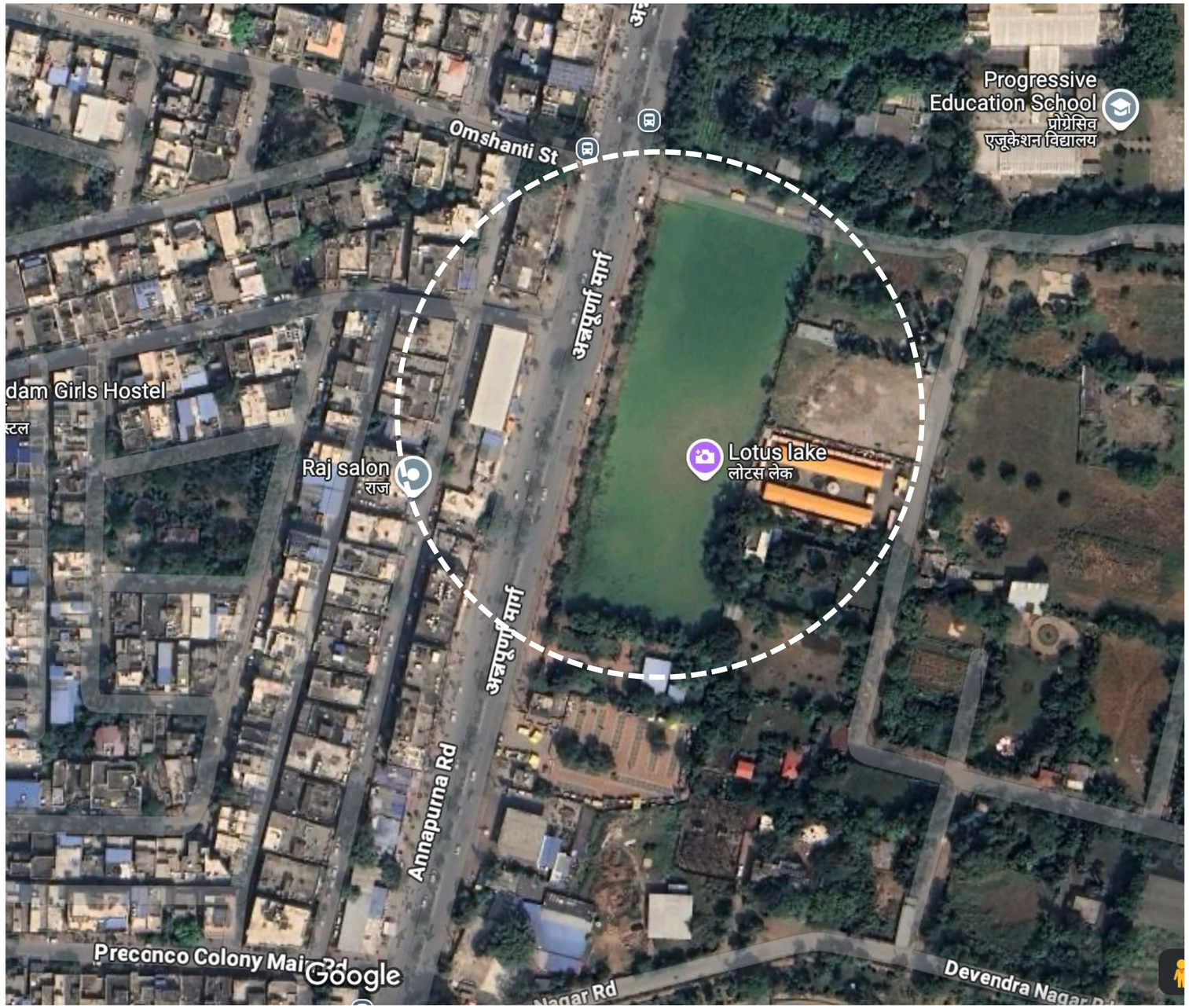
ANNAPURNA LAKE

PROJECT REPORT

BY CLEAN WATER

CLEAN WATER



ABOUT ANNAPURNA LAKE

This 2.5 acre lake, known locally as “Lotus Lake,” lies near the bustling Annapurna Temple in Indore, Madhya Pradesh, nestled within a residential neighborhood. Over the years, the lake suffered from inadequate waste management and the covert dumping of organic and non-organic waste, including sewage, leading to severe water pollution.

