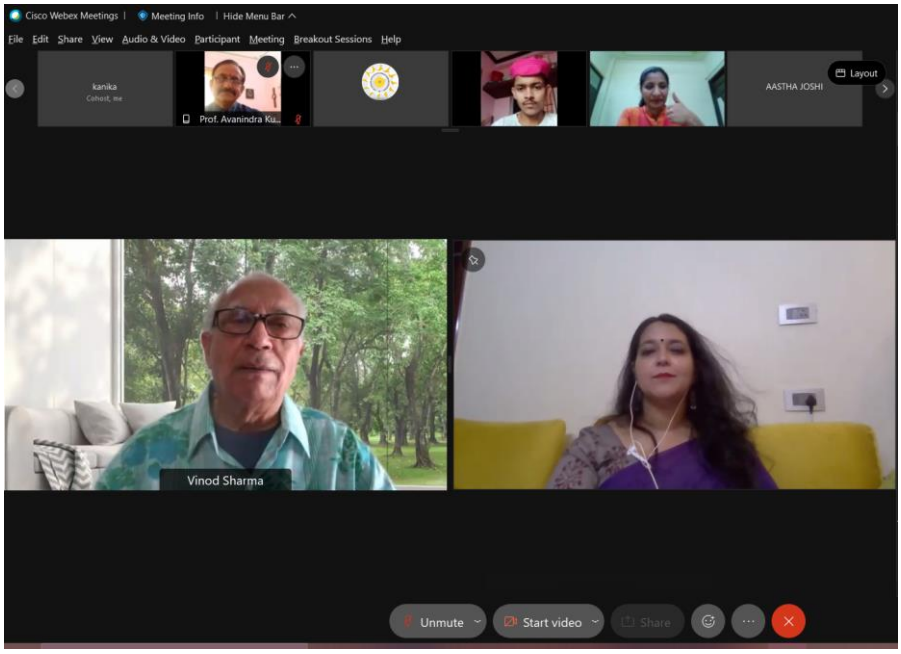


Figure 39: : College training on 5th June 2021

Figure 40: Ganga Samvad Guest of honor on 5th June 2021

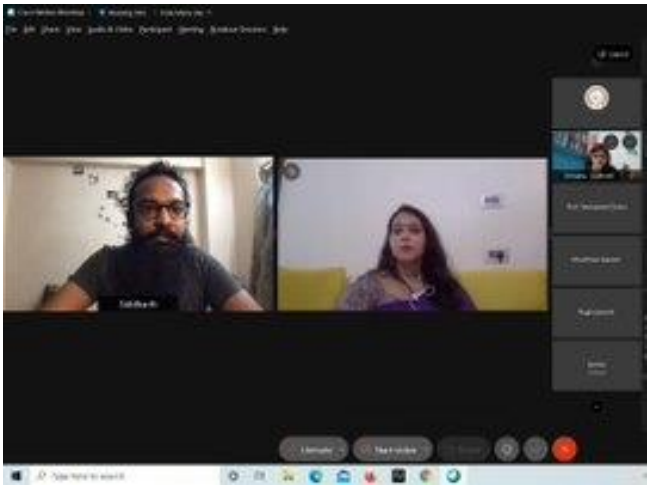
GLIMPSE OF COLLOQUY: GANGA SAMVAD

Prof. Eklabya Sharma, Vice Chancellor, TERI SAS

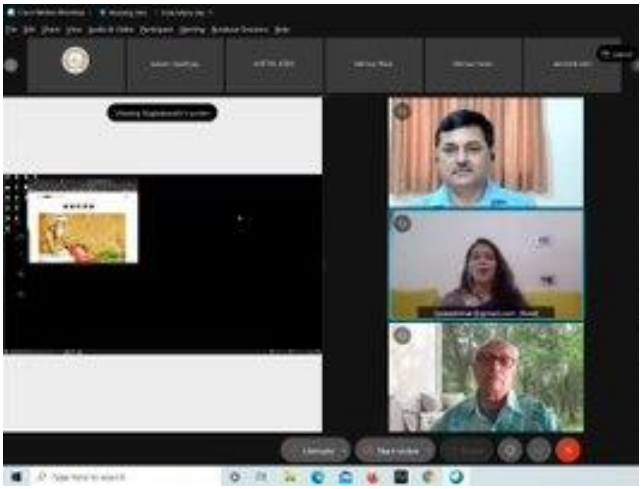
Jagmohan Gupta, NMCG Representative

Prof. C.K. Varshney, Prof. Emeritus, JNU

Prof. Venkatesh Dutta, Babasaheb Bhimaro Ambedkar



Mr. Sidharth Agarwal, Founder,
Veditum India Foundation



Prof. Akhilesh Singh Raghubanshi,
Benaras Hindu University

CHAPTER 4: IIPA'S LEARNING MANAGEMENT SYSTEM FOR CAPACITY BUILDING

A learning management system (LMS) is a web-based education hub that offers a comprehensive and important set of capabilities to support educational activities such as classroom instruction, distant education, and continuing education.

Trainers desire a simple approach to develop content for their classes and manage their resources, data, and learner audiences in today's technology-driven world. Additionally, they must give the best learning experiences possible to adequately prepare pupils for the future.
An LMS may significantly improve students' learning experiences and teaching activities, regardless of whether they are instructor-led, self-paced, or incorporate blended learning and microlearning.

Namami Gange landing page hyperlink has been linked with official IIPAs homepage (https://www.iipa.org.in/cms/public/). The Namami Gange webpage has been further hyperlinked with has IIPAs specified web domain (https://iipa.education/) for its learning management system that makes it easier to navigate inside the LMS content. The steps to reach of Capacity Building of River Ganga course is placed in **Annexure XIII.**

MOODLE: One of the reasons Moodle is the world's top learning management system is that it is backed by a global developer community. A significant advantage of open-source software is that the code is transparent. This means that developers from any country can access and modify the code to make it more secure. The primary reason IIPAs chose Moodle for Namami Gange Programme is that it is highly adaptable, extremely adaptable, and feature rich. Apart from the ability to edit Moodle's open-source code, there are hundreds of Moodle plugins that enable you to customise Moodle's behaviour.

The training program has a wide variety of stakeholders and IIPAs MOODLE can cater different sets and subsets of audiences.
The system encompasses the entire range of educational institutes and industry professionals:

- Gamifying Your eLearning
- Individual Learning Plans
- Assessing Your eLearning: Questionnaire
- Ticking Who's Present: Attendance
- Engaging You Again: Reengagement
- Custom Certificate
- Beautifying Your Content Arrangement: Tiles Format

