

Fostering meaningful youth engagement for wetlands conservation and management in National Capital Territory of Delhi

Project Completion Report 2023



Project Team

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Acknowledgement

On the successful completion of the targets outlined in the 2023 Work Plan 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, 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.

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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 in Delhi Public School (DPS), R K Puram to raise awareness about wetlands, and organizing an exposure visit to the nearest wetland, Hauz Khas Lake in New Delhi to witness its rich biodiversity and services.

Mapping of schools and wetlands in NCT Delhi

The first step was to conduct a mapping exercise to identify potential schools that meet certain criteria. This could involve identifying schools located near wetlands, assessing their accessibility to the wetland, and evaluating their infrastructure and resources.

For this activity, mapping of schools and wetlands in the National Capital Territory of Delhi was conducted through spatial and secondary data. Schools were selected for implementing the project based on its suitability and willingness to open a Wetland Learning Center. Factors such as outdoor areas for learning, access to the wetland, and availability of infrastructural utilities, such as adequate space equipped with teaching aids for conducting workshops, seminars, and educational sessions, conference rooms, projectors, and screens, were considered during the selection process of school for establishing the Wetland Learning Centre.

Delhi had more than 3000 schools spreading across the NCT of Delhi. The number of schools falling under each district is depicted in Figure 1 below.

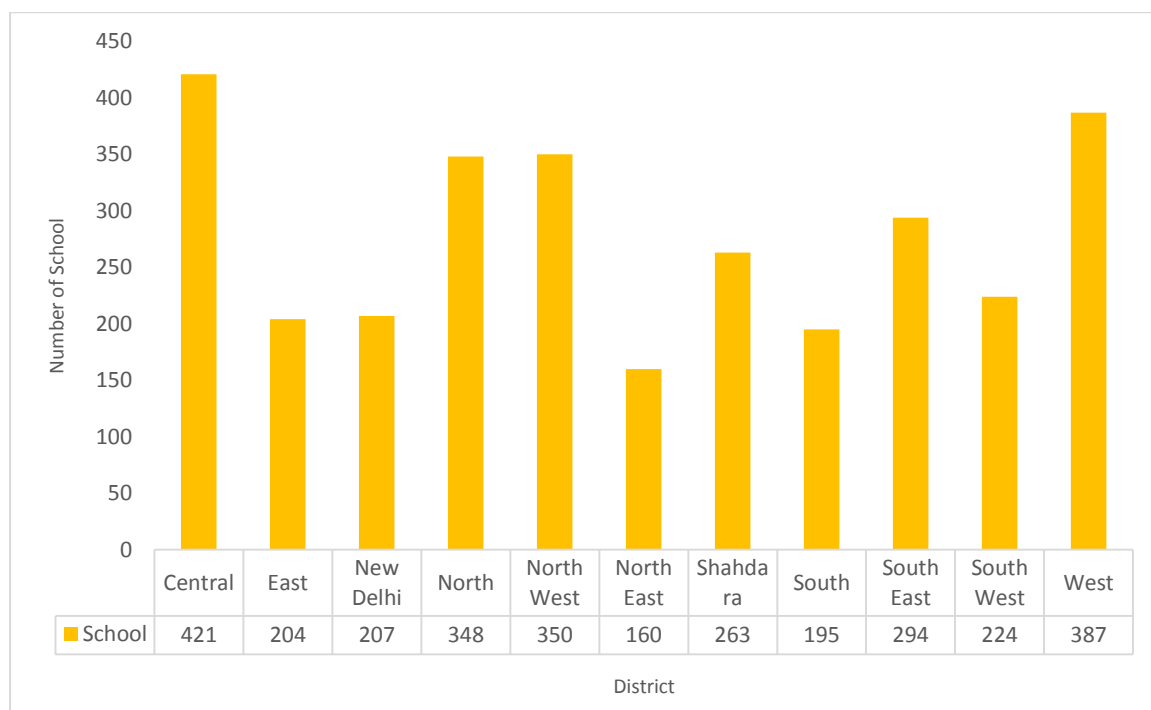


Figure 2 illustrates the mapped density of schools in proximity to the wetlands, with emphasis on highlighting the spatial distribution. The gradient shown in the map represents the density of schools in each district, along with the density of wetlands.