In addition, its proximity to the temple contributed to a recurring influx of religious waste, often discarded directly into the lake. The chemical components of these offerings further disrupted the lake’s ecosystem, posing serious threats to its water quality and aquatic life.

ABOUT CLEAN WATER

Clean-Water is a startup based out of Indore specializing in building nature based solutions for rejuvenating water bodies and restoring their ecosystems.

The company was founded in 2017 by visionary founder and IIT-Bombay Alumnus, Priyanshu Kumath with the aim to indigenously produce bioremediation solutions for restoring India’s polluted water bodies.

The company has pioneered the use of durable and high efficiency floating islands that can be deployed on all types of water bodies for water quality management, beautification and biodiversity enhancement.

By leveraging the power of wetland plants and friendly bacteria, these islands continuously remove pollutants while providing habitats for local flora and fauna. Clean-Water supplements these islands with aerators for increasing the amount of dissolved oxygen in the water and microbial solutions that quickly remove nutrients and reduce accumulated sludge in water bodies.

CLEAN WATER

ABOUT CLEAN WATER

Clean-Water‘s mission is to restore 1,00,000 water bodies across India in a responsible and sustainable way that benefits the environment and people.

Clean Water has worked on 20 water bodies across India in places including Delhi, Ahmedabad and Bangalore. For its efforts, Clean Water has been awarded the title of **“Water Hero”** and recognised as **“Jal Prahari”** by Jal Shakti Mantralaya, Government of India.

Towards Sustainable Water Body Management

Clean Water is committed to rejuvenating water bodies in India, including Annapurna Lake.

We deliver nature-based solutions to restore ecosystems, integrating advanced cleantech to make our efforts enduring and sustainable. At Annapurna Lake, we are applying these approaches to reduce pollutant accumulation, tackle eutrophication, and enhance water quality, creating a thriving ecosystem that supports essential biodiversity.

To rejuvenate the lake's ecosystem, Clean-Water has deployed five floating islands, working in harmony with four floating aerators, regular applications of beneficial microbial cultures, and a lotus-shaped floating solar aerator. These bioremediation methods have allowed us to eliminate contaminants and transform Piplyahana Lake into a robust, vibrant ecosystem that serves the community.

Our goal is not only to restore Annapurna Lake but also to raise awareness about the importance of water conservation and management in India.

PROBLEM AT HAND

Annapurna Lake, once a popular local attraction, gradually deteriorated due to neglect and frequent waste dumping, ultimately becoming a source of foul odors. Two sewage inlets from nearby densely populated residential areas continuously discharged pollutants into the lake, compounding the pollution problem.

Adjacent to one of Indore's busiest temples, the lake also received religious waste, which introduced harmful chemicals that disrupted its ecosystem. Invasive species and algal blooms spread across the water surface, forming a thick green layer that further degraded the lake's health.

In 2023, the lake experienced a devastating fish die-off event, triggered by high levels of BOD and COD and critically low dissolved oxygen. This tragic outcome underscored the urgent need for intervention and proper treatment to restore the waterbody's ecosystem.

Clean-Water aimed to restore Annapurna Lake, transforming it into a valuable asset for both the community and the environment, beyond just a water body.

PROBLEM AT HAND

- ***Nutrient Overload***
- ***Water Hyacinth Formation***
- ***Suffocation of Lake***

अन्नपूर्णा तालाब में मछलियां मृत, पानी जहरीला होने की आशंका

PROBLEM AT HAND

Why is SUSTAINABLE WATER Important?

It is crucial for preserving ecosystems, community well-being, water security, and economic benefits.

It ensures long-term viability and climate resilience.

Sustainable water management isn’t just about preserving water;

it’s about safeguarding ecosystems, enhancing community life, and securing our future.

GRANT SUPPORT & INNOVATION

IIT KANPUR & CITI BANK

IIT ROPAR & HDFC BANK

The Annapurna Lake Rejuvenation Project was made possible through generous grant support from:

- **IIT Kanpur under Citi Bank's initiative**
- **IIT Ropar under HDFC Bank's Parivartan initiative**

These grants enabled us to successfully execute large-scale ecological interventions for lake restoration, including the deployment of Floating Wetlands, Beneficial Microbial Cultures, Floating Aerators and development of a Lotus Shaped Solar-Powered Floating Aerator.

