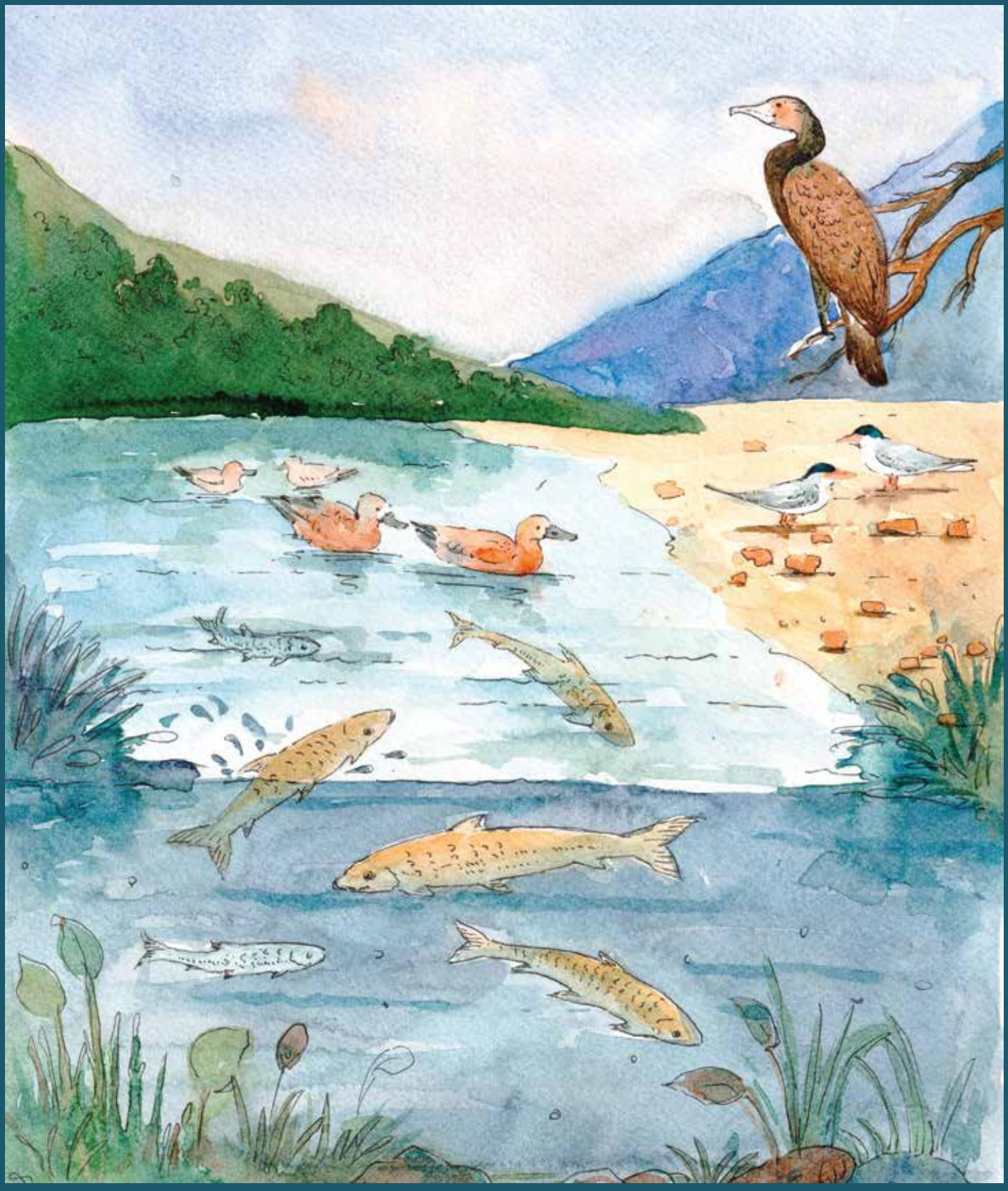
Draft Report

Nature Interpretation and Education for Biodiversity Conservation of Eleven Ganga River Basin States



नमामि गंगे

भारतीय वन्यजीव संस्थान
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जल शक्ति मंत्रालय
MINISTRY OF
JAL SHAKTI

Report: Nature Interpretation and Education for Biodiversity Conservation of Eleven Ganga River Basin States (2020 – 2025)

This report presents the activities, outreach initiatives, and outcomes of environmental education, awareness generation, nature interpretation, and community engagement programmes conducted across the Ganga River Basin. It documents the methodologies adopted, educational materials developed, stakeholder interactions, interpretation initiatives, school and community outreach activities, and conservation awareness programmes implemented across different states.

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Preface

The River Ganga is not only one of India's most important river systems but also a symbol of the country's ecological richness, cultural heritage, spiritual traditions, and socio-economic vitality. Flowing across diverse landscapes and connecting numerous communities, the Ganga River Basin sustains an exceptional range of biodiversity while supporting millions of people through agriculture, livelihoods, ecosystem services, and cultural practices. The river and its tributaries play a vital role in maintaining ecological balance and nurturing the social and cultural fabric of the nation. Over the years, increasing anthropogenic pressures such as pollution, habitat degradation, unsustainable resource use, urban expansion, and declining ecological awareness have posed serious challenges to the health and sustainability of the river system. Conserving the Ganga and its associated biodiversity therefore requires a holistic approach that integrates scientific management, policy interventions, public participation, and widespread environmental awareness. This report presents the experiences, achievements, and outcomes of environmental education, awareness generation, nature interpretation, and outreach initiatives carried out across the Ganga River Basin in eleven states — Uttarakhand, Uttar Pradesh, Bihar, Jharkhand, West Bengal, Himachal Pradesh, Haryana, Delhi, Rajasthan, Madhya Pradesh, and Chhattisgarh. Implemented under the broader objective of promoting river conservation and aquatic biodiversity protection, the programme sought to strengthen environmental literacy and encourage greater public engagement in conservation efforts. The initiative followed a multi-faceted and participatory approach that combined formal and informal modes of learning and outreach. This report documents the approaches adopted, activities undertaken, outreach achieved, and key learnings emerging from the implementation of the programme across the basin states. The outcomes indicate that sustained awareness and interpretation efforts, when supported by contextualized learning and active stakeholder participation, can play a significant role in enhancing environmental understanding and fostering a sense of collective responsibility towards river ecosystems.

Contents

Summary

The report outlines a comprehensive environmental education and conservation effort centered on the Ganga River Basin with the goal of promoting biodiversity conservation and sustainable practices. The initiative incorporates formal and non-formal education to promote sustainable behavior among students, teachers, and local communities, acknowledging the ecological and cultural value of the River Ganga. Key objectives include establishing Ganga Knowledge Corners to disseminate knowledge about river conservation and garnering support for aquatic biodiversity through interactive workshops, teacher training, and mass awareness programs. The initiative conducted 154 school-based awareness workshops across six rivers in five states. The results of pre-post questionnaire survey show significant knowledge gains among students, with increase in knowledge about riverine biodiversity knowledge in cultural heritage, and conservation values, as evidenced by pre- and post-questionnaire surveys. Additionally, 107 low-cost interpretation corners (Bal Ganga Prahari Corners and Jalmala Samvaads) were set up in government schools across 45 districts, serving as permanent learning spaces. Five interpretation centers, including three in urban centers (Haridwar, Varanasi, and Kanpur) and two open-air spaces, were established, reporting visitor increases in all the centers. Teacher training programs empowered 1,484 educators with tools like the "Gyan Kosh" resource kit to integrate conservation themes into classrooms. Mass outreach efforts, including radio talks, mobile and static exhibitions, social media campaigns, puppet shows, nukkad nataks, and publications, engaged approximately 1 crore participants in total. Events like the Mahakumbh Mela 2025 further amplified awareness, sensitizing thousands of participants. With future plans to increase digital outreach and strengthen collaborations with local authorities and schools, this effort serves as an example of a scalable strategy for promoting shared responsibility and long-term conservation of the river conservation.

1. Introduction

Environmental Education (EE) is a process that helps in development of skills, decision making and attitudes to recognize the environmental issues and appreciate the interrelatedness among humans and natural environment (IUCN 1970). The need for EE is recognized in academic institutions across the world (Neal and Palmer, 2003). EE has also been a well-known concept in Indian Education systems as environmental protection and ecological values have always been integrated in EE in India (Ravindranath, 2007). It has become necessary to promote EE as a tool for life and learning shall be promoted since childhood considering the environmental conditions (Sonowal, 2009). To promote sudents' commitment to local biodiversity protection methods like active classroom sessions, hands-on activities and field visits serve as a key to achieve sustainable biodiversity knowledge (Ramadoss and Poyyamoli, 2011). Several studies show that inclusion of environmental and ecological topics in academics increases students' awareness and affects their attitude, behavior and conservation values positively (Leeming et al., 1993; Zelezny, 1999; Rickinson, 2001; Humston & OrtizBarney, 2005; 2007). Community engagement and education is necessary to bridge the gap and promote conservation. Agenda 21, drawn at the Rio Earth Summit in 1992, states that: "Education, including formal education, public awareness and training should be recognised as a process by which human beings and societies can reach their fullest potential. Education and awareness is critical for promoting sustainable development and improving the capacity of the people to address environmental and development issues. Both formal and non-formal education is indispensable to changing people's attitudes" (UNCED, 1992). This highlights the importance of education as critical for achieving sustainable development. There is evidence that outreach programmes, have a conservation impact by helping to change both attitudes and behaviour. Education specifically has also been shown to influence attitudes. When discussing a vast river like the Ganges, which spans 2,525 km across five states in, it is imperative not to narrow our focus to a single aspect. An interdisciplinary approach becomes essential for the conservation of both the water and its biodiversity. To achieve this, engaging with individuals directly or indirectly reliant on the waters of this sacred river is crucial. Programs for mass awareness and outreach are essential to conservation because they inform communities, change public perceptions, and motivate group action. These initiatives encourage people to adopt sustainable activities and cultivate a sense of responsibility by educating them about environmental

risks Communities with frequent environmental awareness campaigns exhibit significantly more positive conservation behaviours compared to less-exposed communities (Montana & Mlambo, 2018).

