



PONDORA – COMMUNITY-LED POND RESTORATION INITIATIVE

Water is at the heart of every village, yet across India, countless traditional ponds lie neglected, overgrown, or polluted. In 2022, when the Government of India launched Mission Amrit Sarovar and NITI Aayog's Sarovar Samriddhi to restore water bodies nationwide, it marked a strong step toward ecological revival. But even as these efforts began, it became evident that restoration alone was not enough.

While studying reports and field studies, we noticed a pattern: most rejuvenated ponds showed initial improvements but quickly fell into disuse again. According to research from the Terai region, 57% of failures in pond rehabilitation were linked not to lack of engineering, but to poor post-rejuvenation maintenance and low community engagement. As the National Institute of Hydrology aptly put it: "Sustenance of such efforts can be ensured only if the local bodies take up the operation and maintenance of the ponds... with full awareness." That's the gap that inspired Pondora.

GENESIS OF THE INITIATIVE

Founded in 2024 by a group of high school students, Pondora was born from a simple belief, that the people who live closest to a water body should be its stewards. While governments and NGOs may fund and execute desilting or infrastructure works, it is the villagers who will ultimately decide whether the pond thrives or fades.

Pondora is our answer to this invisible but vital link, between awareness and action, between technology and tradition, and between restoration and responsibility.

MAIN OBJECTIVE

Pondora works at the intersection of Pond cleaning, IEC (Information, Education, Communication) and Technological Innovation, empowering communities to care for their ponds long after rejuvenation efforts have ended.

Our approach is twofold:

- **Community First** – by embedding environmental education, behavior change campaigns, and inclusive governance at the village level.
- **Technology that Works** – by designing simple, modular solutions like real-time IoT-based water quality monitoring to make pond care more accessible and transparent.

PLANNED ACTIVITIES



To create lasting impact, Pondora's model includes:

- **Baseline surveys** to understand existing behaviors, perceptions, and pond usage patterns.
- **School engagement programs**, turning students into "Pond Ambassadors" who spread awareness and lead village-wide campaigns.
- **Formation of Pond Committees**, elected by the village under the Gram Panchayat, responsible for long-term monitoring and care.
- Providing a **smart pond maintenance kit** to the Pond Ambassadors to enable efficient and regular monitoring of pond health. The kit combines IoT-based electronic sensors with traditional chemical test strips to assess water quality accurately and affordably. The electronic device measures physical parameters such as temperature, pH of water, and total dissolved solids (TDS). Simultaneously, chemical test strips are used to evaluate contaminants like copper and nitrites, and more through color changes. The entire system is connected to a mobile app, which captures the readings (via Bluetooth and image processing) and uploads the data to a cloud server. This ensures that all data is centralized, timestamped, geo-tagged, and available for real-time monitoring and analysis. The kit empowers local communities and students to contribute to citizen-led water quality tracking and supports authorities in making data-driven conservation decisions.
- **Street plays (nukkad nataks), poster drives**, and door-to-door outreach to share messages on pond ecology, plastic waste, and conservation.
- **Livelihood initiatives** such as **fish farming, lotus cultivation, and composting**, to make the pond a source of both ecological and economic value.
- Providing a **modular cost effective** water (Xylocarbon Filter) filter made from sustainable elements to produce clean drinking water from the pond water which was selected as Top 20 projects in Stockholm Junior Water Prize, India.

COLLABORATIONS AND SUPPORT

- Pondora is not a standalone effort. It thrives through meaningful partnerships, such as:
- Bisleri CSR in Abupur, where we are leading community awareness programs and planning a solid waste management project to prevent dumping in water bodies.
- Local Panchayat collaboration in Bambawar, where ownership lies entirely with the village leadership and people, an example of grassroots governance in action.



- A pilot with Development Alternatives in Gautam Buddha Nagar, where our real-time water monitoring device is being tested to support their pond rejuvenation work.

These collaborations reflect Pondora's core philosophy: **work with, not for, communities.**

IMPACT AND RECOGNITION

In less than a year, Pondora has grown from a school project to a replicable model of youth-led environmental governance. The initiative has been shared at international platforms such as:

- The **United Nations ECOSOC Youth Forum**, where I presented our model as a scalable example of grassroots climate action.
- The **Youth Climate Conclave** and **World Sustainable Development Summit 2025**, where I was selected to draft and present the **official Youth Pledge** on sustainability.
- Our Xylocarbon filtered was selected as Top 20 projects out of 400 in **Stockholm Junior Water Prize**, India hosted by IIT Madras.

Pondora has generated a positive impact in the villages we are currently working in, and in the coming months, our impact will increase.

- We have reached out to almost 100 people in Bambawar as of now and as our sessions continue till July, we will have hosted sessions with 400 people in total.
- We intend to work on seven different pond locations in the village of Bambawar

Pondora is not just a restoration project. It is a reminder that solutions to our biggest environmental challenges can begin with empathy, education, and one pond at a time.



SUPPORTING IMAGES



Image 1 : Interaction with the locals in Bambawar



Image 2 : In meeting with the locals of Bambawar to discuss their problems



Image 3 : Highlighting Pondora's work in using technology at Youth Forward: Green Innovation, Digital Inclusion, and Global Partnerships for the SDGs side event



Image 4 : Meeting with CEO of Bisleri International - Mr.Angelo Georg



Image 5 : Highlighting Pondora work on ponds in Asia-Pacific Conference during UN ECOSOC Youth Forum