Beyond rejuvenating Annapurna Lake to drinking water standards, this support also helped us develop new products, furthering innovation in waterbody restoration.

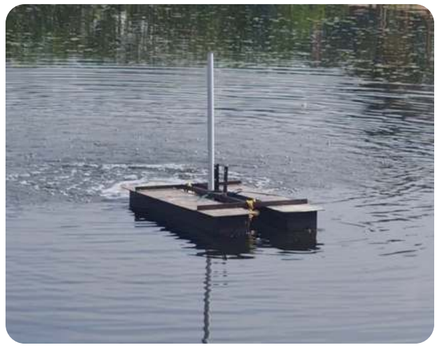
We extend our gratitude to our grant partners for their commitment to sustainable water management and look forward to driving further advancements together.

OUR INNOVATIVE PRODUCTS HELP US TO DELIVER & SCALE QUICKLY

Floating Wetlands

Mimic nature's process and provide wetland effect to waterbodies to clean the water.

- Improve water quality, reduce algal blooms and remove pollutants
- Produces Value (fish yield, oil, etc).
- Beautification tool for water-bodies
- Provide habitat to all life-forms



Floating Aerators

Aeration/Oxygenation helps in improving water quality and increasing Oxygen for sustenance & growth of aquatic life

Beneficial Microbial Cultures

Friendly bacteria work in tandem with wetlands to help devour nutrients and other unwanted pollutants to reduce algal blooms

HOW OUR PRODUCTS CREATED IMPACT

Plant Roots & Bio Media provides surface for bacterial growth

FLOATING WETLANDS → Special Plants
- Removes heavy metals
- Consumes excess nutrients like Phosphorus & Nitrogen
- Provides Habitat for biodiversity

Oxygen acts as fuel for bacterial growth

AERATORS → Oxygenates Water
- Increases dissolved oxygen level for aquatic life and ecology growth
- Decreases BOD & COD Levels
- Removes harmful gases

Gives Fuel and Surface for Bacterial Growth

BENEFICIAL MICROBIAL CULTURES → A mixture of different types of bacterial cultures
- Converts ammonia and nitrates into nitrogen gas
- Breaks down organic pollutants and sludge
- Outcompeting algae for nutrients

- **Removes Color & Odour**
- **Prevents Algae Growth**
- **Removes Harmful Gases**
- **Prevents Growth of Invasive Species**
- **Removes Heavy Metals**
- **Decreases BOD & COD**
- **Increases Dissolved Oxygen**
- **Increases Aquatic Life**
- **Promotes Biodiversity**
- **Self-Sustainable Solution**

WHAT ARE FLOATING WETLANDS AND HOW DO THEY WORK?

Floating islands are innovative ecological solutions for water bodies pioneered in India by Clean-Water. They consist of buoyant structures supporting wetland vegetation and biomedia, creating a sustainable ecosystem. The plants' roots extend into the water, absorbing nutrients and promoting biological filtration, improving water quality. The biomedia also help in the formation of colonies of helpful bacteria (biofilms) that improve the water treatment efficiency of the islands 4-5 times!

This process mitigates issues like algae blooms, removes pollutants such as heavy metals from the water and provides habitats for above water and underwater species. This makes floating islands an effective and environmentally friendly tool for water quality management, ecological restoration and beautification

FLOATING WETLANDS

FLOATING WETLANDS

Floating Islands are innovative structures designed to enhance water quality and provide ecological habitats. They mimic wetland effects, promoting microbial activity that helps settle sediments and absorb pollutants like phosphorus, nitrogen, and heavy metals. Ideal for lakes, ponds, and rivers, they also contribute to biodiversity and beautification of water bodies.