Nature interpretation and education is integral to biodiversity conservation of the Ganga River. Interpretation servers as an institution for dissemination of knowledge of natural or cultural heritage through provocation and revelation of the relationships and meanings of the natural environment (Orams, 1996), interpretation centers stimulates, facilities and extends people's understanding so that empathy and concern towards river and biodiversity conservation can be developed, prompting more responsible behavior (Bramwell and Lane, 1993).

Objectives of the Study –

The objectives of the programme are:

1. Establishment of Ganga Knowledge Corners in select sites as a platform for dissemination of information towards Ganga River conservation and cleanliness
2. Garner support for aquatic biodiversity and Ganga conservation through outreach and conservation education programs.

Methodology

The approach to attain the objectives has been shown in Figure 1.1 that outlines a comprehensive framework for "Awareness and Sensitization Programs," divided into two main categories: Localized Awareness and Mass Awareness. Localized Awareness includes targeted initiatives like School Awareness Workshops, low-cost interpretation corners, Interpretation Centers, and publications tailored for school students, focusing on engaging smaller, specific groups. In contrast, Mass Awareness encompasses broader outreach methods such as Radio Talks, Puppet Shows, Nukkad Natak (street plays), Social Media campaigns, Publications, and both Static and Mobile Exhibitions, designed to reach a wider audience and maximize public engagement. Together, these strategies aim to educate and sensitize diverse populations through a mix of localized, community-focused efforts and large-scale outreach methods.

Figure 1.1 Flow chart representing various approach taken for conducting awareness and sensitization programs

Methodology – Establishment of Interpretation Corners

1. Site Selection

- A reconnaissance survey was conducted by the project team along the Ganga River and its tributaries to identify suitable locations for implementing the program.
- Government schools located within a 5 to 8 kilometre radius of the riverbanks were prioritized, considering their proximity to the river and the potential influence of local environmental conditions on the students' perspectives.
- Schools with active administrative support, accessibility, and sufficient student strength were selected for both awareness workshops and "Jalmala Samvaad" sessions.

2. Awareness Program Design

- An interactive and experiential learning module on river biodiversity and conservation was developed, aiming to bring the river ecosystem into the classroom.

- Sessions were designed to enable students to critically reflect on issues affecting the river, including pollution, biodiversity loss, and conservation practices.
- Tools used included interpretation materials, game-based learning activities, and interactive discussions, power point presentation.
- Interpretation Corners were established within school premises to serve as ongoing learning spaces, displaying information on river biodiversity, conservation values, and heritage.

3. Pre- and Post-Questionnaire Survey

- To evaluate the effectiveness of the intervention and knowledge retention over time, a structured questionnaire-based survey was conducted in two phases:

  Pre-session Survey:

  - Administered prior to the interactive session and Jalmala Samvaad.
  - Collected demographic details, baseline knowledge of biodiversity, heritage, and conservation, as well as students' intentions and attitudes towards environmental stewardship.

  Post-session Survey:

  - Conducted three months after the Pre-questionnaire survey.
  - Targeted the same group of students who had participated in the original session.
  - Aimed to measure the retention of knowledge and attitudes developed through the program.
- The questionnaire responses were later analyzed to assess the impact and effectiveness of the awareness initiative.

Methodology– Outreach and Mass Awareness Program

To promote biodiversity and environmental awareness in the Ganga basin, a multi-pronged outreach approach was adopted, targeting a wide range of stakeholders.

1. Stakeholder Identification

Key stakeholders were identified, including school and college students, teachers (both in-service and pre-service), forest department officials and community members.

2. **Audio-Visual Material**

A variety of interactive and culturally relevant activities were planned and designed to suit different audience groups. These included interactive sessions and workshops, edutainment/Performative Communication Tools like Puppet shows, and *nukkad nataks* (street plays), exhibitions (both mobile and static), social Media and publications. The Figure 1.2 categorizes audio-visual material into three main types: Audio, Visual, and Audio-Visual. Audio content includes Interactive Sessions, Radio Talks, and Publications, focusing on sound-based engagement. Visual content encompasses Exhibitions and Social Media, emphasizing visual presentation and interaction. Audio-Visual material consists of Puppet Shows and Nukkad Natak (street plays), blending both audio and visual elements to create a more immersive experience. This classification highlights the diverse formats through which audio-visual content can be delivered, catering to different audience preferences and engagement styles.

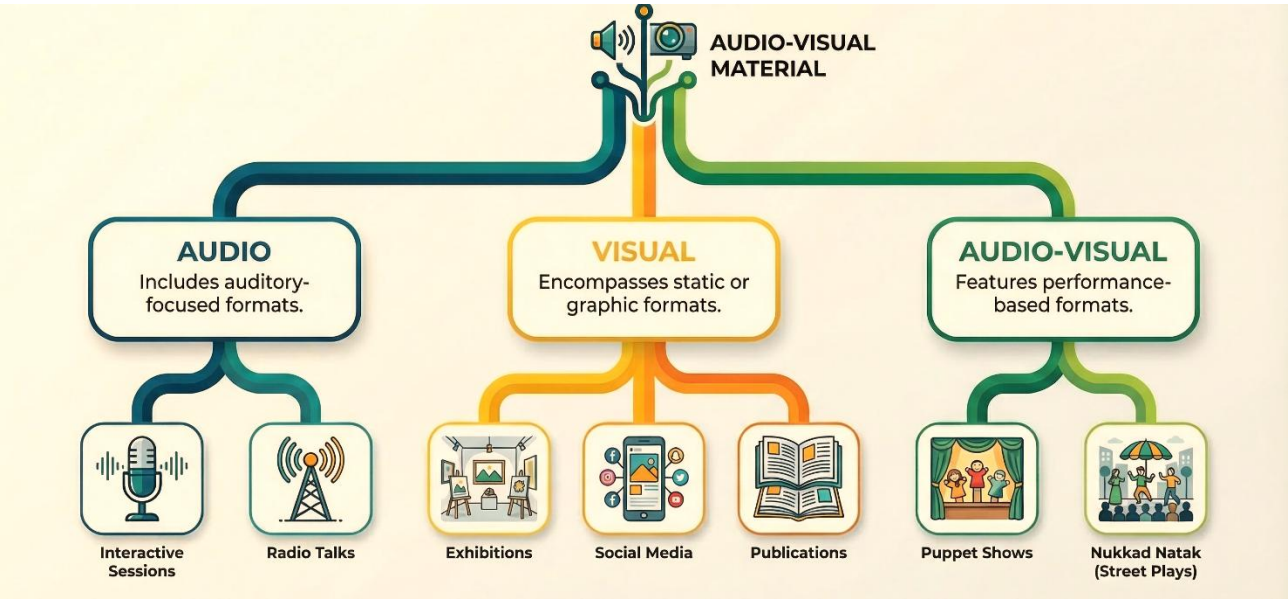

Figure 1.2: Flow chart representing various Audio Visual materials being utilized to conduct Mass awareness and outreach programs

2 Awareness and Sensitization

Environmental awareness is closely connected to environmental knowledge, attitudes, and actions. It serves as the foundational step toward enabling individuals to engage in responsible environmental stewardship (Montana & Mlambo, 2018). School-based environmental awareness programs are necessary for developing positive attitudes and behaviors toward biodiversity conservation in students. Integrating such awareness programs into school curricula and activities can enhance students' understanding of biodiversity issues; while countering negative perceptions and promoting sustainable practices, addressing drivers of biodiversity loss like poaching and deforestation (Montana & Mlambo, 2018). Research demonstrates that effective educational strategies, particularly those combining modeling and direct contact with factual information, significantly improve students' attitudes (Morgan & Gramann, 1989). Implementing such programs in schools can address misconceptions and promote conservation awareness, aligning with the need for public support in wildlife management (Morgan & Gramann, 1989). Increasingly, it is acknowledged that sharing information with and improving the understanding of communities is vital for effective biodiversity conservation (Van der Ploeg et al., 2011; Ogunjinmi et al., 2012; Choudri et al., 2016). Raising environmental awareness and sharing information are recognized as crucial components in advancing sustainable development (Hossain et al., 2018). School awareness workshops act as practical extensions of theoretical knowledge, translating abstract concepts and formulas into real-world applications through interactive activities and structured training sessions (Zainudin & Rosini, 2010). The physical and psychological environment of these workshops plays a critical role in ensuring effective teaching and learning. A well-organized and comfortable setting promotes smooth instruction and boosts student engagement (Talib & Selamat, 2004). Moreover, structured activities within workshops encourage responsible behavior, efficient use of equipment, and adherence to safety protocols, thus fostering a culture of discipline and readiness among learners (Mohd & Rahizah, 2011). This setting is crucial not only for cognitive development but also for inculcating practical life skills.

Awareness workshops in the Ganga River Basin are essential to promote a deeper understanding of the river’s ecological significance and the urgent need for its conservation. The basin supports millions of people and harbors rich biodiversity, yet it faces severe threats from pollution, habitat degradation, and unsustainable practices. Local communities, especially students and youth, often

lack access to structured environmental education. Conducting awareness workshops helped bridge this gap by providing relevant knowledge, encouraging critical thinking, and promoting responsible behavior.

