

FOSTERING MEANINGFUL YOUTH ENGAGEMENT FOR WETLANDS CONSERVATION AND MANAGEMENT

Project Completion Report
2024

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Acknowledgement

On the successful completion of the targets outlined in the 2024 workplan of the India Water Partnership and GWP-South Asia supported project titled 'Fostering Meaningful Youth Engagement for Wetlands Conservation and Management in the National Capital Territory of Delhi', we extend our heartfelt gratitude to all those who have contributed to this achievement.

First and foremost, we would like to express our sincere appreciation to the entire team at the India Water Partnership and GWP-South Asia for their unwavering support throughout this journey. Their guidance and encouragement have been instrumental in helping us navigate through challenges and accomplish our objectives.

A special mention goes to Dr. Veena Khanduri, Executive Secretary-cum-Country Coordinator, India Water Partnership for her continuous support and invaluable guidance. Dr. Veena's expertise and dedication have been indispensable in steering us towards success. We are immensely grateful for her mentorship and commitment to this project. We would also like to thank Mr. Mangla Rai and Mr. Neeraj for their continued support.

Furthermore, we would like to extend our gratitude to Dr. Ritesh Kumar, Director, Wetlands International South Asia for his invaluable guidance and support. We would like to extend our gratitude to our colleagues at Wetlands International South Asia for their tireless efforts and dedication towards meeting the deliverables. We would like to acknowledge Ms. Suchita Awasthi (National Project Coordinator-WISA), Mr. Saadan Hussain (Junior Technical Officer- Climate Change), Mr. Anil Fartiyal (Junior Technical officer – Biodiversity, WISA) and Nikita Mishra (Junior Technical officer – Knowledge Base Development, WISA) for their continued support throughout the project.

We also extend our appreciation to the teachers and staff of Delhi Public School, RK Puram, and Delhi Public School, Faridabad, for their support and collaboration throughout this project. Their commitment to environmental education and their willingness to engage with our youth initiatives have been invaluable in fostering meaningful connections and driving positive change.

To all the individuals, organizations, and stakeholders who have contributed to this project, we offer our sincere thanks. Your collective efforts have not only helped us achieve our goals but have also strengthened our resolve to continue working towards a sustainable future for our wetlands and our communities.

As we look ahead, we remain committed to building upon the successes of this project and continuing our efforts to conserve and protect the wetlands of Delhi. Together, we can make a difference.

Contents

Executive Summary	5
3D model on wetland catchment	6
Essay Writing Competition	8
Presentation session at DPS Faridabad, New Delhi for students on importance of wetlands and benefits of their conservation	9
Outputs, Conclusions and Recommendations.....	10
Achievements against targets (as per 2024 log frame)	11

Executive Summary

Wetlands are critical ecosystems that contribute significantly to the liveability of cities, reduce flooding, regulate microclimate, replenish drinking water, filter waste, provide urban green spaces, and offer habitat for urban biodiversity. However, the National Capital Territory of Delhi, known for its extensive network of wetlands, has been expanding its urban footprint, thereby threatening these vital ecosystems through encroachment and pollution. Several wetlands have dried up, and over 200 have been lost forever due to urbanization and industrialization. The youth will bear the brunt of wetland degradation and its impacts in the near future, making them key stakeholders in wetlands management and conservation.

This project aims to foster youth engagement for wetlands conservation and management in the National Capital Territory of Delhi by establishing a Wetland Learning Centre within a school in Delhi. The centre will develop a knowledge base on wetlands and promote civic action. In 2023, the project achieved its targets, including selecting a school, preparing learning materials for students, conducting an introductory presentation session to raise awareness about wetlands, and organizing an exposure visit of students and teachers to the Hauz Khas Lake, a constructed wetland nearest to DPS R K Puram, New Delhi selected for project interventions in 2023 & 2024, to witness its rich biodiversity and services.