TECHNICAL SPECIFICATIONS

- **Build:** Hybrid - 7 Layered
- **Anchoring & Fixing:** Anchored to Bottom or from Side
- **Sizes:** 2m x 2m x 0.4m
- **Island Height:** 12 inches
- **Max Load:** 800 Kgs
- **Operational Design Load:** 400 kgs
- **Finish:** FRP
- **Frame:** FRP
- **Ideal For:** Lakes , Rivers , Drains & Ponds
- **Expected Life** > 10 years

Benefits

- Artificial bio-media provides maximum pollutant removal
- Natural wastewater treatment without use of chemicals
- Can be camouflaged in a natural environment

FLOATING AERATORS

To aerate the lake, Clean-Water deployed sub-surface floating aerators, dispersing them over the lake to target most affected areas. Since Annapurna Lake’s water supply is limited to sewage discharge and seasonal rainfall, choosing an aeration method that preserved water levels was essential. Therefore, sub-surface aerators were selected over fountain or paddle-wheel types, which could otherwise contribute to water loss.

These sub-surface aerators release oxygen a few feet below the water surface, effectively reaching critical areas of the lake’s water column that lack direct air exposure. Clean-Water also carefully adjusted the aeration flow to avoid disturbing the lakebed, thereby preventing sediment and sludge agitation, which could harm fish and other aquatic life.

FLOATING AERATORS (2 HP)

CLEAN WATER

Floating aerators enhance oxygen transfer in water bodies via high-velocity jets, improving water quality and preventing algae blooms. Ideal for lakes, ponds, and treatment facilities, they support aquatic life and ecosystem health.

TECHNICAL SPECIFICATIONS

- **Horse Power:** 2 HP
- **Voltage Range:** 230V (Single Phase)
  420V (Three Phase)
- **Frequency Range:** 50 Hz/60 Hz
- **Ampere Range:** 11A (Single Phase)
  3.3A (Three Phase)
- **Water Flow Range:** 100-110 feet
- **Oxygen Generation (kg/hr) :** 3.8 Kg/hr
- **Power Consumption (unit/hr) :** 1.5-1.8 unit
- **Installation Depth (in feet) :** 5 feet from the surface level

Benefits

- Boosts oxygen levels to support healthy aquatic life and enhance water quality.
- Minimizes stratification for uniform temperature and oxygen distribution throughout the water body.
- Prevents harmful algae blooms for a clearer, healthier aquatic environment.

BENEFICIAL MICROBIAL CULTURES

Beneficial Microbial Cultures are dormant colonies of specialised friendly bacteria. These bacteria are introduced in the water either by sprinkling them directly on the surface of the water or by diluting them with lake water in a separate drum and then allowing gradual dosing through a tap.

The bacteria consume excess nutrients and accumulated sludge quickly and safely. Through this, they starve out infestations and algal blooms and thereby stop their spread in the water. In this way, the bacteria improve water quality and help restore balance in the ecoystem

The bacteria start showing results within a few days' time and need to be dosed based on the amount of pollutants entering the lake regularly.

BENEFICIAL MICROBIAL CULTURE

CLEAN WATER

Microbial cultures, consisting of beneficial bacteria consortia, combat eutrophication by improving water clarity, reducing sludge, and removing excess nutrients. This low-cost solution prevents algae infestations in diverse water environments.

Benefits

- Quickly tackles eutrophication in water bodies.
- Improves water clarity and odour within a few days.
- Biologically removes excess nutrients, reducing sludge and silt.
- Safely stops undesirable infestations of algae and water hyacinth.

BIOLOGICAL NUTRIENT REMOVAL PROCESS

1) Oxidation

$COHNS + O_2 + \text{bacteria} \longrightarrow CO_2 + NH_3 + \text{other end products} + \text{energy}$

2) Synthesis of new cell tissue

$COHNS + O_2 + \text{bacteria} \longrightarrow C_5H_7NO_2\ (\text{new cell tissue})$

3) Endogenous decay or respiration

$C_5H_7NO_2 + 5O_2 \longrightarrow 5CO_2 + 2H_2O + NH_3 + \text{Energy}$

4) Anaerobic Fermentation

$\text{Complex Organic Matter} \longrightarrow \text{Soluble Organic Molecules} \longrightarrow 3CH_4 + CO_2$

5) Biological Nitrogen Removal in the form of Nitrogen gas

(i) Nitrification $NH_3 + O_2 \longrightarrow NO_2^- + 3H^+ + 2e^-$

$NO_2^- + H_2O \longrightarrow NO_3^- + 2H^+ + 2e^-$

(ii) Denitrification in this process NO_3^- is converted to nitrogen gas (N_2) by denitrifying bacteria These are heterotrophic bacteria which need organic matter as a source for carbon.