Methodology

A reconnaissance survey was conducted along the Ganga River and its tributaries to identify suitable government schools within a 5–8 km radius of the river for program implementation. Priority was given to schools with strong administrative support, accessibility, and adequate student strength. An interactive and experiential learning module on river biodiversity and conservation was developed. The learning modules were site and issue specific tailored for individual sites and were delivered through interactive awareness workshops with the school students. Activities included oral/visual presentation, game-based learning methods and interactive discussions sessions. To evaluate the program's impact, a structured pre- and post-questionnaire survey was administered, to understand changes in students' knowledge, attitudes, and intentions towards environment, with the post-survey conducted three months after the intervention to assess knowledge retention. Ganga Knowledge corners Corners namely "Bal Ganga Prahari (BGP) corners" and "Jalmala Samvaad" were also set up in schools as permanent learning spaces. BGP corners are libraries equipped with interactive learning material and artwork, and wherever rooms weren't available we utilized galleries to showcase river biodiversity in interactive way, and these were named "Jalmala Samvaad".

Results

School Awareness Programs

We conducted school awareness and sensitization workshops across the Ganga River basin create awareness about riverine biodiversity and related concerns. Site and issues specific awareness programs were organized for different rivers in the Ganga river basin. A total of 181 awareness and sensitization workshops (Table 2.1) have been so far conducted along six rivers in the states of Uttar Pradesh, Uttarakhand, Haryana, Bihar, Jharkhand, West Bengal and Madhya Pradesh. The details are given below -

Table 2.1: Total Number of Educational Workshops Conducted in the Ganga River Basin

S.No.	River	States	Total no. of awareness workshops conducted	Total no. of participants
1	Ganga	Uttar Pradesh, Uttarakhand, Bihar	39	2475
2	Gomti	Uttar Pradesh	25	1321
3	Yamuna	Uttarakhand, Uttar Pradesh, Haryana	69	3970
4	Gandak	Bihar	14	671
5	Ramganga	Uttarakhand	17	980
6	Chambal	Madhya Pradesh	4	153
7	Ghaghra	Uttar Pradesh, Bihar	5	378
8	Ajay	Jharkhand, West Bengal	4	315
9	Rupnarayan	West Bengal	2	125
10	Damodar	Jharkhand, West Bengal	3	242
	Total		181	10,630

Image 2.1: Biodiversity Awareness Workshop at Govt. School, Almora, Uttarkhand along Ramganga River

Image 2.2: Questionnaire survey being conducted at Govt. School, Chamoli, Uttarakhand..

Pre and Post Questionnaire Survey

In order to find out the retention power amongst school students, a pre and post workshop questionnaire survey was conducted. From the analysis of the questionnaire of 60 schools (n = 3077) along the Yamuna, Ramganga, Gandak and Gomti Rivers we found out that there was a knowledge gain amongst students across three categories. Comparing the responses, we found a 27.85% increase in their knowledge about riverine biodiversity (Figure 2.1), 39.93% increase in culture and heritage (Figure 2.2) and 19.04% in conservation values (Figure 2.3). We used Wilcoxon Signed-rank test to check if the pre to post changes are statistically significant and it gave a p value < 0.05 indicating the significance.

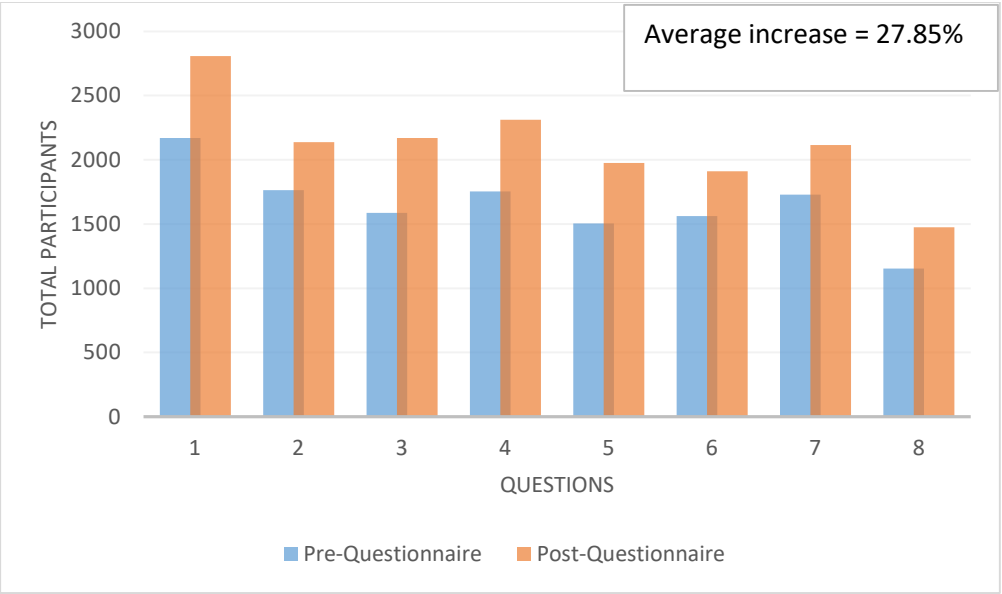

Figure 2.1 – Graph representing comparison of pre and post score and average percentage Increase in knowledge level in the Ganga River Basin in the category “Riverine Biodiversity”.

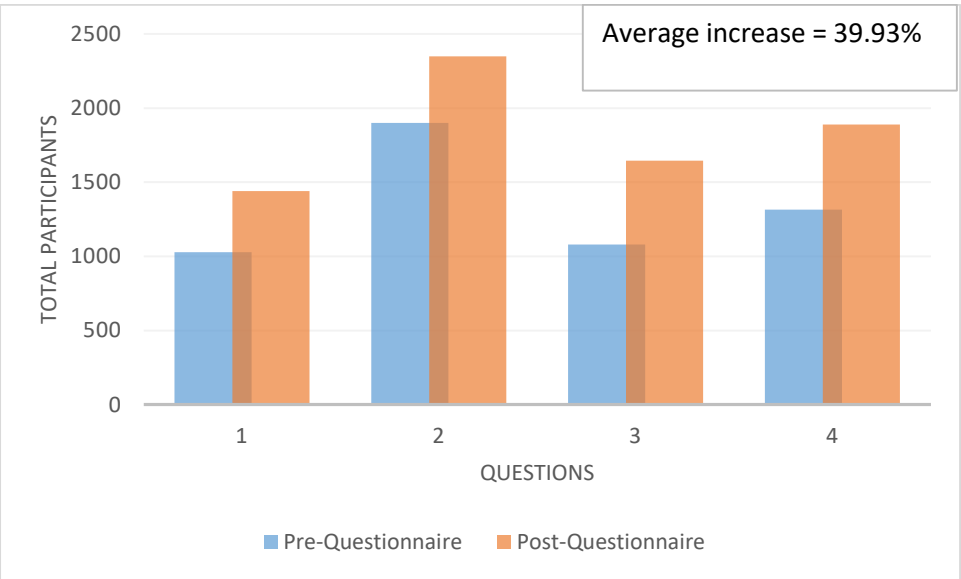

Figure 2.2 – Graph representing comparison of pre and post score and average percentage Increase in knowledge level in the Ganga River Basin in the category “Culture and Heritage”.

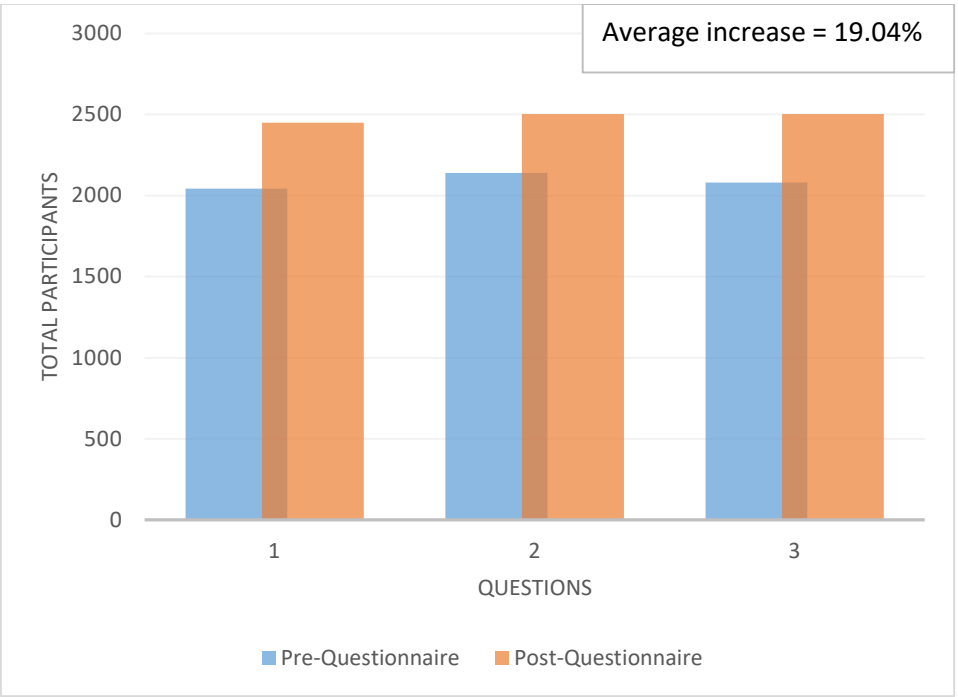

Figure 2.3 – Graph representing comparison of pre and post score and average percentage Increase in knowledge level in the Ganga River Basin in the category "Conservation Values".

Low-cost Interpretation Corners

We have established low-cost Interpretation Corners in accessible locations along the Ganga and its tributaries in nine states and one union territory. They are strategically located to maximize access and engagement, especially in areas with large student populations near the riverbanks. Bal Ganga Prahari (BGP) Corners and Jalmala Samvaads have been established in government schools across 45 districts. In total, 107 low-cost interpretation corners (27 BGP Corners and 80 Jalmala Samvaads) have been established making significant impact in education outreach (Table 2.2, Figure 2.4). These smaller-scale interpretation corners act as specialized libraries or galleries, equipped with models, panels, publications, and artwork focused on Ganga biodiversity. We established Strategically placed in government schools along the Ganga's tributaries, these centers actively involve students during special events like Wildlife Day, World Environment Day, International Day of Biological Diversity etc. inviting participation from nearby schools, colleges and other academic institutions.