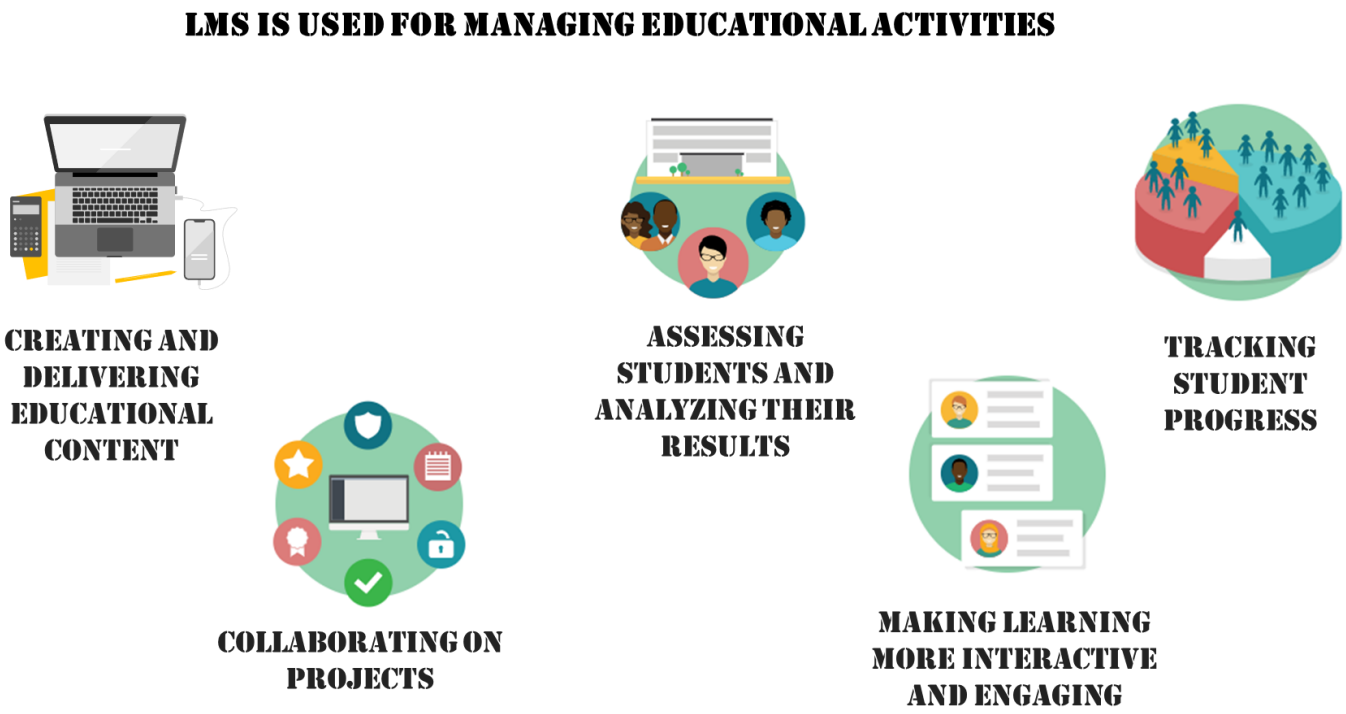


Figure 41: Key Feature of LMS platforms

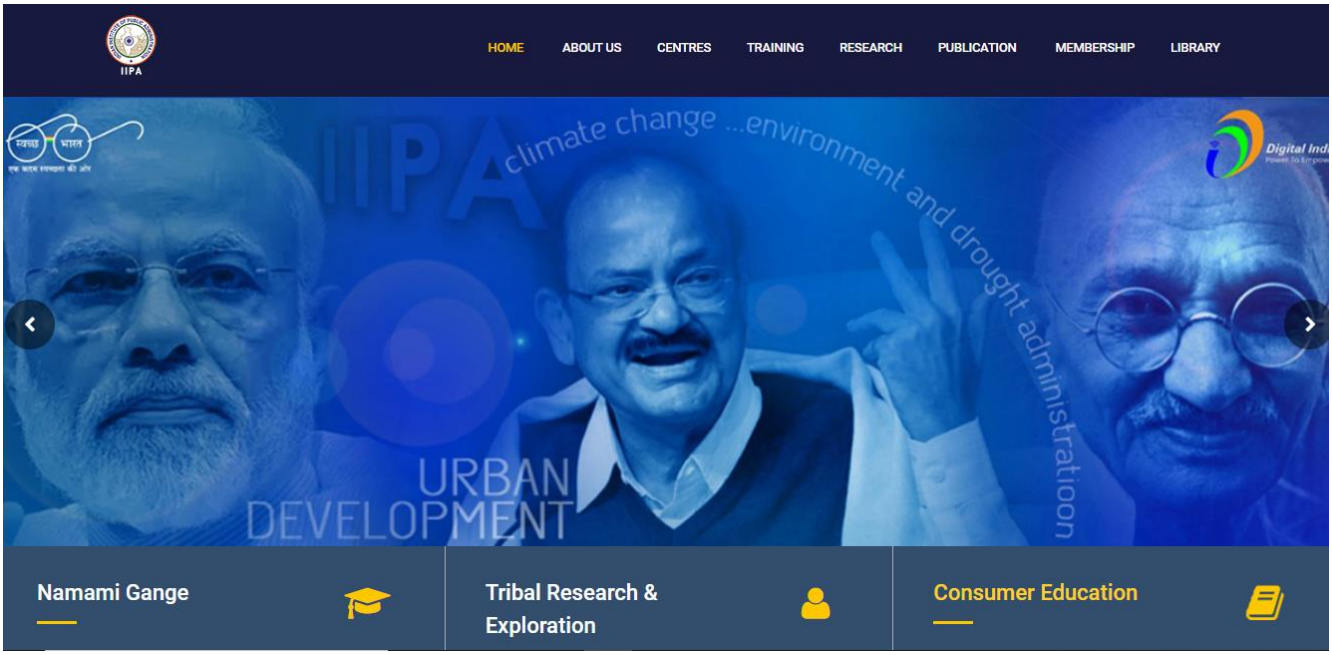


Figure 42: IIPA website with Namami Gange external link

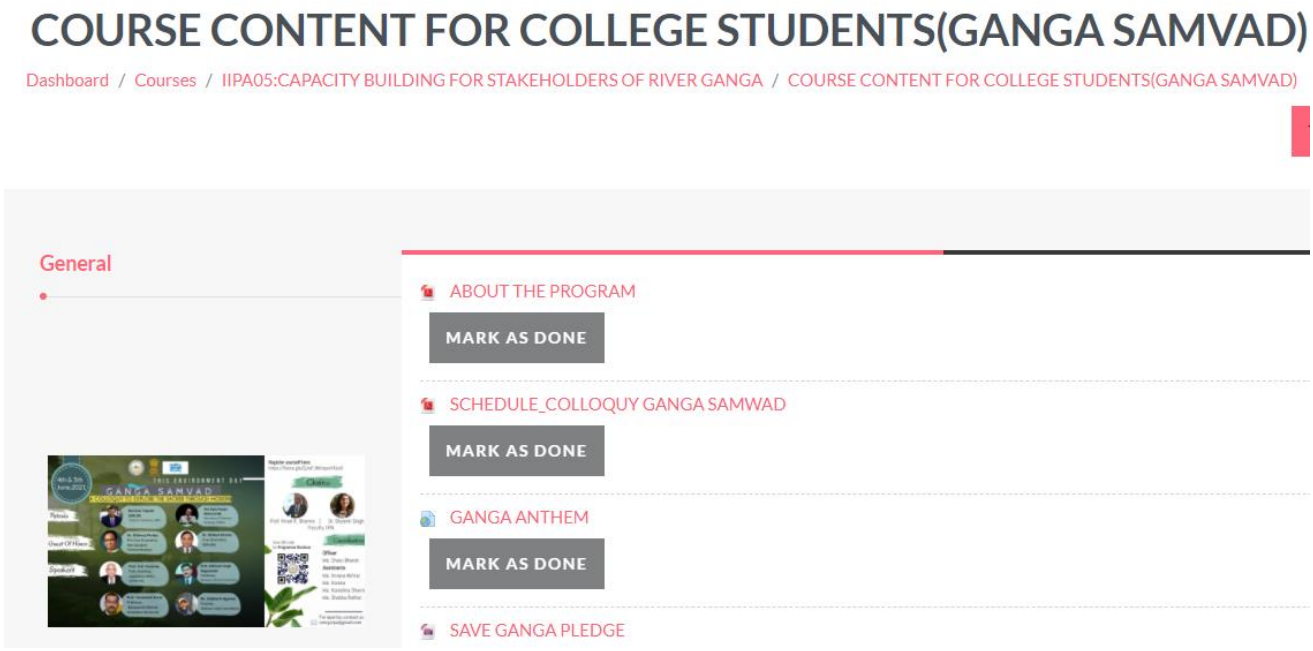


Figure 43: Content outlook for stakeholders of Ganga

CHAPTER 5: MAINSTREAMING PROJECT ACTIVITIES IN KARMAYOGI PLATFORM

The government has operationalised digital learning on Integrated Govt. Online Training Programme (Igot) - Karmayogi Platform for Capacity Building of Civil Servants by setting up a Special Purpose Vehicle (SPV). To provide flexi-time and on-site online training, this major component of DoPT involves six key components ranging from strengthening existing institutions, refreshing policy, detailing competencies required for specific roles and positions, and creating a strong push for a culture of life-long learning among civil services.