Workshop on Conserving Wetlands for Managing Water Risks

On April 25, 2024, a workshop titled “Conserving Wetlands for Managing Water Risks” was organized for Class VIII students of DPS RK Puram, New Delhi by Wetlands International South Asia in collaboration with India Water Partnership. The workshop aimed to raise awareness about the critical role of wetlands in the water cycle, the influence of water and landscapes on wetland formation and functions, and the impacts of wetland degradation on water security and conservation. The event witnessed active participation from 440 students and 14 teachers, demonstrating a strong commitment to fostering environmental stewardship among young learners.



The session was moderated by the 8th-grade students, creating an engaging platform for peer-to-peer interaction. Presentations were delivered by Diana Datta, Programme Associate at IMWBES, and Dayadra Mandal, Junior Technical Officer, Water Management, who elaborated on the vital role wetlands play in mitigating water-related risks like floods and droughts. They also emphasized how conserving wetlands contributes to sustainable water management. Visual aids and interactive discussions were utilized to enhance understanding, alongside a case study of Bangalore City, which highlighted the alarming consequences of wetland loss.

As part of the workshop, students were encouraged to participate in an innovative 3D Model-Making Competition focused on wetland catchments. This hands-on activity aimed to deepen their understanding of wetland ecosystems and foster practical learning. The workshop successfully educated and inspired students to become active guardians of wetlands, reinforcing the importance of these ecosystems in preserving biodiversity and ensuring water security for future generations.

3D Model-Making Competition on Wetland Catchment

On May 17, 2024, the 3D Model-Making Competition on wetland catchment, organized by Wetlands International South Asia in partnership with India Water Partnership and DPS RK Puram, New Delhi, brought students together to explore the significance of wetlands. With themes like "The Role of Wetlands in the Water Cycle" and "The Role of Wetlands in Addressing Water Challenges," the competition highlighted critical functions of wetlands, such as mitigating drought, buffering floods, recharging groundwater, and regulating coastal areas. Participants were encouraged to use biodegradable and recyclable materials, aligning with the event's sustainability goals. Out of 21 entries, nine models were shortlisted by an esteemed panel of teachers for their innovative approaches to showcasing wetland ecosystems.

The evaluation guidelines were as follows:

- **Theme Representation:** Models had to accurately depict the role of wetlands in the water cycle or in addressing water-related challenges, highlighting elements such as processes, species, vegetation, and cultural significance.
- **Accuracy:** Models needed to effectively showcase all components relevant to the selected theme.
- **Creativity:** Innovative and original designs that creatively represented natural landscapes and effectively communicated the theme were given higher scores.
- **Sustainability:** The use of biodegradable, recyclable, or environmentally friendly materials was emphasized to promote ecological awareness.
- **Presentation Clarity:** Participants were evaluated on the coherence and structure of their presentations, including the rationale, materials used, and the model's significance.
- **Overall Quality:** Effort, creativity, and a demonstrated understanding of wetland ecosystems were key aspects of the evaluation.



Figure 1 Dr Asghar Nawab Head of Programme – Aquatic Ecology evaluating the presentation and the 3D model

Adhering to these criteria, the top 9 students were selected for their exceptional models and compelling presentations, showcasing a deep understanding of wetland conservation and the creative potential of sustainable design.

The final round of the competition was evaluated by a distinguished jury comprising experts such as Dr. Veena Khanduri, Executive Secretary-cum-Country Coordinator, India Water Partnership from India Water Partnership, Dr Asghar Nawab, Head of Programme – Aquatic Ecology and representatives from Wetlands International South Asia. After the evaluation process, four models stood out for their exceptional creativity, depth of understanding, and practical demonstrations of wetland conservation.

The top four participants were selected for their ability to deliver high-quality presentations, clearly articulate the concepts behind their models, and demonstrate a profound understanding of wetland ecosystems and their significance. These students were honored with prestigious awards, recognizing their creativity, dedication, and innovative approaches to showcasing the importance of wetlands. Their models not only highlighted practical solutions and insights into wetland conservation but also reflected an in-depth comprehension of the theme, making them role models for aspiring environmental stewards.