Table 2.2: Total number of low-cost interpretation corners 'BGP Corners and Jalmala Samvaad' established across the Ganga River Basin

S.No.	River	Total No. of low interpretation corners Established	Total Students Sensitized	Total Teachers Sensitized
1.	Ganga	16	7239	203
2.	Yamuna	35	21083	539
3.	Ramganga	10	7227	180
4.	Gandak	6	2820	74
5.	Gomti	19	26930	337
6.	Chambal	2	1450	55
7.	Ghagra	5	3155	94
8.	Ajay	4	2625	88
9.	Damodar	4	4195	113
10.	Rupnarayan	2	2820	60
		107	**79544**	**1743**

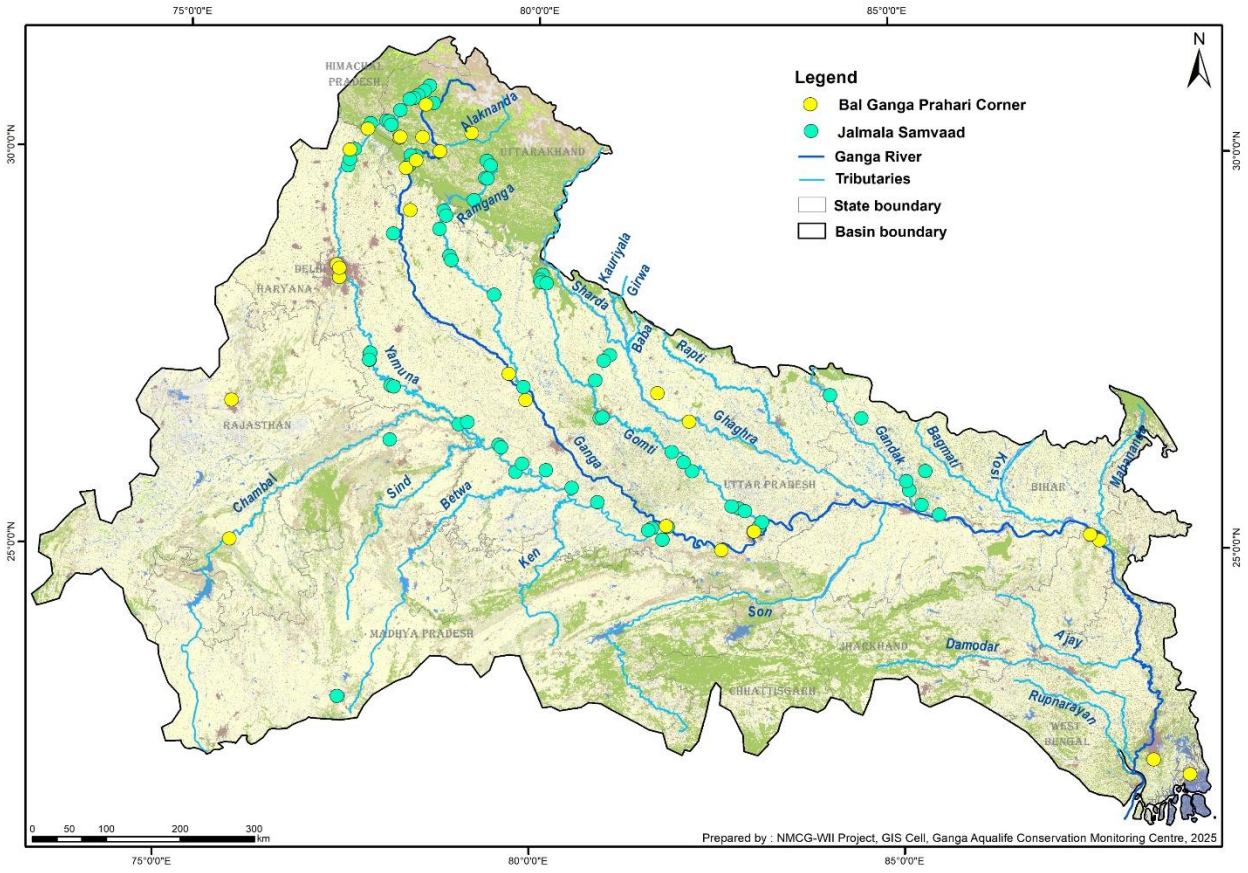

Figure 2.4: Map representing the Bal Ganga Prahari Corners and Jalmala Samvaad established across the Ganga River Basin

Image 2.3: Jalmala Samvaad established at Govt. School, Jharkhand along Damodar River

Image 2.4: Bal Ganga Prahari Corner established at a Govt School, Sirmour, Himachal Pradesh along Yamuna River

3. Teacher Training

Teacher education and teachers themselves are critical components of educational transformation and growth (Darling-Hammond, 2020). Teacher training programs are thus essential to equip educators with the skills, knowledge, and tools needed to deliver high-quality education in dynamic and diverse classrooms. They are needed for developing competent and skilled educators who can enhance the quality of education and prepare future generations for the challenges of the world (Dange and Siddaraju, 2020). These programs enhance pedagogical expertise, introduce innovative teaching methods, and foster cultural competence, enabling teachers to address varied student needs effectively. They aim to equip teachers with the necessary knowledge, skills, behaviours, and attitudes to perform their tasks effectively both inside and outside the classroom (Dange and Siddaraju, 2020). By keeping educators updated on technological advancements and evidence-based practices, training ensures they remain relevant and impactful. Moreover, such programs increase teacher confidence, and improve retention, directly contributing to better student outcomes. Conducting teacher training is an investment in creating adaptable, inspired educators who foster inclusive, engaging, and successful learning environments. There is need for training of teachers, however, the current training programs face several challenges, including limited high-quality research, a shortage of well-qualified teachers, low motivation among prospective educators, inadequate infrastructure, and a predominantly supply-driven approach (Kumar and Azad, 2016). Teacher training programs can be enhanced to improve learning outcomes and ensure teachers are well-prepared to meet the complex learning needs of students in a rapidly changing social environment (Moeini, 2008). According to the study by Singh and Shakir (2019), several factors contribute to the weakening of teacher training programs; these include insufficient opportunities for professional development, low teacher salaries, limited training in Information and Communication Technology (ICT), inadequate emphasis on research and innovation, infrastructural limitations, an imbalance between the demand and supply of teachers, resistance to innovative teaching methods, and the isolation of teacher education departments from the broader academic framework. Teacher training is crucial for the qualitative improvement of education, as highlighted by the Kothari Commission (1964-66). We conducted teacher training programs across the Ganga River Basin to empower educators through interactive awareness

programs and environmental education tools, promote sustainable development and conservation awareness. These programs aimed to equip teachers with the skills to inspire students in local communities, promoting knowledge about the ecological significance of riverine biodiversity, water resource management, and biodiversity preservation.

Methodology

The teacher training program is conducted with both pre-service and in-service teachers. The selection of in-service and pre-service teachers for the training program was guided by their availability and willingness to participate. For pre-service teachers, participants were chosen from the District Institutes of Education and Training (DIETs). In the case of in-service teachers, the focus was on those working in schools where student awareness workshops had already been conducted, allowing for continuity and reinforcement of conservation education. All selected institutions and schools were located within the Ganga River basin, primarily in close proximity to the river or its tributaries, to ensure contextual relevance and enhance the connection between local environmental issues and educational content. Training program follows an interactive, activity-based approach aimed at enhancing educators' understanding of riverine ecosystems and conservation. It begins with a presentation on the followed by a series of hands-on activities designed to engage participants in experiential learning.

Results

Training of In-service and Pre-service teachers

A total of 489 pre-service, 34 lecturers (Table 3.1) and 961 in-services teachers (Table 3.2) have been trained through these training workshops. The teacher training program was successfully implemented using an interactive, activity-based approach to enhance educators' understanding of riverine ecosystems and conservation. Each session began with a presentation on the biodiversity of the Ganga River and its tributaries, highlighting the ecological significance of the river system and the impacts of human activities on its health. This was followed by a series of hands-on, experiential learning activities designed to actively engage participants. Educators participated in group discussions using the instructional manual *"Discovering Ganga"* and took part in educational games such as *Snake and Ladder*, *Web of Life*, *Biodiversity Dart*, and *Species Puzzle*.

These activities fostered critical thinking, collaboration, and innovative teaching strategies for integrating river conservation themes into classroom practice.

Table 3.1: Details of teacher training program conducted in District Institution of Education and Trainings

S.No.	Institution	Total No. of pre-service teachers	Total No. of D.I.E.T. Lecturers
1	D.I.E.T. Uttarkashi	33	4
2	D.I.E.T. Agra	120	4
3	D.I.E.T. Sarnath	81	5
4	D.I.E.T. Kanpur	103	6
5	D.I.E.T. Prayagraj	85	9
6	D.I.E.T. Dehradun	67	6
Total No. of Teachers Trained		**489**	**34**

Image 3.1: Teacher training workshop with pre-service teachers at D.I.E.T. Kanpur, Uttar Pradesh, along Yamuna River.