IGoT Karmayogi is a wide-ranging online platform that provides resources for such comprehensive learning. To create a positive momentum around this national programme, a call for a full-bodied institutional framework complemented by an enabled policy framework was presented. Along with that, the recognition of the need to create accountability by performance check, evaluation and monitoring was required to enable coordination and standardization in its implementation.

In respect of the Namami Gange Flagship Programme, a need for clear articulation of roles and responsibilities of every stakeholder involved seemed vital. For long-term sustenance, organization of all the stakeholders in an effective and resourceful manner is critical to work towards ongoing service excellence.

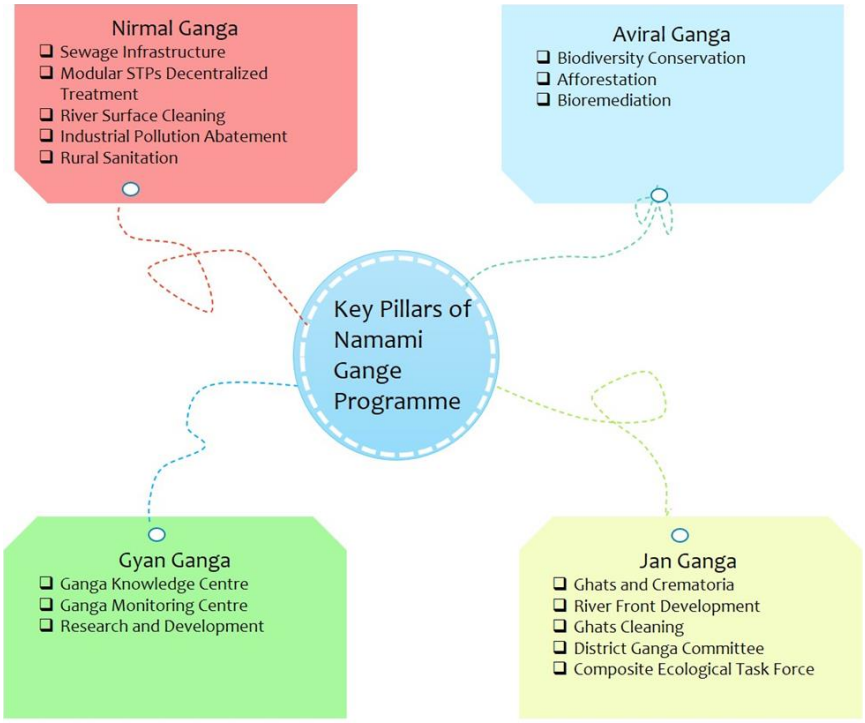


Figure 44: Key pillars of Namami Gange

Stakeholder Assessment of Namami Gange under Karamyogi Platform

Stakeholder Engagement Plan will majorly focus on providing training and handholding support. To support various government departments, we will conduct pre-onboarding workshops with representatives; provide support teams to serve as the single point of contact, conduct department level workshops and host master training programs, enabling stakeholders towards building internal capabilities and expertise. The trainings can be tailored at each hierarchical level based on need assessment surveys.