$2NO_3^- + 10e^- + 10H^+ \longrightarrow N_2 + 6H_2O$

DEVELOPMENT OF FLOATING LOTUS SOLAR AERATOR

CLEAN WATER

For the Annapurna Lake, Clean Water developed a new product - Floating Lotus Solar Aerator. In our previous installations, at times we faced problem with getting electric connections to the centre of the lake. Also there have been instances of theft of electric cables in the past. Moreover, Annapurna Lake lies in the heart of a residential area of Indore and its beautification would create a positive impact on the community around it.

Therefore, to reduce to reliance on grid electricity, avoid disruptions in aeration because of cable theft and beautification of the lake and its surroundings, Clean Water decided to develop and innovative aesthetic solar powered aerator in the shape of a lotus.

The product was developed with grant money from IIT Kanpur and IIT Ropar. Clean Water used the expertise of a local solar and LED lights manufacturing company to make the product autonomous.

DEVELOPMENT OF FLOATING LOTUS SOLAR AERATOR

CLEAN WATER

For Annapurna Lake, Clean Water introduced an innovative product—the Floating Lotus Solar Aerator. In previous installations, challenges like limited access to electrical connections at the lake's center and frequent theft of electric cables hindered effective aeration. Located in the heart of a residential area in Indore, Annapurna Lake also presented an opportunity to enhance community aesthetics through thoughtful design.

To reduce reliance on grid electricity, avoid aeration interruptions from cable theft, and beautify the lake, Clean Water designed a solar-powered aerator in the elegant shape of a lotus. This unique, autonomous device combines functionality and visual appeal, contributing to the lake's restoration and the community's enjoyment.

Developed with grant funding from IIT Kanpur and IIT Ropar, the project was realized with technical support from a local company specializing in solar and LED lighting, ensuring the aerator operates independently and sustainably.

FLOATING LOTUS-SHAPED SOLAR AERATOR

CLEAN WATER

Product Description:

The 3HP scorpion jet aerator is a solar-powered solution designed to improve water quality in lakes and ponds, powered by a 6.5 KW system of floating solar panels. Mounted on a specially developed floating structure, this system supports both the solar panels and the suspended underwater aerator, ensuring optimal performance.

The aerator is uniquely designed in the shape of a lotus, enhancing the aesthetics of the waterbody, and features LED lights powered by solar energy that illuminate the structure at night. Customizable to meet specific requirements, this eco-friendly aerator combines functionality, sustainability, and visual appeal.

Salient Features:

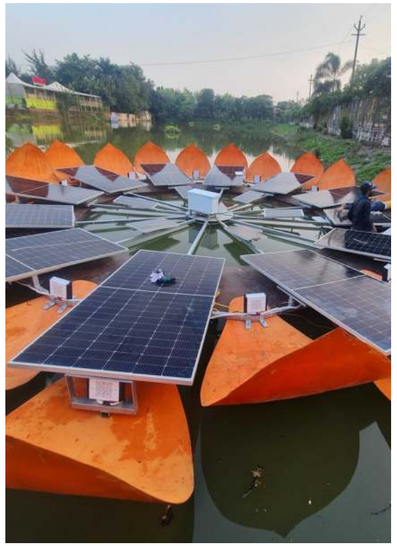
- **Solar Powered Efficiency**
- **Special Floating Structure**
- **Aesthetic Lotus Design**
- **Nighttime Illumination**
- **Customizable Design**
- **Environmentally Friendly**
- **Versatile Application**
- **Innovative Technology**

FLOATING LOTUS-SHAPED SOLAR AERATOR

CLEAN WATER

TECHNICAL SPECIFICATIONS

- **Build:** Galvanized MS Structure | FRP Petals & Floaters
- **Anchoring & Fixing:** Anchored to Bottom
- **Diameter** ~ 30 ft. (Customizable)
- **Weight** 1300-1500 kgs
- **Aerator Horse Power** 3 HP
- **Aerator Type** Submersible Jet Scorpion Aerator
- **Floating Solar Panel Capacity:** 6.5 KW
- **LED lights:** 24 (Customizable)
- **Auto/Manual** Auto



PROJECT IMPLEMENTATION

INITIAL STAGES

After a significant fish die-off in 2023, Clean-Water recognized the lake as a critical concern for the local community. In response, the team conducted an in-depth survey of the lake and took on the initiative of its rejuvenation. The project was fully conceptualized, planned, and executed by Clean-Water’s team, focusing on addressing the lake’s specific environmental challenges.