Table 3.2: Details of teacher training program conducted with in-service School Teachers

S.No.	Rivers	States	Total No. of In-service teachers
1	Ganga	Uttarakhand, Uttar Pradesh, Bihar, Jharkhand	251
2	Yamuna	Uttarakhand, Uttar Pradesh, Himachal Pradesh, Haryana	402
3	Gomti	Uttar Pradesh	213
4	Ramganga	Uttarakhand, Uttar Pradesh	46
5	Gandak	Bihar	40
6	Chambal	Madhya Pradesh	9
Total No. of Teachers Trained			**961**

Gyan Kosh

Following the training, each school received a resource kit called "Gyan Kosh." This kit includes a teacher training manual, activity books, a factsheet on river biodiversity, a booklet addressing plastic pollution, educational games, puppets, origami materials, a pen drive containing relevant videos, and a water testing kit. These resources aim to empower teachers with the necessary knowledge and tools to integrate engaging and informative environmental education into their classrooms.

Image 3.2: 'Gyan kosh' a resource kit provided to schools and teachers after the awareness workshops

4. Interpretation Centers

Interpretation is the process of conveying the significance of a place or thing to people in a way that deepens their appreciation, fosters understanding, and encourages a positive outlook toward conservation. It aims to enrich visitors' experiences, communicate deeper symbolic meanings, and inspire changes in attitudes or behavior towards the natural or cultural environment (Prentice, 1996). People use interpretation to help them understand the place they are visiting (Stewart et al., 1998). Nature interpretation and education is integral to biodiversity conservation of the Ganga River. As an institution for dissemination of knowledge of natural or cultural heritage through provocation and revelation of the relationships and meanings of the natural environment (Orams, 1997), interpretation centers stimulates, facilities and extends people's understanding so that empathy and concem towards river and biodiversity conservation can be developed, prompting more responsible behaviour (Bramwell and Lane, 1993; Stewart et al., 1998). Local people can benefit from an interpretation programme, for instance, it increases their understanding of how they can contribute to the protection of an area's natural resources upon which they depend for subsistence or some form of income. Interpretation can be seen as a process that helps visitors develop a sense of connection or care for a place. While most visitors may not stay long enough to form a deep bond, good interpretation can still take them a step closer to understanding and appreciating the place. This emotional connection can lead to empathy and a caring attitude, not just for that specific site, but also for other natural or cultural places around the world. In this way, interpretation can inspire people to care about conservation more broadly (Stewart et al., 1998).

Methodology

The approach for establishing interpretation centers along the Ganga River focused on strategic location, thematic relevance, and long-term sustainability. A total of five interpretation centers were developed, with three located in major urban centers ensuring high footfall and visibility. Two additional centers were designed as open-air interpretation spaces. The central theme across all centers is the Ganga River—highlighting its biodiversity**,** journey from origin to destination**,** and the challenges posed by pollution**.** Each center was developed with context-specific content, interactive displays, and educational materials to engage diverse audiences, including students, local communities, and tourists. The planning process included site selection based on accessibility

and ecological relevance, design of interpretive content tailored to local culture and river ecology, and collaboration with government stakeholders for long-term stewardship

Results

A total of five interpretation centers were developed, with three located in major urban centers—Haridwar, Uttarakhand, Kanpur and Varanasi, Uttar Pradesh—ensuring high footfall and visibility (Table 4.1). Two additional centers were designed as open-air interpretation spaces and have been handed over to the Forest Department for continued management and community engagement, in Sanjay Van Rudrapur and City Forest Ramnagar, Uttarakhand. . These interpretation centers assist in promoting an understanding and appreciation of the biodiversity and cultural significance of our National River – the Ganges.

The three closed Interpretation centers are named, “Ganga Avlokan” in Haridwar, Uttarakhand, “Ganga Darpan” in Varanasi and “Anubhuti” in Kanpur, Uttar PradeshThe average increase in the number of visitors visiting the centers since the year of inception has shown a steady growth with an increase of 39.3 % at Ganga Avlokan, 21.9 % at Ganga Darpan and 52.6 % at Anubhuti.

Table 4.1: Detail of total number of participants of educational tours and workshops, and visitors at Interpretation Center

S.No.	Interpretation Center	Visitors/Educational Tours/Workshop participants
1	Ganga Avlokan, Haridwar	150123
2	Anubhuti, Kanpur	116753
3	Ganga Darpan, Varanasi	45989

Ganga Avlokan, Haridwar, Uttarakhand

This is situated at Chandi Ghat, Haridwar, Uttarakhand. The Center is designed to engage and educate visitors about the river Ganga and its biodiversity. These centers feature displays, dioramas, and exhibits, and panels that showcase the journey of the river Ganga - from origin to destination, livelihood that it provides and biodiversity that thrives in and around it. Since the year of inception number of visitors show an increase of 39.3 % (Figure 4.1).

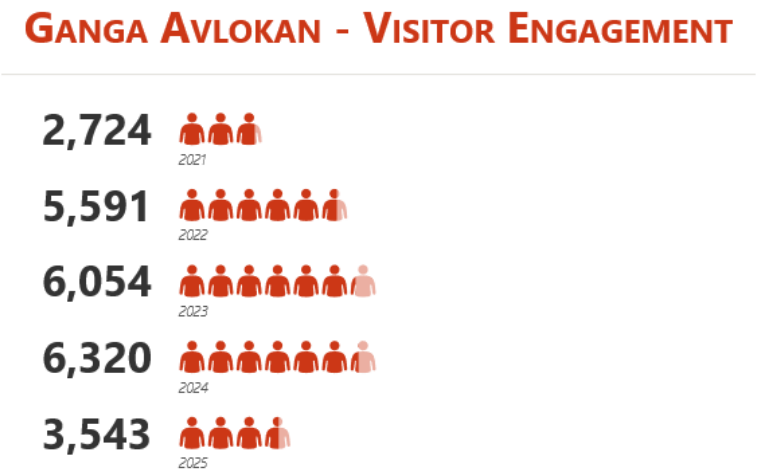

Figure 4.1: Graph representing total number of visitors at Ganga Avlokan since the year of inception

Image 4.1: Ganga Avlokan Interpretation Center established at Chandi Ghat, Haridwar, Uttarakhand

Ganga Darpan, Varanasi, Uttar Pradesh

"Ganga Darpan" an interpretation center has been developed at the Turtle Rescue and Rehabilitation Center, Sarnath, Varanasi. The center showcases Ganga as an integral part of our lives since ancient time. It serves as a knowledge and activity center. Since the year of inception number of visitors show an increase of 21.9 % (Figure 4.2).

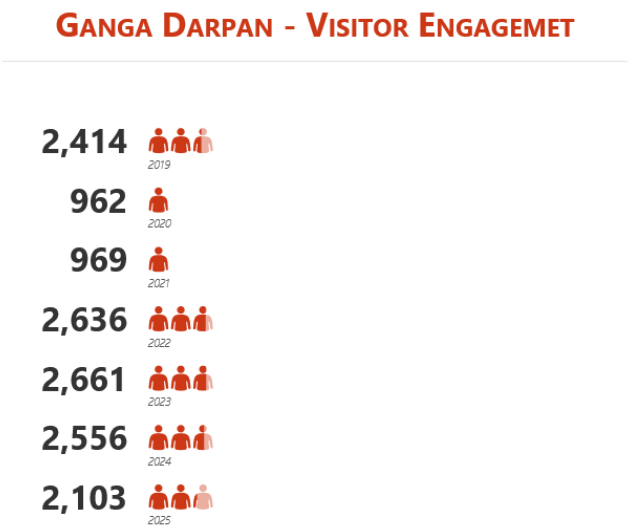

Figure 4.2: Graph representing total number of visitors at Ganga Darpan since the year of inception.

Image 4.2: Ganga Darpan Interpretation Center established at Sarnath, Varanasi, Uttar Pradesh

Anubhuti, Kanpur, Uttar Pradesh

"Anubhuti" has been developed at the heritage building of Allen Forest situated at Kanpur Zoological Park. Nestled on the banks of river Ganga, Kanpur stands as one of the North India's major industrial centers with its own historical, religious and commercial importance. Since the year of inception number of visitors show an increase of 52.6 % (Figure 4.3).

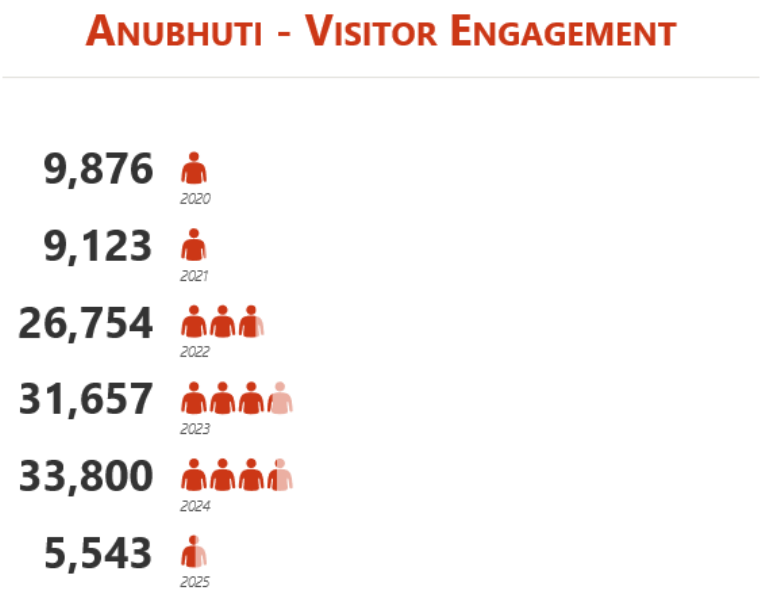

Figure 4.3: Graph representing total number of visitors at Anubhuti since the year of inception.

Image 4.3: Anubhuti Interpretation Center established at Kanpur Zoo, Kanpur, Uttar Pradesh

Sanjay Van, Rudrapur, Uttarakhand

An Open-air Interpretation centers have been established in Sanjay Van Rudrapur, Uttarakhand. Sanjay Van is a green area that is the part of Tanda range forest in Pantnagar town of Udham Singh Nagar District. The center was developed with the support of the Forest Department and has been handed over to their management.