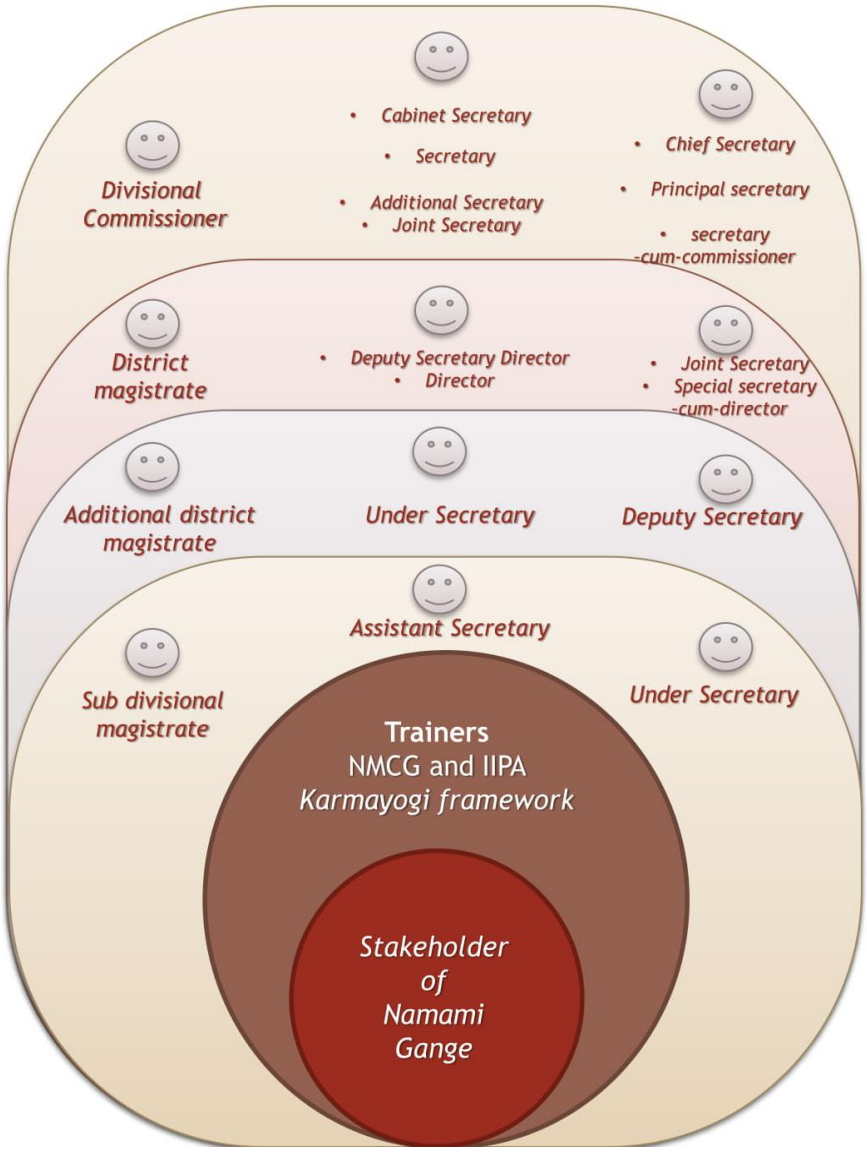


Figure 45: Hierarchic structure of Government of India

Building Namami Gange on the outline of Mission Karmayogi

The course structure has been proposed on the pillars of Mission Karmayogi

1. Policy Framework

A policy framework for Namami Gange works on implementable policies which are critical. The existing policies must be refreshed and formulate a new course of action of Programmes. A standardized training for Namami Gange will articulate critical thinking of the stakeholders through adoption of a river-basin approach and multi-sectoral mandate towards water quantity and quality aspects. The modules will briefly indicate Relevant National key Legislations, Environmental and Social Management Framework (ESMF) and Regulations and Requirements.

2. Institutional Framework

The Namami Gange has institutional mechanisms under which distributes from Central to State. At centre it is constituted of National Ganga River Basin Authority and at State it is State Program Management Group (SPMG) for comprehensive management. The course modules describe pillars of framework include Planning and Knowledge Units, Technical Units, Communication, outreach Unit, Procurement and Admin unit. Further, mechanism on institutional strengthening, new infrastructure development and collaboration with different institutions, departments, academics will be elaborated.

Institutions involved in Namami Gange at National, State and local levels.

Table 2: Units of Giverment of India associated to Namami Gange

National	State	Local
Ministry of Jal Shakti	State Pollution control Board	District Ganga Committee
National Mission for Clean Ganga	State Ganga Committee	
Ministry of Housing and Urban Affairs	Department of Drinking water and Sanitation	Municipalities and Gram Panchayats

Ministry of Rural Development	Jal Board	PRI's
Central Pollution Control Board	Municipal Corporation	Urban Local Bodies
Ministry of Environment, Forest and Climate Change	Water supply and sewerage board	Ganga Praharis
Ministry of Human Resource and development	State Ground water Board	Ganga Mitra
	State programme management group	
International, national and Local Experts/think tanks, NGOs and Academic & Research Institutions		

3. Competency Framework

Conducting an occupation analysis by asking participants position information questionnaire (PIQ). This can be provided by participants to be used as a basis for what are the key behaviors necessary to perform their respective jobs. Taking the competency mapping one step further, the results of evaluation will be used to identify in what competencies participants need additional development or training. This will help in focusing on training needs required to achieve the goals of the position and department. This will help employees develop towards understanding their need of different courses and their levels.