PROJECT IMPLEMENTATION

PRODUCTS INSTALLED

Following the water assessment and identification of key ecosystem issues, Clean-Water deployed five floating islands, four floating aerators, a floating lotus shaped solar aerator and initiated regular dosing with beneficial microbial cultures. These targeted interventions were designed to tackle issues such as elevated BOD, COD, high levels of phosphates, nitrates, and nitrites, as well as the spread of invasive species, setting the stage for the lake’s restoration and ecological balance.

PROJECT IMPLEMENTATION

DEVELOPMENT OF NEW PRODUCT

To address challenges like grid dependence, cable theft, and the need for beautification, Clean-Water developed the Floating Lotus-Shaped Solar Aerator for Annapurna Lake. This solar-powered, lotus-shaped device enriches water with dissolved oxygen, reducing BOD and COD to support aquatic life. Weighing 1,500 kg, it features solar panels that power daytime aeration and LED lighting at night, creating a striking centerpiece that enhances the lake’s appeal.

PROJECT IMPLEMENTATION

MEDIA COVERAGE

पाई लगी, न कौड़ी... मुफ्त में चौखा अन्नपूर्णा तालाब!

इंदौर. नगर प्रतिनिधि। अभी तक अन्नपूर्णा तालाब की पहचान थी जलकुंभी, कचरा, गंदगी... नगर निगम परेशान था कि दिन कैसे फिरें... सोच-विचार के बीच ही तालाब मुफ्त में संवर गया... 'कमल' खिल गया।

क्लीन-वाटर (सस्टेनेबल वाटर टेक्नोलॉजीज प्राइवेट लिमिटेड) ने तालाब का जिम्मा लिया। आईआईटी कानपुर और रोपड़ ने मदद की। क्लीन-वाटर की अगुवाई प्रियांशु कुमठ (आईआईटी बॉम्बे), रेवंत नाहर (आईआईटी बॉम्बे) और सोनम मंदानी (आईआईटी इंदौर से पीएचडी) कर रहे हैं।

सबसे पहला काम था पानी की सफाई। पिछले साल सैकड़ों मछलियां मर गई थीं। सफाई के साथ ही क्लीन-वाटर ने तालाब की सुंदरता बढ़ाने और पानी को साफ रखने के लिए 5 फ्लोटिंग वेटलैंड और 1 फ्लोटिंग लोटस (तैरता कमल) सोलर एरेटर तैयार किया है। 4 फ्लोटिंग एरेटर के लिए बिजली कनेक्शन का इंतजार है। कंपनी 6 महीने रखरखाव भी करेगी, जिसके बाद नगर निगम को सौंपेगी। क्लीन-वाटर ने ही पिपलियाहाना तालाब में भी

सूरज की बिजली से पानी में रोशन कमल

फ्लोटिंग वेटलैंड बनाए थे। फ्लोटिंग एरेटर पानी को हवादार और ऑक्सीजनयुक्त करने में मदद करते हैं, ताकि पानी में रहने वाले जीव-जंतुओं को जीवन-दान मिले। अन्नपूर्णा तालाब में फ्लोटिंग लोटस सोलर एरेटर देखने काबिल है। ये सूरज की किरणों से बनने वाली बिजली से रोशन होता है। आंटी मोड है। फ्लोटिंग लोटस सोलर एरेटर को यूबीआई टेक्नोलॉजीज के अक्षत गोयल (आईआईटी बॉम्बे के पूर्व छात्र) के साथ मिलकर तैयार किया है, जो इंदौर में सोलर पैनल बनाती है। तालाब में माइक्रोबियल कल्चर भी डाले जा रहे हैं। इस पाउडर में 5 बैक्टीरिया कल्चर हैं, जो बदबू दूर करते हैं। हरे रंग को हटाते हैं। जलकुंभी, जल सलाद, शैवाल, डकवीड को रोकते हैं।