Image 4.4: Sanjay Van open-air Interpretation center established at Rudrapur, Uttarakhand

City Forest, Ramnagar, Uttarakhand

This is also an open-air Interpretation center. City forest is part of the Jim Corbett National Park at Ramnagar in Nanital. The center was developed using 3D species model and informative panels with the support of the Forest Department and has been handed over to their management.

Image 4.5: City Forest open-air Interpretation center established at Ramnagar, Uttarakhand

5. Outreach and Conservation Education Programs

To ensure that the conservation practices are effective, focusing solely on protecting natural resources is no longer enough; efforts must be made to engage the people who directly or indirectly are dependent on these resources or are affected by them (Infield & Tolisano, 2019). Lasting change occurs when the local communities see themselves as a part of the solution, without engaging these people and addressing their needs or issues, conservation becomes an uphill battle (Dhliwayo et al. 2023). That's why conservation is no longer about protecting or preserving the nature in theory—it is also about living with it, alongside it – it's about co-existence. Conservation education bridges this gap. It is an initiative that focuses on making people active participants in the preservation of resources they rely on and creating a sustainable balance (Hutchings & Cassar, 2006). It builds a foundation of respect, knowledge, and shared responsibility by fostering environmental education, engaging communities and promoting eco-friendly livelihoods. Connecting people deeply with the ecosystems that sustain them, this approach transforms conservation from an obligation into a shared commitment. It empowers individuals to protect the planet's future and makes protecting nature part of everyday life (Swargiary, 2023). Conservation education is not just an option but a necessity. Other enforcement although extremely necessary, they alone cannot secure the future of our rivers, forests, and wildlife. Engaging communities, providing sustainable livelihood options, educating young minds are the backbone of a conservation movement that resonates with people's values and realities (Gurung & Thapa, 2023; Infield & Tolisano, 2019). By empowering people to protect the natural resources that sustain their lives, instead of imposing restrictions, community engagement nurtures a sense of shared stewardship (Oskarsson, 2014). Similarly, river conservation requires a collaborative effort across all levels of society. When government policies align with the values and practices of local communities, it creates an environment conducive to sustainable and effective river conservation initiatives (Gilson & Garrick, 2021); whether in policy-making, or on-the-ground action each department, institution, and individual has a vital role to play (McKinley et al. 2017). Community-based education initiatives provide opportunities to share traditional ecological knowledge, foster intergenerational knowledge transfer, and actively involve local communities in conservation efforts. These programs typically feature workshops, storytelling sessions, and hands-on activities

(Varma and Kumar, 2024). Collective action can become a powerful force in protecting these ecosystems, if every person realizes their responsibility.

Mass awareness programs were conducted in the Ganga Basin to educate and engage large sections of the population on the importance of river conservation. Considering the ecological, cultural, and economic significance of the Ganga and its tributaries, it was crucial to develop a sense of responsibility among communities. These programs aimed to increase understanding of river biodiversity, pollution issues, and sustainable practices, ultimately encouraging collective action for the protection of the river system.

Methodology

To effectively reach diverse audiences and promote river conservation across the Ganga Basin, a multi-pronged approach using audio, visual, and audio-visual materials was adopted. Audio methods included radio talks and interactive sessions to engage communities through local language and dialogue. Visual tools such as exhibitions, social media and publications helped communicate key messages in a clear and relatable manner. Audio-visual methods like puppet shows and nukkad nataks (street plays) brought stories of the river and its challenges to life, creating educational impact. Social media platforms were also used to extend outreach and sustain engagement. This integrated approach ensured that awareness efforts were inclusive, culturally resonant, and accessible to people of different age groups and literacy levels.

Results

Various mass awareness and outreach programs were conducted across the Ganga River Basin. They are listed below –

Interactive Program – Awareness and Sensitization Workshop

Various interactive workshops were conducted on several events to create awareness about the river and its biodiversity in various states and districts across the Ganga River basin. Approx 1 crore participants were sensitized through the awareness and sensitization programs conducted under various GOI initiatives as listed in Table 5.1.

Table 5.1: Details of various awareness and sensitization programs conducted during various events

Activity	**No of people reached out (Approx.)**
Ganga Utsav	10,000
Nadi Utsav	10,00,000
Har Ghar Tiranga	2,00,000
Catch the Rain	25,000
Swachhta Hi Sewa	3,00,000
Maha Kumbh	50,00,000
Ek Ped Ma Ke Naam	10,000
Special Day Celebration	10,00,000
Amrit Dhara	25,000
Vriksharopan	50,000
Mission LiFE	2,50,000
Azadi Ka Amrit Mahotsav	10,00,000

Mahakumbh Mela

The environmental awareness and conservation activities conducted by the team, and the Ganga Praharis during Mahakumbh 2025 served as a powerful platform to advocate for river conservation and sustainable practices. At the Mahakumbh, in collaboration with its volunteers - Ganga Praharis, we conducted impactful environmental awareness activities at the NMCG Pavilion, Sangam, Arail Ghat, and the Kalash Awareness Stall. Through awareness programmes, cleanliness drives, street plays (Nukkad Nataks), and plastic waste management sessions, they educated diverse stakeholders about the importance of conserving rivers and aquatic biodiversity for ecological balance. A total of 50,00,000 people were sensitized through our activities and awareness including local community members, pilgrims, educational institutions, government officials, local vendors, and foreign visitors.

The Ganga Prahari group played a pivotal role in mobilizing devotees through street plays and interactive discussions. These sessions highlighted the dangers faced by aquatic species like the Gangetic Dolphin, Gharials, Otters, and Mahseer fish, emphasizing the threats posed by pollution, habitat destruction, and climate change.

Image 5.1: Sensitization programme with Mahakumbh Visitors about role of community participation in field of conservation

Image 5.2: Awareness about the plastic waste and importance of biodiversity for river ecosystem by Ganga Prahari

Radio talks

Radio talks are highly effective for creating mass awareness about riverine biodiversity due to their wide reach and accessibility. They deliver engaging, informative content to diverse audiences, including rural and urban communities, in local languages, making complex ecological issues relatable. By featuring experts, conservationists, or local voices, radio talks educate listeners about the importance of river ecosystems, threats like pollution, and conservation actions.

We conducted Radio talks on Radio Rishikesh and Aakashwadi Dehradun on various topics. The radio talk shows organized focused on raising mass awareness about environmental conservation, youth empowerment, and career opportunities, effectively engaging diverse audiences. Radio Rishikesh aired a total of 14 episodes on topics including the Bal Ganga Prahari Programme for riverine conservation, the role of women in Himalayan conservation (celebrated on Himalaya Day), and the significance of street plays for conservation awareness. Waste management, particularly plastic waste and composting, was highlighted during Swachhta Pakhwada. Youth-centric discussions on environment, development, and their role in nation-building, were featured on International Youth Day and Independence Day. Career-oriented talks covered opportunities in forestry, biotechnology, wildlife, environmental science, commerce, science, GIS, and remote sensing, with specific emphasis on GIS applications. Additionally, wildlife photography was explored on World Photography Day. A radio show series of 8 and 6 episodes titled, "Ganga ki Baat" was also conducted through Aakashwadi Dehradun. By aligning with significant days and addressing pressing ecological and social issues, these radio talks developed public understanding and inspired action toward conserving riverine biodiversity and beyond.

Image 5.3 Radio show conducted at Radio Rishikesh on International Youth Day

Mobile Exhibition

As part of the Wildlife Week celebration under the aegis of the 75th Azadi Ka Amrit Mahotsav, a Yatra was organized to raise awareness about the significance of water and biodiversity and their impact on our lives. The 3000 km Yatra traced the Ganga, Yamuna, and Gomti Rivers, addressing various audiences, including school students, village community members, pedestrians, the Forest department, and teachers (Table 5.2, Figure 5.1).

Table 5.2: Total number of placed visited during mobile exhibitions conducted across the Ganga River Basin

S.No.	Activity	Place	No. of Participants
1	Flag off, Selfie point	Haiderpur Wetland, Bijnor	1500
2	Workshop with underprivileged Children along the Yamuna River	Delhi	5330
3	Educational activities with school students	Kanpur	8040
4	Painting competition in Kanpur ,Zoological Park	Kanpur zoo	7820
5	Awareness workshop with students	Zafarabad, Jaunpur	6720
6	Awareness workshop with students	Ghanshyampur, Sultanpur	5130
7	Community workshop with villagers	Dhakua, Kaithi, Varanasi	8300
8	Awareness workshop with students and locals	Rajbari, Varanasi	7270
		Total	**50,110**

Image 5.4: Awareness workshop conducted during Mobile Exhibition at Kanpur with school students