This engaging event not only deepened students' knowledge of wetland ecosystems but also inspired them to become active champions of environmental stewardship. By raising awareness about the critical role wetlands play in water security and ecosystem preservation, the competition successfully fostered a sense of ecological responsibility among all participants.

Essay Writing Competition

An Essay Writing Competition was conducted on 3rd August 2024 for 8th-grade students of DPS RK Puram, New Delhi to foster awareness about wetlands and their conservation. The competition featured three themes:

- **Wetlands for Urban Resilience:** Exploring their role in flood mitigation, water quality improvement, and biodiversity.
- **Role of Youth in Wetland Conservation:** Highlighting youth-led actions for preservation and sustainable practices.
- **There was a Wetland Here:** Encouraging storytelling about the loss and impact of wetlands.

Students were required to submit original essays of 350-500 words, addressing one of the themes. Entries were evaluated on relevance to the topic, content quality, creativity, structure, and grammar, with a total score of 20 points. The competition strictly adhered to guidelines promoting respect, originality, and positive environmental attitudes, with plagiarism resulting in disqualification. Winners received Certificates of Achievement, Honourable Mentions earned Certificates of Appreciation, and all participants were awarded Certificates of Participation. This activity successfully engaged students in understanding and advocating for wetland conservation.

Following the evaluation process, three students were shortlisted for their outstanding submissions that reflected originality, depth, and a clear understanding of the themes. The shortlisted essays demonstrated exceptional creativity and alignment with the competition's objectives.

Presentation session at DPS Faridabad, NCT for students on importance of wetlands and benefits of their conservation

The presentation session, titled 'Wetlands as a Biological Supermarket,' was held at Delhi Public School Faridabad, NCT Delhi on August 20, 2024, with the objective of raising awareness about the significance of wetlands, the threats they face, and the vital role of youth in their conservation. The session introduced participants to the concept of wetlands, their various types, and the valuable ecosystem services they provide. It also highlighted Ramsar sites—wetlands of international importance—and discussed the current number of Ramsar sites in India.



Figure 2 Dayadra Mandal presenting on wetlands and its values

Active participation of nearly 200 students of 6th and 7th grades and nearly 20 teachers showcased their enthusiasm and keen interest in the topic.



Figure 3 Active participation of the students of DPS Faridabad

Following the presentation, a painting competition was organized based on understanding of the students on the values and benefits of wetlands. Students expressed their understanding of the topic through their artwork, reflecting insights gained from the session. Nearly 200 students from classes VI and VII participated in the competition, and the top 10 students from each class were shortlisted based on their unique perspectives and creativity. This interactive approach not only deepened their knowledge of wetlands but also encouraged them to become active advocates for conservation.

Outputs, Conclusions and Recommendations

The activities were designed to enhance students' understanding of the multifaceted importance of wetlands and their role in maintaining ecological balance. Presentations on catchment management highlighted how land-use practices in upstream areas directly influence wetland health, emphasizing the need for sustainable practices to reduce sedimentation and pollution. Essay topics like urban resilience underscored the vital role wetlands play in mitigating floods, improving water quality, and providing habitats for diverse species, showcasing their function as natural buffers against climate extremes. Similarly, youth-focused themes explored how collective actions and sustainable practices can drive community-level conservation efforts, inspiring young individuals to lead change. Storytelling about lost wetlands served as a poignant reminder of the irreversible impacts of degradation, fostering a deeper emotional connection and urgency to protect these vital ecosystems. Together, these activities aimed to instil a systems-thinking approach, emphasizing the interdependence of biodiversity, water resources, and community stewardship in wetland conservation.

A collaborative initiative with DPS Faridabad led to the successful organization of an introductory workshop aimed at enhancing students' understanding of wetland conservation and management. Through interactive and hands-on learning experiences, participants explored the historical significance, hydrology, and biodiversity of wetlands. The session underscored the indispensable role of urban wetlands in South Delhi, highlighting their function as critical habitats for diverse species and their capacity to process treated sewage water.