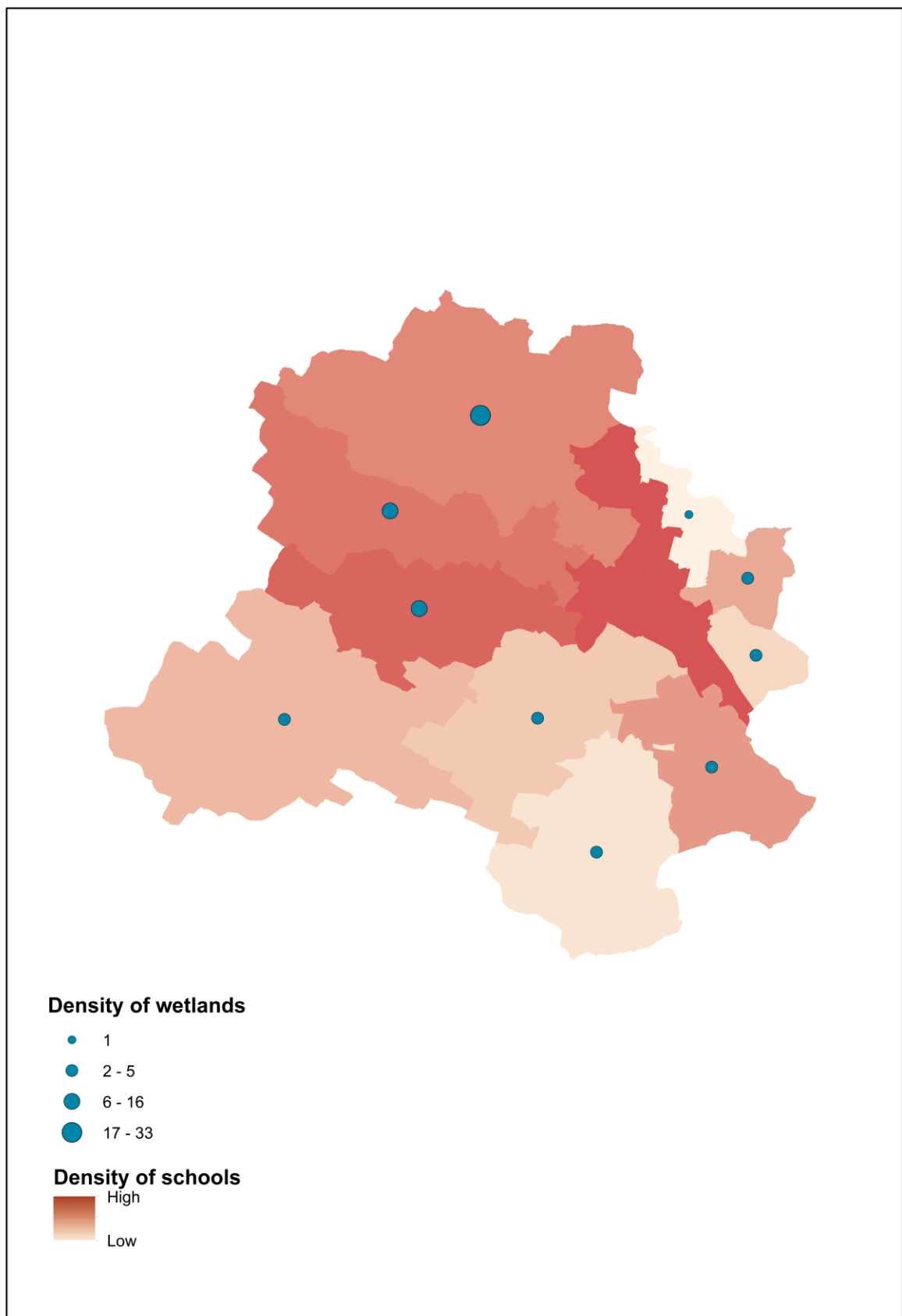


Figure 2: Density of School and Wetlands in National Capital Territory of Delhi

Once the mapping was complete, the schools were shortlisted based on the SMART criteria. This means that the schools must have specific, measurable, achievable, relevant, and time-bound characteristics that align with the project's goals.

Several criteria which include proximity to a wetland, accessibility to the wetland, availability of infrastructural utilities such as teaching aids, conference rooms, projectors, and screens, and the willingness to work collaboratively to foster youth participation towards wetlands conservation were taken into consideration for selecting the school.

A total of twelve schools were approached and informed of the objectives of the project. This step involved reaching out to the schools and presenting the project's goals and objectives to them.

A communication was sent to the shortlisted schools to implement the project initiative. This involved establishing a dialogue with the schools to discuss the project in more detail and to plan how it will be implemented.

Delhi Public School R K Puram, New Delhi was finally selected to implement the project. This decision was based on the school's alignment with the project's objectives, as well as their willingness and exceptional educational infrastructure.