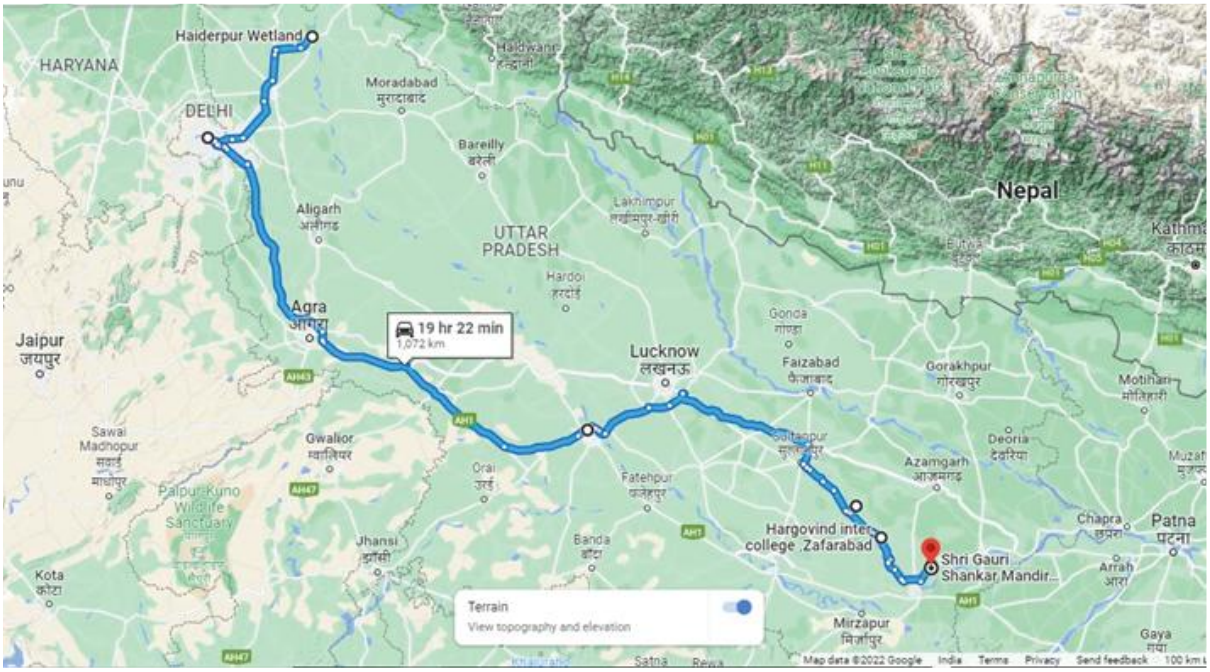

Figure 5.1: Map showcasing the distance covered during the Mobile Exhibition in Ganga River Basin

Static Exhibition

Exhibitions are valuable for raising awareness about riverine biodiversity due to their ability to visually engage and educate diverse audiences. These display posters, models, and informational panels, provide clear, accessible information about river ecosystems, species, and threats like pollution. Set up in public spaces like schools, ghats etc they attract broad attention and encourage self-paced learning. Their cost-effective, reusable nature allows for repeated use across locations, ensuring consistent messaging. To sensitize community about biodiversity conservation of Ganga Basin various exhibitions were exhibited during various occasions. Table 5.3 provides a list of total number of participants who participated in the event.

Table 5.3: Total number of exhibitions conducted across the Ganga River Basin

S.No.	Event	Location	No. of Participants
1	Exhibition at Shiv Ghat	Haridwar	200
2	Exhibition at Soor Sarovar wetland	Agra	210
3	Exhibition at USAC	Dehradun	162
4	Vigyan Sarvatra Pujyate' organized by Ministry of Culture, Government of India.	Nehru Stadium, Dehradun	4030
5	Vigyan Sarvatra Pujyate' book fair under Science and Technology Education Theme	UCOST, Dehradun	560
6	Biodiversity Exhibition in association with Azim Premji Foundation	Govt Upper Primary School, Selaqui	500
7	Exhibition on Clean Ganga Mission	Varanasi	100000
		Total	**1,05,662**

Image 5.5: Exhibition set-up at Dashashwamedh Ghat, Varanasi during World Environment Day

Social Media

As we are living in a digital world, we started to focus more on digital content and social media platforms to disseminate knowledge about river and its biodiversity. Also, as print media can only reach to limited audience and stakeholders, these platforms assist in reaching the masses in a convenient manner. Social media helps in creating awareness about riverine biodiversity by reaching vast, diverse audiences instantly with engaging content and stories. It leads to interaction, enabling users to share, comment, and participate in conservation campaigns, amplifying impact. Platforms also connect communities with experts and organizations, driving collective action and sustained interest in protecting river ecosystems. We have created Facebook and Instagram accounts named "Ganga Darpan" and "Glimpses of Ganga" and these pages are constantly updated with educational content to create awareness. So far through our social media pages on Instagram, Facebook and YouTube we have engaged over 15, 55,950 participants from all across the country and world. We also created an Environmental Blog named "Ganga Darpan" with an aim to provide a platform for sharing knowledge, experiences, best practices and stories in the field of river

conservation, with a focus on education and outreach as well. So far we have published 88 blogs and stories, with a visitor engagement of around 3500, and 5800 views.

Publications

Publications play a crucial role in enhancing awareness, whether they communicate existing knowledge or introduce new information to the public. In the context of promoting awareness about the Ganga and its biodiversity, specific publications have been meticulously designed, developed, and disseminated among diverse audiences, including the general public, school students, and teachers. These include both print media as well as digital media publications. We develop publications targeted for school students and teacher as well as for mass awareness. Through our publications we have reached to almost 15, 00,000 participants all across Ganga River basin. The details are given in Annexure I.

Image 5.6: Various publications designed for both students and the local communities

Village Walk

In Siror Village, Uttarkashi, a transformative initiative was undertaken to promote environmental awareness and celebrate the region's natural heritage. A thoughtfully designed village walk was established along the scenic banks of the Bhagirathi River. This trail was developed not only as a recreational pathway but also as an educational experience for both locals and visitors. Informative signages were strategically placed along the route, offering insights into the diverse flora and fauna that inhabit the region, as well as the ecological importance of the Bhagirathi River. These signboards were designed in simple, accessible language to engage people of all age groups, especially students and community members. The walk serves as a platform to connect people more deeply with their environment, fostering a sense of pride and responsibility towards biodiversity conservation.

Image 5.7: Village Walk established along the Bhagirathi River in Sirror Village, Uttarkashi, Uttarakhand

Puppet Shows and Nukkad Natak

Puppet Shows and Nukkad Nataks play a vital role in addressing social issues and conveying moral messages to the audience. Through their creative performances and symbolic storytelling, they serve as a medium to address issue related to biodiversity conservation attracting masses. Various awareness activities, were conducted along many locations along the Ganga River mainly Nukkad Natak (street plays) (Table 5.4) and Puppet Shows (Table 5.5), were conducted across various locations along the Ganges River Basin to educate communities.

Table 5.4: Total number of Nukkad Nataks conducted across the Ganga River Basin

S.No.	Location	No. of Participants
1	Narora	25000
		25000
2	Kashipur, Sambal	4200
3	Kanpur	10000
		15000
4	Mirzapur	5600
5	Varanasi	25000
		12200
		8518
	Total	1,30,518

Table 5.5: Total number of Puppet Show conducted across the Ganga River Basin

S.No.	Location	No. of Participants
1	Varanasi	50,500
2		50,000
3	Mirzapur	50,000
	Total	1,50,500

Image 5.8: Puppet show organized for the local community in Varanasi, Uttar Pradesh

Image 5.9: Nukkad Natak organized for the local community in Mirzapur, Uttar Pradesh

6. Conclusion

The Ganga River spanning across five north Indian states is of ecological and cultural significance to the local community and thus its conservation and preservation needs innovative techniques and methods to promote sustainable practices. The report emphasizes on the important role of Environment Education in creating awareness, changing attitudes and promoting responsible behavior for conservation of riverine biodiversity. Establishment of low-cost interpretation corners (Ganga Knowledge corners) in selected government schools along the rivers has provided accessible platform for knowledge dissemination about river, its biodiversity, and conservation practices. The interpretation corners along with interactive workshops have provided students with an opportunity to engage with various environmental issues like pollution, habitat degradation and biodiversity loss. They also have assisted in creating a sense of ownership towards the well-being of the river. The pre and post-questionnaire surveys has shown improvement in students' knowledge retention demonstrating the effectiveness of the intervention

Further, the Interpretation centers serve as a platform where complex information is presented in an easy manner making it easier for people to understand the ecological importance of the river. The establishment of five interpretation centers along the Ganga River, including Ganga Avlokan in Haridwar, Ganga Darpan in Varanasi, and Anubhuti in Kanpur and two open-air spaces managed by the Forest Department (Sanjay Van in Rudrapur and City Forest in Ramnagar), has advanced biodiversity conservation. With gradual increase in visitor numbers these centers are inspiring both local communities and visitors, successfully creating understanding, and responsible behavior towards the river's ecology.

The mass awareness and outreach programs target diverse group of stakeholder like school students, teachers, forest officials, local community etc, and has further improved impact of the initiatives. Through audio-visual approaches such as puppet shows, nukkad nataks (street plays), exhibitions, social media campaigns, and publications, the initiative tries to bridge the gap between knowledge and action. The initiative's community-driven approach reflects the principles of Agenda 21 that emphasizes education as an important part of sustainable development.

By integrating formal education with non-formal activities, the initiative empowered local communities while focusing on the long-term conservation efforts along the Ganga River. But in order to sustain the efforts collaboration with schools, local authorities and communities is

extremely necessary. Future initiatives are considering scaling up the establishment of interpretation corners and utilizing digital platforms to reach broader audiences, ensuring that the conservation of the Ganga remains a shared responsibility. In conclusion, this entire program shows that targeted environmental education interventions and community engagement serve as important tools for creating awareness and promoting biodiversity conservation. The Ganga Knowledge Corners and associated outreach activities have created a scalable model for promoting sustainable development. This project makes a substantial contribution to the goal of a cleaner, healthier, and more resilient Ganga River for coming generations by encouraging understanding, knowledge, and action among the younger generation and local stakeholders.

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Annexure – I

Games & Activities

Activities in school workshops for students are game-based, with the underlying concept of "education with recreation." The session began with a talk on River Biodiversity, outlining threats and conservation status. Subsequently, students were engaged in various games designed to convey conservation concepts through play. These games include "Web of Life," "Biodiversity Dart," "Save Our Rivers - Snake and Ladder," "Species Puzzle," "Origami," "Wildlife Sudoku (Quiz)," and "Animal Stapoo (Identify the pug marks)." These interactive games play a crucial role in biodiversity awareness workshops, making them engaging and interactive. The details are given here -

Web of Life - Web of Life is a fun game that teaches kids about the food chain. Each child gets a card with a component of biodiversity. We use a thread to show how everything is connected in the food chain – like the sun helping plants, bees pollinating, birds eating bees, and so on. If we make one thing extinct, it affects the whole chain. This game helps kids see how nature works and why every part is important.