Competencies have broadly been classified into three types- behavioral, functional and domain. The overall competency framework for Namami Ganga course modules has been stated:

Table 3: Competency Framework for Namami Gange

Proposed themes	Behavioral competencies	Functional competencies	Domain competencies
Nirmal Ganga	State regulations, pollution abatement, critical and analytical thinking	Institutionalize rigorous tracking of performance metrics and comprehensive program evaluations	Introduce and expand use of cutting-edge technologies and data analytical tools for real time monitoring of government programs
Aviral Ganga	Interconnectedness of complete water resource	Programme design and implementation, water policy and regulation	Designing ecological studies, restoration design
Gyan Ganga	Provide data and tools to drive effectiveness and efficiency of government programs	Creative and new solutions	Enable data-driven policy making
Jan Ganga	Working with boards and volunteers, conflict management	Best management practices, incorporating stakeholders in decision making	Facilitation, collaboration, effective communication

4. Digital Learning Framework

Digital Learning Framework will be developed to assist target audience in effectively embedding the knowledge product developed for Namami Gange. Modules will be incorporated through digital links through open access free learning web portals.

5. Monitoring and Evaluation Framework:

The overall responsibilities for M&E are defined by the organizational structure of the main stakeholders in its function as administrator of the projects and funds. Monitoring will have the primary responsibility at the project level with the implementing organization, with government structure providing supplementary review, technical oversight, coordination and quality assurance. During evaluation the primary responsibility lies with government bodies towards managing the evaluations. An external consultant is hired to undertake the evaluations of the funds and deliverables, with feedback and guidance from the Advisory Council.

D. Study modules under Namami Gange:

The proposed study modules will be developed on key pillars of Namami Gange with aspects of

D1. Nirmal Ganga:

Nirmal Ganga focuses to ensure that the flow of water - along with sediments, nutrients and other natural constituents of the flow – are continuous and adequate throughout the Ganga river network. The course module on Nirmal Ganga has been divided into 3 Levels of training.

Table 4: Three Levels of training for course on Nirmal Ganga

CONTENTS	COURSE LEVEL	BASIC DETAILS
Organizational Structure and Legal Framework	Introductory	Importance of Nirmal Dhara for Ganga River Basin Management A draft "National River Ganga Basin Management Bill" Mission 'Nirmal' Dhara, Broad Plan of Action: prohibiting/restricting certain activities in the NRGB, and ii) by promoting certain activities in NRGB through implementation of numerous projects.

Ganga River System Pollution	**Introductory**	Sources of Pollutants Pollutant Ingress Pollution Status
Implementation Strategy: Category A, B, C	**Intermediate**	Coordinating the activities concerning mission of GRBMP. Category A: Management of Solid and Liquid Waste Generated from Domestic/ Commercial Sources Category B: River-frame Development, Floodplain Management and Rejuvenation of Water Bodies Category C: Management of Solid and Liquid Waste Generated from Industrial Sources. Priority Projects from Mission Nirmal Dhara.(MND): Segregating projects in Priority Level 1, 2, 3, 4, 5, 6 and 7
Project Planning: Urban River Management Plan 1. Class 1 2. Class 2 and 3	**Intermediate**	Restoration of natural drains in Class I and Class II towns Sewage treatment in Class I and Class II towns using ZLD system.