Building on this engagement, an exposure visit and year-long activities will be conducted with DPS Faridabad, in 2025 to deepen students' learning and involvement. In collaboration with the DPS Faridabad authorities and teachers, a Wetland Learning Centre will be established in one school or college in Delhi. This centre will house educational materials like audio visual material, monographs, and other resources developed as part of this project. These materials will be integrated into existing libraries or science labs in the selected school.

A dedicated group of students part of the wetland club that will be formed during wetland learning centre set up, led by a teacher, will manage the materials, maintaining a record book to track their usage. Students will gain access to diverse educational materials. This will enable them to visualize and interpret various landscape functions of the basin and understand the critical role wetlands play in community well-being. This will enable them to visualize and interpret various landscape functions of the basin, understand the ecosystem services wetlands provide, and grasp their critical role in climate resilience. By showcasing how wetlands absorb and store greenhouse gases, regulate water cycles, and protect communities from extreme climate events, the initiative will empower students to connect wetland conservation with broader climate change mitigation and adaptation strategies. Through these initiatives, the program aims to foster a generation of informed and empowered

youth actively participating in wetland and climate action. Through these initiatives, the program aims to foster a generation of informed and empowered youth actively participating in wetland conservation.

Achievements against targets (as per 2024 log frame)

1. Log Frame Targets #	
Targets set for 2024 (Please mention the targets – Outputs/ outcomes: what will be achieved & what will be the expected number of people to be impacted from this activity)	Explanation of the targets set for 2024 (Please give explanation of the targets – How & where the targets would be achieved?)
<p>Output 1: Audio-video learning material about the significance of wetland: The audio-video learning material about the significance of wetlands seeks to achieve heightened environmental awareness and appreciation for the importance of wetlands in ecosystems and human well-being through interactive and engaging content. It is expected to impact a significant number of individuals, potentially reaching hundreds or more, by providing accessible and engaging educational content on wetland ecosystem, fostering a collective commitment to wetland conservation and stewardship.</p>	<p>The audio-visual content on wetlands can be distributed through online platforms, educational institutions, and community outreach programs, ensuring wide accessibility. Additionally, partnerships with environmental organizations and government agencies can promote the material, while engagement strategies like social media campaigns and local events can help maximize its reach. Through this comprehensive strategy, the content can effectively impact and educate a diverse and extensive audience on the significance of wetlands.</p>
<p>Output 2: Learning material such as brochures, booklets and manual: The learning materials about various facets of wetlands, aim to disseminate essential information and raise awareness about wetland ecosystems and conservation practices. These materials have the potential to impact local communities and educational institutions, with an expected reach in hundreds and more, promoting informed decision-making and sustainable wetland management.</p>	<p>To achieve the targets with learning materials on wetlands, a multi-pronged approach is essential. Firstly, collaboration with local environmental organizations, schools, and other authorities to distribute the materials widely is vital. These can be made available at libraries, visitor centers, and online platforms to ensure accessibility. Additionally, organize workshops and seminars to educate and engage communities directly, fostering a deeper understanding and appreciation of wetland conservation. This comprehensive strategy will help reach and impact diverse audiences across different settings and regions.</p>
<p>Output 3: 3D model on wetland catchment specific to the selected wetland: Creating a 3D model of a specific wetland catchment area for student learning will achieve enhanced education and engagement in wetland ecology and conservation. This initiative is expected to impact</p>	<p>To achieve the targets for student learning with the 3D wetland catchment model, collaborating with local schools and educators for direct integration into the courses becomes crucial. Hosting site-based workshops and field trips can provide practical experience.</p>