कंपनी तालाब में उगी घास को भी साफ कर रही है। कचरा हटाने के साथ चारदीवारी की ऊंचाई बढ़ा रहे हैं, ताकि लोगों को कचरा फेंकने से रोका जा सके। कुछ लोग पूजा-पाठ का सामान यहां विसर्जित कर रहे हैं। इंदौर में कैलटेक लैब की रिपोर्ट बताती है कि तालाब का पानी, पीने काबिल हो रहा है। मछलियां भी बढ़ रही है। मच्छरों पर रोक लगी है।

सौंदर्य के लिए कमल जैसी पंखुड़ियां लगाईं, लाइटिंग की, 20 लाख में तैयार हुआ एरेटर

अन्नपूर्णा तालाब में लगा लोटस एरेटर, यह पानी को साफ करेगा और सौर ऊर्जा से होगा संचालित

20 लाख में लगा लोटस एरेटर
40 लाख का फंड भी मिला

भास्कर संवाददाता | इंदौर

अन्नपूर्णा तालाब का पानी साफ करने के लिए इंदौर की एक कंपनी ने तालाब पर एक कमल के आकार का एरेटर लगाया है। ये एरेटर पानी में ऑक्सीजन का प्रवाह सुनिश्चित कर मछली और तालाब के जीव-जंतुओं का जीवन बढ़ाने का काम करेगा। सौर ऊर्जा से चलने वाला ये एरेटर देश का पहला इस प्रकार का प्रयोग है।

इस काम के लिए आईआईटी कानपुर और आईआईटी रोपड़ ने इंदौर की स्टार्टअप कंपनी क्लीन वाटर को 40 लाख का फंड भी दिया है। कंपनी ने अब तक 5

एरेटर लगाने का प्रयोग पीपल्याहाना तालाब में कर चुके

क्लीन वाटर के फाउंडर प्रियांशु कुमठ ने बताया इससे पहले फ्लोटिंग आइलैंड और एरेटर लगाने का प्रयोग पीपल्याहाना तालाब में किया जा चुका। वहां हमने जनवरी 2022 से लेकर मार्च 2024 तक एरेटर और फ्लोटिंग आइलैंड संचालित किए। उसके बाद इसे इंदौर नगर निगम को सौंप दिया। तब से ही एरेटर बंद पड़े हैं।

- तार चोरी होने के कारण इस्तेमाल किए सोलर पैनल कुमठ ने बताया जब उन्होंने पीपल्याहाना तालाब पर ग्रिड से कनेक्शन लेकर एरेटर लगाए, तब से बार-बार उसकी केबल रात में चोरी हो

6 महीने तक करेंगे देखरेख, उसके बाद नगर निगम को सौंपेंगे

कंपनी 6 महीनों तक एरेटर की देखभाल करेगी जिसके बाद इसे नगर निगम को सौंप दिया जाएगा। कंपनी एक महीने से इस प्रोजेक्ट पर काम कर रही है। वहीं यह लोटस एरेटर तालाब में पिछले हफ्ते ही फ्लोट किया है। कुमठ बताते हैं इस तालाब में क्षेत्र के 300-400 घरों की पूजन सामग्री आती है जिसमें फूल-पत्तियों के अलावा सिंदूर, कुमकुम, हल्दी, अबीर-गुलाल जैसे घातक और केमिकल युक्त पदार्थ होते हैं। इसकी वजह से पानी दूषित हो जाता है, जो मछलियों व अन्य जीव-जंतुओं के लिए घातक हो जाता है। पिछले साल एक ही दिन में लाखों मछलियां मर गई थी। इसे रोकने के लिए यहां फ्लोटिंग आइलैंड लगाए हैं जो तालाब से घातक केमिकल्स को सोख लेते हैं।