Biodiversity Dart Game - The Biodiversity Dart Game is a fun way for kids to learn about nature. Using a dartboard, children throw darts at sections divided into good deeds and bad deeds related to nature, earning plus or minus points. Good deeds include actions that protect nature, while bad deeds involve things that harm it. Kids form teams and compete, aiming to understand

how their daily actions impact nature. Through this friendly competition, we hope to inspire children to consider how they can contribute to conserving their surroundings in their everyday lives.

Save our rivers (Snake and Ladders) - Snake and Ladders gets a green twist in our version. We replaced snakes with harmful deeds towards nature and ladders with good actions to protect it. The life-sized game lets children become the pawns, making it even more exciting. Our goal is to impart knowledge about their role in protecting the environment. This hands-on activity teaches kids that small actions by everyone can make a big difference in conservation efforts.

Biodiversity Jigsaw - The Biodiversity Jigsaw is an engaging puzzle game featuring pictures of the local area's biodiversity. Tailored to our workshop's location, the game includes information about each species and its role in nature. By piecing together, the puzzle, children not only learn about the diverse wildlife in their surroundings but also understand the vital role these animals play in maintaining the area's biodiversity.

Origami - Wildlife Origami is a creative and educational activity where children learn the art of origami while exploring the world of wildlife. With specially designed origami sheets, kids can fold and create paper animals, birds, and insects, discovering the diversity of wildlife. Each origami model is accompanied by interesting facts about the species, helping children connect art with knowledge about nature.

Wildlife Scrabble - This is an interactive game that combines fun and learning. Children are grouped into teams and challenged with questions about wildlife and conservation. Armed with alphabet tiles, they creatively form answers, putting their knowledge and retention skills to the test. This engaging activity not only reinforces facts discussed in the workshop but also serves as a dynamic assessment of the workshop's impact on

the children's understanding of wildlife and conservation.

Animal Stapoo - This is an exciting life-sized game that brings the world of wildlife tracking to kids. Teams of children gather around a sheet featuring footprints of various animals. In this instant game, we call out the name of an animal, and the teams race to identify the corresponding footprint or pugmark. Through this activity, children not only have fun but also develop skills in recognizing and understanding the identifying factors of animal footprints, providing them with a hands-on introduction to the fascinating field of wildlife tracking.

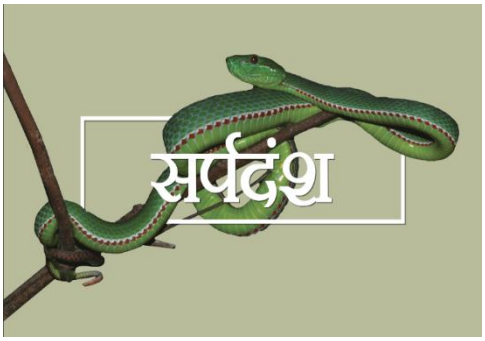
Riddle Game - The Riddle Game is a playful activity featuring 15 cards, each with a riddle on one side and its answer on the other. Kids engage in the game by guessing the answers, providing a fun and simple way to assess their factual knowledge about nature. Through this entertaining process, we can gauge their understanding of the roles played by various elements in their daily lives, fostering both enjoyment and learning.

Thumb print- Thumbprint is an inclusive activity designed for both children and adults. By incorporating diverse colour elements, participants learn how to transform a simple thumbprint into a variety of animals. Throughout the activity, we not only engage them creatively but also educate about the characteristics and details of each animal they paint. Thumbprint thus combines artistic expression with an informative exploration of the animal kingdom.

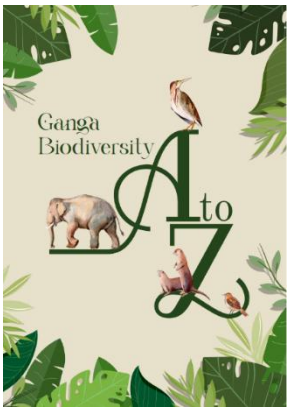
Annexure II

Print Media

1. **Sarpdansh:** A small booklet on snake bite named **"*Sarpdansh*"** has been modified, re-developed and distributed amongst the locals living along the Ganga River basin. *Sarpdansh* is a collection of myths about snakes that local people generally believe in and the facts about them. It also contains first aid and prevention methods that can be followed to avoid such situations.

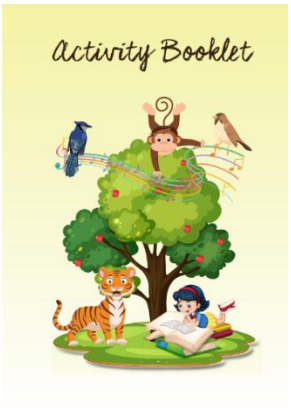


2. **Ganga Biodiversity - A to Z**: This is a bilingual coloring book specially crafted for school students. Each alphabet is paired with information about a specific animal or plant species, with one page dedicated to details about the species and the facing page featuring a coloring activity. This innovative approach merges education with creativity, providing an engaging step towards conservation awareness among students through the exploration of diverse flora and fauna in the Ganga region.



3. **Be Water Wise**: This is a compact bilingual booklet emphasizing the significance of water conservation. Packed with engaging games and activities, teachers can lead students through various aspects of water awareness, including pollution, wastage, and recycling. The activities are thoughtfully designed to make learning about water conservation enjoyable, encouraging students to modify their daily habits and contribute to water-saving efforts in both their homes and surroundings.

4. **Activity Book – Kindergarten**: The Activity Booklet is a small, bilingual guide that talks about why it's important to take care of nature. It's like a little book of games and things to do that teachers can show students. Each game is about different parts of nature, like stopping pollution, not wasting things, and taking care of animals. It's a fun way to help students understand how what they do can affect the environment. The booklet teaches them simple things they can do to keep the Earth safe and happy.

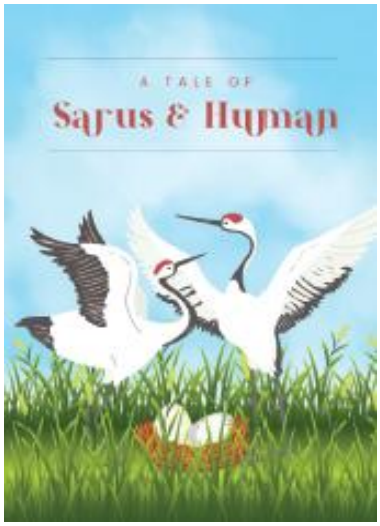


5.

6. **Biodiversity of Uttarkashi**: The Biodiversity of Uttarkashi is a bilingual booklet that focuses on the birds, trees, plants, and mammals unique to the Uttarkashi district in Uttarakhand. This compact guide provides comprehensive information about each species, including scientific names, IUCN status, identifying features, basic geographical distribution, and general knowledge about the species. It serves as a small yet significant initiative to encourage the younger generation, living in close proximity to nature, to learn and appreciate the diversity of their surroundings. This booklet aims to foster a sense of curiosity and connection with the natural world among the youth.

Digital: E-books

Otter Story & Sarus Story – Small story books about smooth-coated otter and Sarus crane with engaging animated images and story line for kids.



Annexure III

Sample Questionnaire

भारतीय वन्य जीव संस्थान देहरादून, उत्तराखण्ड

1. हमारी राष्ट्रीय नदी कौन सी है?
   क) गंगा ख) यमुना ग) भागीरथी घ) नर्मदा
2. अजय नदी किस स्थान पर गंगा नदी से मिलती है?
   क) झारखण्ड ख) प. बंगाल ग) कन्नौज घ) प्रयागराज
3. भारत का राष्ट्रीय जलीय जीव कौन सा है?
   क) गांगेय डॉल्फिन ख) घड़ियाल ग) बाघ घ) शार्क
4. आपके राज्य का राजकीय पुष्प क्या है?
5. आपके राज्य का राजकीय पशु क्या है?
6. आपके राज्य का राजकीय पेड़ क्या है?
7. आपके राज्य का राजकीय पक्षी क्या है?
8. आपके राज्य में कुल कितने रामसर आर्द्रभूमि क्षेत्र हैं?
   क) 4 ख) 2 ग) 5 घ) 1
9. वर्ष 2025 में महाकुंभ का आयोजन किस स्थान पर किया गया था?
   क) प्रयागराज ख) हरिद्वार ग) उज्जैन घ) नासिक
10. हिन्दू पौराणिक कथाओं के अनुसार कौन से भगवान अजय नदी से संबंधित हैं?
    क) हनुमान जी ख) श्री राम ग) शिव जी घ) श्री कृष्ण
11. अजय नदी के किनारे कौन-सा मंदिर स्थित है?
    क) रुद्रेश्वर महादेव मंदिर ख) श्री हनुमान मंदिर ग) सरौन काली मंदिर घ) वाल्मीकि मंदिर
12. कुंभ मेले का आयोजन कितने वर्षों के अंतराल पर होता है?
    क) हर साल ख) हर 6 साल ग) 12 साल घ) 3 साल
13. क्या आपको नदी के संरक्षण के लिए कार्य करना चाहिए?
    क) हाँ ख) नहीं

14. यदि आपके क्षेत्र में सांप दिखाई दे तो आप क्या करते हैं?

क) उसे मार देते हैं ख) उसे पकड़ कर दूसरी जगह छोड़ देते हैं

15. क्या आपको लगता है अजय नदी में जलीय जैव विविधता की आवश्यकता है?

क) हाँ ख) नहीं