Overall, the methodology involved a systematic approach to selecting a school for a project initiative, starting with mapping and shortlisting potential schools, and then evaluating them based on specific criteria before making a final selection.

Presentation session at DPS R K Puram, New Delhi for students on importance of wetlands and benefits of their conservation

A presentation session titled '**Wetlands as a Biological Supermarket**' conducted at Delhi Public School RK Puram on January 18, 2024, aimed to educate participants about the importance of wetlands, the threats they face, and the necessity for youth involvement in wetlands conservation. The session was organized by Wetlands International South Asia and India Water Partnership.



Figure 1: Students taking wetland pledge; Students received learning materials on wetlands

The session began with students and teachers taking the wetland pledge, emphasizing their commitment to wetlands conservation. The team from Wetlands International South Asia provided a brief introduction to the track vision and track records of India Water Partnership and Wetlands International South Asia. Thereafter, they introduced the concept of wetlands, their various types, and the services they provide, which are considered beneficial.



Figure 2 Harsh Ganapathi introducing Wetlands International South Asia (WISA) and India Water Partnership (IWP)

The presentation also focused on Ramsar sites, which are wetlands of international importance, and the current number of Ramsar sites in India. The team discussed the wetlands of NCT-Delhi and the threats they face, highlighting the history and significance of Hauz Khas Lake as an example of a wetland in NCT-Delhi and emphasizing the importance of conserving such ecosystems.



Figure 4 Diana Datta presenting the concept of wetlands



Figure 3 Dayadra Mandal presenting on the wetlands of NCT-Delhi



Throughout the session, students interacted actively, showing enthusiasm and interest in the topic. Dr. Veena Khanduri, Executive Secretary-cum-Country Coordinator of India Water Partnership (IWP), concluded the session by highlighting the importance of wetlands and the vital role that youth can play in their conservation efforts. The session underscored the significance of youth involvement and how individuals can contribute to making a significant impact towards wetlands conservation.

The presentation session successfully educated participants about the importance of wetlands, the threats they face, and the necessity for youth involvement in wetlands conservation.



Figure 5 Dr Veena Khanduri highlights the importance of the youth involvement

Students and teachers actively participated in the session, showing enthusiasm and interest in the topic. The session began with students and teachers taking the wetland pledge, emphasizing their commitment to wetlands conservation.

The wetland pledge serves as a reminder of their responsibility towards protecting wetlands. This served as a call to action for participants to actively contribute to wetlands conservation. Overall, the session was successful in raising awareness, engaging participants, and emphasizing the importance of youth involvement in wetlands conservation. It provided valuable insights and motivated participants to take action towards protecting wetlands.



Figure 6 Students showcasing the flashcards, brochures and the comic book they received as learning material

Exposure visit to Hauz Khas Lake by DPS R K Puram, New Delhi students

On January 24, 2024, students from classes VIII and X of DPS RK Puram, New Delhi which saw an active participation of embarked on a captivating journey to Hauz Khas Lake, an urban wetland, as part of an exposure visit. The exposure visit provided a hands-on, immersive learning experience for the students of DPS RK Puram.



Figure 7 Interactions with students at Hauz Khas Lake

The session was organised by Wetlands International South Asia and India Water Partnership. It aimed to deepen the students' understanding of wetland conservation and management, exploring their functions, benefits, and threats associated with an urban wetland.

A team from Wetlands International South Asia organised the open-sky session. The students were taken from the school to the Hauz Khas Lake and were divided into two groups, each group having experts to introduce the significance of Hauz Khas Lake, delving into its historical significance. The team guided students through the serene surroundings, offering insights into ecosystem services and wetland biodiversity, showcasing unique and different types of resident water birds like Spot Bill Ducks, Common Pochards and many more which were present at the time of exposure visit. They were also informed about the season in which the migratory water birds come to India flying from various regions of the World. The students were also educated about water birds how they are important to sustain the wetlands ecosystem,



Figure 8 Interaction with students on the lake's history and the biodiversity

The students gained valuable insights about the wetland's history, its revival story, the hydrology of the wetland, and the diverse biodiversity it supports. The visit highlighted the crucial role of an urban wetland, such as accommodating treated sewage water and providing habitat for various species in South Delhi.



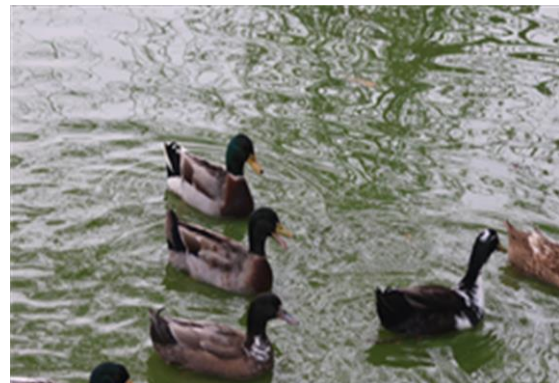
Figure 9 Witnessing the surrounding and biodiversity in and around Hauz Khas Lake

The students were highly interactive throughout the session, recalling the names of water birds observed around the lake and asking questions.