WATER QUALITY ASSESSMENT

CLEAN WATER

PARAMETER	Safe Limits	Test Results
Nitrate as NO3	<45	BDL
Total Suspended Solid(TSS)	<500	26
Biochemical Oxygen Demand (BOD)	<10	2.5
Dissolved Oxygen	>5	6.7
Nitrite as NO2	<30	BDL
Phosphorous as P	<4.5	BDL

BDL = Below Detection Level
Test Results dated approx 2 months after installation

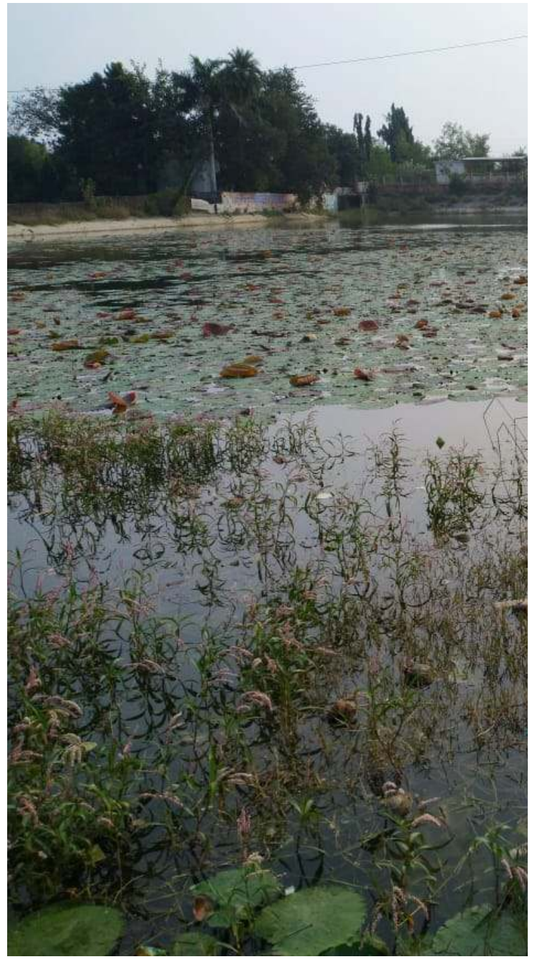
IMPACT

Improvement in Water Quality

Our dedicated efforts to restore the lake have resulted in a striking improvement in water quality, transforming it from a nutrient-laden environment to a balanced, thriving ecosystem. Initially, the lake faced significant challenges from the overgrowth of duckweed and frequent algal blooms due to eutrophication. These issues were effectively mitigated through strategic interventions designed to address the root causes of nutrient overload. The installation of floating islands, which function as natural biofilters, has been instrumental in absorbing excess nutrients and impurities, restoring balance to the lake's nutrient levels. These islands not only improve water quality but also provide habitats that support various plant and animal species, enriching the lake's biodiversity.

Additionally, the use of floating aerators has enhanced dissolved oxygen levels throughout the water, promoting healthier conditions for aquatic life. By increasing oxygen distribution, these aerators support the breakdown of organic materials and discourage harmful bacterial growth. The regular application of beneficial microbial cultures has further accelerated the decomposition of organic matter, effectively reducing the nutrient load that fuels unwanted plant and algae growth. Together, these initiatives have substantially elevated the lake's water quality, fostering a sustainable and self-regulating ecosystem that now supports a rich variety of aquatic life. The positive changes achieved reflect Clean-Water's commitment to long-term ecological health and community well-being.

- Methane (CH_4) reductions: 0.175 t CH_4 (in 3 months)
- GWP emission reductions: 5 t CO_2 eq (in 3 months)
- Livelihood: 50 - 100 families benefited



BEFORE:

AFTER:

VISION FOR THE FUTURE

Indore Model of Lake Restoration

Clean Water aims to work on other water bodies in Indore and develop an integrated water body management system. Clean Water hopes that this “**Indore Model of Restoration”** will inspire other water body restoration efforts that use bioremediation methods across the country. Through further projects, Clean Water will further refine this model and hope to take it to other municipalities in the country to ensure conscious, sustainable development of India’s waterbodies.

SUCCESSFUL IMPLEMENTATION

CLEAN WATER

BEFORE:

AFTER:

SUCCESSFUL IMPLEMENTATION

CLEAN WATER

BEFORE:

AFTER:

THANK YOU!

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