		Reuse/recycling of treated sewage in Class I and Class II towns Use of treated sewage for restoration/creation of surface water bodies. Use of treated sewage for irrigation. Sewage management in new/existing colonies, housing societies using ZLD system. Zero-liquid discharge (ZLD) systems for large/medium industries, including TDS management.
Financial Structuring	**Expert**	Project Management and Sustainability PPP Structure and Framework Cost of Implementation Budget Outlay
Monitoring and Feedback	**Expert**	Metrics related to project outcomes to assess the success of MND The matrix will cover: Development of a Review Work Plan and Indicators Independent Evaluative Review Efficiency and effectiveness of the Fund's

		process for review and appraisal of proposals. Efficiency and effectiveness of the Fund's administration and management. Quality of Fund reports produced, in particular the Mapping Study on Gaps and Unmet Needs. Effectiveness of the Fund's sustainability measures. Adequacy of measures to address potentially adverse impacts (e.g., social and environmental impacts)

Further, competency framework for participants developed post engagement of Nirmal Dhara course module:

Proposed themes	Behavioral competencies	Functional competencies	Domain competencies
Organizational Structure and Legal Framework.	Baseline knowledge and ability to advice.	Developing awareness/building Knowledge. Applying knowledge routinely.	Vision and mission development and advocacy.
Ganga River System Pollution	Ability to understand core issues related to Ganga pollution.	Aware of questions to ask and able to access resources.	Capacity building and Routine program monitoring
Implementation Strategy:	Ability to understand sub themes of MND	Integrate planning and implementation processes.	Manage the planning and implementation of activities to build

Category A, B, C	and project prioritization based on themes.		capacity for organizational and system levels to support a unified and effective implementation strategy.
Project Planning: Urban River Management Plan	Ability to develop and communicate a clear and compelling vision and mission.	Manage the process for developing and implementing a strategy and infrastructure.	Evaluation process including the use of evaluation findings for program improvement. Introduction of new technologies for improvement.
Financial Structuring	Ability to understand financial monitoring policies, procedures and systems.	Effectively negotiate funding for agreed-upon needs with a range of internal and external stakeholders.	Identify gaps and provide pragmatic recommendations for improvement.
Monitoring and Feedback	Ability to comprehend M&E concepts and importance of M&E & differentiate between M&E.	Develop and design framework and link the indicators with frameworks.	Metrics development related to project outcomes to assess the success of MND.

Courses on Aviral Ganga, Gyan Ganga and Jan Ganga will be developed on similar structures for Karamyogi Platform.

CHAPTER 6: RESOURCE PERSON DIRECTORY

The Resource Directory's (RD) goal is to disseminate specialized resources that aid in the development of sustainable and mature data archives as well as the development of new concepts and features within current data archives. The RD is a curated inventory of current resources that collects, selects, and reviews information on pertinent papers, training materials, tools, and support services.

IIPA Team ventured on locating resource persons who would add important knowledge and value to the training course. Since the training covered schools and colleges from the belt of Ganga, the engagement was diverse and resource persons engaged were plenty. The information and opinions received from them were used to ensure an effective training.

The research team also established contact with various industries during their exposure visit. Surveys were conducted with local people to understand the situation and communicate the information during the training.

By integrating their own experience, school teachers played the role of resource person and helped in achieving the intended objectives. Similarly, subject matter specialists were engaged during college training to build a knowledge sharing platform and to get the best out of the integration.

Mutual collaboration of human expertise was created during the photo documentation visit as well in which the team engaged with the experts and locals to get a hold of the nexus of Ganga Rejuvenation. The contact details of the resource persons have been recorded in **Annexure XIV.**

PLAN OF ACTION

The action plan is a checklist for the steps or tasks team needs to complete to achieve the deliverables of 2nd year of the project. This is an essential part of the strategic planning process and helps with improving teamwork planning. The plan will not only benefit in project management, but also action plan will be used by individuals to prepare a strategy to achieve their own personal goals as well.

TIMELINE OF ACTION PLAN

Figure 46:Half yearly Plan of Action

ANNEXURES

(ATTACHED SEPRATELY)

Annexure I

Annexure II

Annexure III

Annexure IV

Annexure V

Annexure VI

Annexure VII

Annexure VIII

Annexure IX

Annexure X

Annexure XI

Annexure XII

Annexure XIII

Annexure XIV

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