<p>a classroom-sized audience, reaching dozens to hundreds of students, providing them with a hands-on, immersive learning experience that fosters a deeper appreciation for wetland ecosystems and encourages the next generation of environmental stewards.</p> <p>Output 4: Exposure Visit: Ensuring field visits to the wetland and conducting activities to promote wetland positive behaviour for students. The visit will encourage data collection on water quality and biodiversity. Expected number of students/youth that will be impacted will be around ~200 individuals</p> <p>Output 5: Wetland Learning Centre in 1 school: Schools as a form of wetland learning center for students will achieve a comprehensive and interactive educational experience, fostering a deep understanding of wetland ecosystems and their significance in environmental conservation. The expected impact can be substantial, reaching hundreds to thousands of students annually, equipping them with the knowledge and appreciation needed to become effective stewards of wetlands and the environment.</p> <p>Output 6: Cadre of youth actively involved in wetlands conservation: The cadre of youth actively engaged in wetlands conservation through assignments and site visits will achieve heightened environmental awareness and practical experience in wetland conservation. This engagement is expected to impact more than 250 individuals, potentially in the hundreds or thousands, including the participating youth, their peers, and the communities they interact with, contributing to more sustainable wetland management and conservation efforts.</p> <p>Output 7: Feedback forms: Using feedback forms to assess the effectiveness of the wetland learning</p>	<p>Participants engage directly with the ecosystem, witnessing biodiversity, ecosystem functions, and potential threats firsthand along with collation of data. This hands-on approach fosters a sense of environmental stewardship and can inspire individuals to take action in support of wetland conservation. Local visits connect the significance of wetlands to participants' communities, making the importance of these ecosystem's tangible. The lasting impact of such visits can influence attitudes and behaviors, creating informed and proactive advocates for wetland preservation.</p> <p>To achieve the organization of wetland learning center in a school, it is crucial to collaborate with school administrators and educators to seamlessly integrate wetland-related courses and activities into the educational program. Engaging local environmental experts for on-site support and promoting the center through various channels ensures awareness and accessibility, ultimately impacting hundreds of students annually.</p> <p>To achieve the targets of involving a cadre of youth in wetlands conservation, a collaborative approach is crucial. Youth will be engaged in assignments, workshops, and site visits to develop practical skills and knowledge in wetland conservation. They will then extend their impact by conducting community outreach and leveraging online platforms, collectively aiming to involve dozens to hundreds of young people in these valuable conservation efforts.</p> <p>To achieve the targets of evaluating the wetland learning center's effectiveness, a systematic approach</p>
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center will achieve valuable insights into its impact and areas for improvement. The expected number of people to be impacted includes all visitors, students, and educators involved with the center, with a potential reach in the hundreds or more. These assessments will help refine the center's educational offerings, ensuring a more meaningful and educational experience for its users.

involves the distribution of feedback forms to all center visitors, students, and educators, both on-site and online. Utilizing data analysis tools, the collected feedback will provide valuable insights, enabling the center to make informed adjustments and enhancements to its educational offerings. This iterative process aims to better serve the hundreds or more individuals impacted by the learning center and ensure a continually improved learning experience.

Indicator will be as per the activities outputs & outcomes; the Target will be in numbers and brief explanation to achieve the targets set for 2024.

While sending the concept note, please fill-up columns (1); (2) & (3) and the columns (4) & (5) would be filled-in while you send the full and final report to us at the end of project period.

Indicator	Targets set in 2024	Explanation of targets 2024	Results achieved in 2024 against the target	Explanation of results achieved in 2024
(1) Audio-video learning material about the significance of wetland	1	The audio-visual content about wetlands can be disseminated through online platforms, schools, and community initiatives. Engagement through local events will further broaden its impact, effectively educating a diverse audience on wetlands' significance.	1	The script development is ongoing, and the material will be completed and disseminated in 2025.
(2) Learning materials such as brochures, booklets and manual on different facets of wetland ecosystem	2	To achieve the targets with wetland learning materials, collaboration with local organizations, schools, and government agencies for wide distribution at libraries, visitor centers, and online platforms. Organizing community workshops and seminars to deepen understanding and appreciation, ensuring broad impact across diverse settings and regions.	2	The production of materials is ongoing and will be finalized by 2025.