Following are some water birds shown to the students.



Common Moorhen



Resident Duck



Indian Peafowl



Red-naped Ibis



Rose ringed Parakeet



Spot billed duck

Dr Veena Khanduri, Executive Secretary-cum-Country Coordinator of India Water Partnership, underscored the importance of regular wetland monitoring, particularly through the involvement of schools and youth organisations, providing crucial support to the field mission.



Figure 10 Interaction with the Delhi Public School RK Puram

Outputs, Conclusions and Recommendations

The presentation and exposure visit to Hauz Khas Lake, New Delhi, an urban wetland, organized by Wetlands International South Asia and supported by India Water Partnership, aimed to deepen students' understanding of wetland preservation and management. The event provided a hands-on, immersive learning experience for students from classes VIII and X of DPS RK Puram. The presentation session laid the foundation for students by explaining what wetlands are, their significance, and how individual actions can contribute to their conservation. The exposure visit highlighted the wetland's historical significance, its restoration journey, its hydrology, and the diverse wildlife it supports. Students gained valuable insights into the vital role of urban wetlands, such as treating sewage water and providing habitats for various species in South Delhi.

The presentation session and exposure visit to Hauz Khas Lake significantly enhanced students' comprehension of wetland conservation and management. Through hands-on, immersive learning experiences, students gained valuable insights into the historical significance, hydrology, and biodiversity of the wetland. The session underscored the pivotal role of urban wetlands in South Delhi, serving as vital habitats for various species and accommodating treated sewage water. This comprehensive understanding of wetland ecosystems empowers students to actively engage in conservation efforts and advocate for the protection and preservation of these crucial environments.

To further enhance students' understanding of wetland conservation and management, it is recommended to organize interactive sessions for the students to understand the significance of wetlands. These experiences provide hands-on learning opportunities that deepen students' appreciation for the ecological significance of wetlands. Additionally, encouraging students to actively participate in conservation efforts through workshops, seminars, and field trips to foster a sense of responsibility and ownership towards preserving these vital ecosystems. Collaborating with schools, youth organizations, and local communities is essential for promoting regular wetland monitoring and conservation activities. Finally, advocating for the protection and conservation of urban wetlands through policy advocacy and community engagement initiatives is crucial for ensuring the long-term sustainability of these valuable habitats.

Achievements against targets (as per 2023 log frame)

Targets set for 2023 (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 2023 (Please give explanation of the targets – How & where the targets would be achieved?)
<p>Output 1: Flash cards on water birds of NCT of Delhi: Engaging and interactive flashcards on the water birds of NCT of Delhi will be developed, tailored to the age group (for students in the 6th-8th standard, and beyond 8th standard) and learning objectives of the students. Expected number of students/ youth that will be impacted will be around ~200 individuals</p>	<p>Output 1: Flashcards are a powerful educational tool for comprehending the essential biodiversity features of wetlands. They employ visual aids, concise information, and a chunked format to simplify complex concepts into manageable segments. By encouraging repetition and recall, they promote long-term retention and self-assessment, fostering active engagement. Their portability and accessibility enable flexible learning, whether solo or in group settings, and their customization allows tailoring to specific wetland biodiversity aspects. Overall, flashcards motivate learners and complement hands-on experiences, making them a valuable resource for deepening understanding of wetland biodiversity.</p>
<p>Output 2: Presentation session: Delivering an introductory presentation on the significance of wetland to the age group (for students in the 6th-8th standard, and beyond 8th standard) and learning objectives of the students. Expected number of students/ youth that will be impacted will be around ~200 individuals</p>	<p>An introductory presentation on wetlands is instrumental in conveying their significance. It will offer context, highlight key points, and uses visuals to simplify complex concepts. By exploring ecosystem services, discussing challenges, and making it locally relevant, it helps the audience connect with the topic. It will help in fostering active participation and a commitment to wetland conservation. Additionally, the presentation provides resources for further learning, fostering a deeper understanding of the importance of wetlands and motivating individuals to become proactive stewards of these vital ecosystems.</p>
<p>Output 3: Exposure Visits: Ensuring field visits to the wetland and conducting activities to promote wetland positive behaviour for students. Expected number of students/ youth that will be impacted will be around ~200 individuals</p>	<p>An exposure visit to a wetland offers a unique and immersive experience that deeply enhances understanding of its importance. Participants engage directly with the ecosystem, witnessing biodiversity, ecosystem functions, and potential threats firsthand. 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>