(3) School students and teachers use the 3D model and learning materials to raise awareness (specific to the selected wetland)	1	To achieve targets for student learning with the 3D wetland catchment model, collaboration with local schools for curriculum integration, host site-based workshops, leverage online resources, and promote participation in science fairs, enhancing student engagement and wetland conservation understanding. Quality of the models from feedback received from the students (gender disaggregated) will help in further improvement.	4	Four 3D models were prepared by students were shortlisted and showcased at DPS RK Puram, New Delhi, exceeding the target.
(4) Exposure Visit	1	Participants engage directly with the ecosystem, witnessing biodiversity, ecosystem functions, and potential threats firsthand along with collation of data.	1	The exposure visit is planned and will be conducted in 2025.
(5) Wetland Learning Centre	1	School as a form of a wetland learning center in a school, collaboration with administrators and educators to integrate wetland-related activities into the curriculum. Engaging local experts, promote the center widely, and aim to impact hundreds of students annually.	1	A collaborative initiative with DPS Faridabad has been formalized, and the center is scheduled to be set up by 2025.

(6) Formation of youth cadre for wetlands conservation in Delhi	>250	To engage youth in wetlands conservation, collaboration is key. They will participate in assignments, workshops, and site visits to gain practical knowledge, later extending their impact through community outreach and online platforms, with a goal of involving dozens to hundreds of young participants.		The youth cadre will be formed after the Learning Centre is operational in 2025.
(7) Feedback forms	2	To assess the wetland learning center's effectiveness, distributing feedback forms to all visitors, students, and educators, both on-site and online. Promoting participation, collect valuable feedback, and use data analysis to inform improvements, providing a continually enhanced learning experience for the impacted hundreds or more. Recommendations from experts through outreach events for mid-term correction and future implementation.	2	Feedback collection will commence with the operationalization of the center in 2025.

Annex

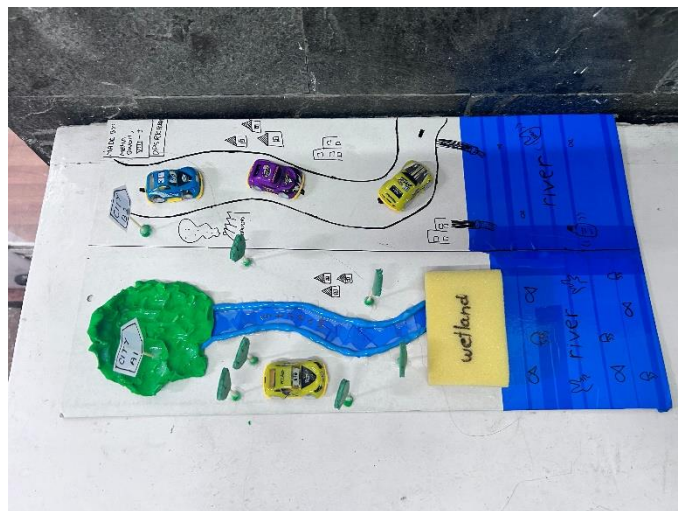


Figure 1 3D model by Jashnoor (VII) (left) and Meha Singh (VII) (Right)

DPS RK Puram, New Delhi shortlisted Essays

<https://drive.google.com/drive/folders/1aGUzUax9ltw-wF26bP5KJg6K5ru-OHpl?usp=sharing>

DPS Faridabad Presentation

<https://docs.google.com/presentation/d/10HO3SA6811M-6krwNtICApGaiHna2F3/edit?usp=sharing&ouid=114584174935437878266&rtpof=true&sd=true>

DPS Faridabad, NCT shortlisted drawings

<https://drive.google.com/drive/folders/18Y0MJ0ZcuoqTQZllwgPgkOpnHsQLYr3u?usp=sharing>