Indicator	Targets set in 2023	Explanation of targets 2023	Results achieved in 2023 against the target	Explanation of results achieved in 2023
(1) Preparation of flash cards on water birds of NCT of Delhi	50	Flashcards will help in appreciating the key biodiversity in and around the wetland through visuals and concise information. They will encourage active engagement, promote long-term retention, and are versatile for individual or group learning, complementing hands-on experiences and motivating learners.	54	A set of 54 Flashcards of the NCT-Delhi specific water birds had been prepared which provides brief information on the specific water bird, including its habitat and the geographical area where it is typically sighted.
(2) Presentation Session	1	Introductory presentation on wetlands will provide context, simplify complex concepts with visuals, and encourages a connection to local relevance. It fosters active participation and commitment to wetland conservation, offering resources for deeper understanding and motivating stewardship.	1	Presentation session on 'wetlands as biological supermarkets' was conducted on 18 th January 2024, where we saw an active participation of 280 students and 14 teachers at Delhi Public School RK Puram

(3) Exposure Visit	1	An exposure visit to a wetland provides an immersive, firsthand experience that enhances understanding of its significance, fostering environmental stewardship and inspiring conservation action. By connecting wetlands to local communities, it makes their importance tangible and creates lasting advocates for wetland preservation.	1	An exposure visit to Hauz Khas Lake was conducted on 24 th January 2024 for students' understanding of wetland conservation and management, exploring their functions, benefits, and threats associated with an urban wetland.	
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Soft copies of learning materials/knowledge products

Following are the soft learning materials that were prepared as a part of the 2023 target are:

1. Flashcards – A guide to common avian residents of NCT Delhi

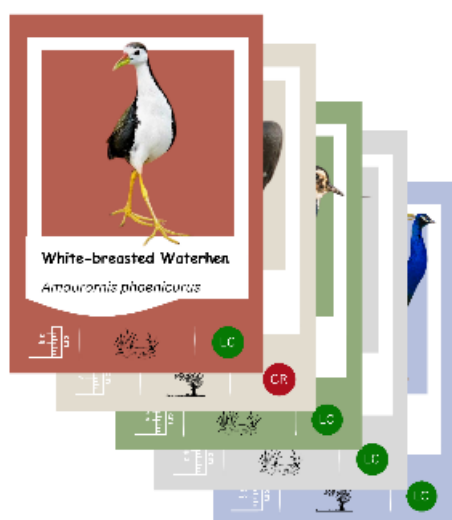
Available at:

https://drive.google.com/file/d/14rPgrOjqWZxdPRUnyQIhI_HUa06wSOIm/view?usp=drive_link

2. Brochure on Wetlands of NCT-Delhi

Available at:

https://drive.google.com/file/d/1APnTMfI8_TYN_u8jGFY9kPc9KcQPejLt/view?usp=drive_link



A guide to common avian residents of NCT Delhi



Brochure on Wetlands of NCT Delhi

The news articles on the presentation session and exposure visit can be accessed at

<https://south-asia.wetlands.org/news/wonders-of-wetlands-a-fun-filled-exploration-with-school-students-in-delhi-nct/>

<https://south-asia.wetlands.org/news/young-conservationists-take-a-plunge-a-wetland-odyssey-with-school-students/>

The presentation on 'Wetlands as Biological Supermarket' can be accessed at

https://drive.google.com/file/d/100_Nyjew_qERRvofWvhlkHqp2P3dqi-t/view?usp=drive_link

The presentation session conducted on 18th January 2024 was attended by class VIII students where we saw an active participation of 280 students and 14 teachers.

The exposure visit to Hauz Khas Lake held on 24th January 2024 was attended by class VIII students and class X students. 32 students from class VIII and 4 students from class X in the photography cell.

The list of students who attended the exposure visit are:

Class VIII

Mritsha
Devansh
Belancia
Shobhit
Khushi
Devraj
Vaibhav
Anika
Tanish
Hardik
Priyanshu
Aditya
Samar
Aaron
Rachit
Shubham
Bhavika
Shivam
Nidhi

Hamza
Ayaana
Sumyukta
Shivanjali
Nipun
Priya
Reanna B.
Aatreya
Navya T.
Vihaan
Armaan
Arush
Amogh

Class XI

Ikagra Gupta
Suparna
Niyati
Samriddhi