ABCONS INFRA LLP

"ABCONS Technology: Harnessing Nature for Cleaner Waters, Shaping a Sustainable Tomorrow."

Summary

Conventional water treatment methods are plagued by inefficiencies, environmental degradation, and unsustainable practices, exacerbating issues of water scarcity and compromised water quality. Ecosystems face threats, and industries contribute to pollution. ABCONS Technology addresses these challenges by introducing a breakthrough phycoremediation-based solution. The problem at hand is the urgent need for an eco-friendly, efficient, and sustainable water treatment approach that not only removes pollutants effectively but also restores ecosystems. ABCONS Technology emerges as a solution, offering a paradigm shift in responsible water management, aligning with global environmental objectives.

Description of the initiative

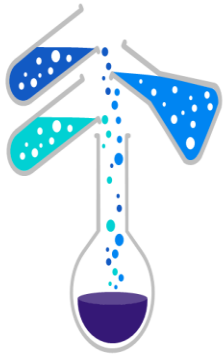
ABCONS Technology represents a pioneering initiative in water management, introducing an innovative and sustainable approach to address the critical challenges associated with conventional water treatment. Rooted in phycoremediation, this groundbreaking solution harnesses the natural power of algae to efficiently and eco-consciously remove pollutants from water bodies.

The initiative focuses on revolutionizing wastewater treatment, providing a cleaner and more sustainable alternative. ABCONS Technology's versatility extends to diverse applications, including sewage and effluent treatment in urban and industrial settings, aligning with the broader goal of fostering responsible water consumption and production practices.

At the heart of the initiative is a commitment to environmental stewardship, promoting the restoration of ecosystems and contributing to global sustainability objectives. ABCONS Technology stands as a beacon of innovation, offering a transformative and scalable solution for a cleaner, healthier, and more sustainable water future.

Product Uniqueness and Advantages

We have developed a unique concentrated product that is non-toxic to water and adheres to guidelines and regulations. Our technology utilizes Nano nutrients and lake water to promote the growth of beneficial algae and diatoms. Through photosynthesis, these organisms produce pure Nano bubbles of oxygen, facilitating the breakdown of organic matter by aerobic bacteria. This process fosters the growth of zoo plankton and glaze on, offering a comprehensive solution for the treatment of lakes, rivers, and industrial pollution, including sewage treatment plants (STPs).



Technology working mechanism.

- Microalgae metabolism of nutrients and organic matter
- Autotrophic, mixotrophic, or heterotrophic modes
- Glucose and acetate metabolism
- VFAs metabolism and β-oxidation cycle

Nutrient Metabolism
- Nitrogen
- Phosphorus

The biochemical pathways-Snapshot

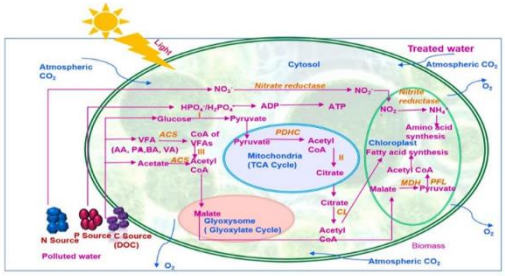
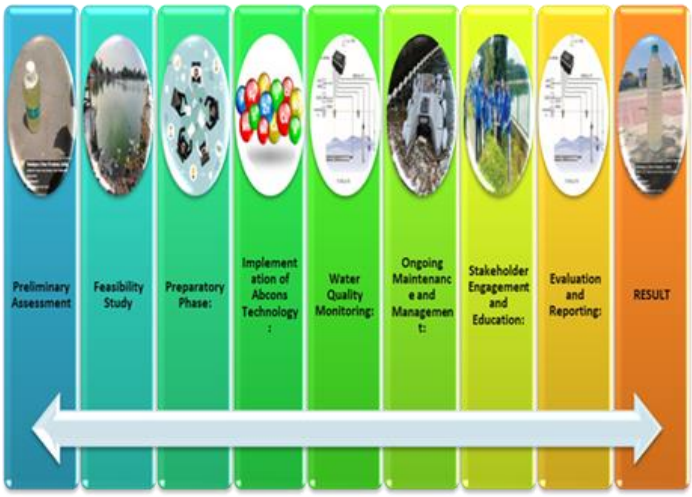


Fig. 1. Schematic diagram of a microalgal cell summarizing the biochemical pathways of pollutants removal from wastewater. I: Glyoxysis cycle; II: Citric acid cycle; III: β-Oxidation; VFAS: Volatile Fatty Acids; AA: acetic acid; PA: propionic acid; BA: butyric acid; VA: valeric acid; ACS: Acetyl CoA synthetase enzyme; PDHC: Pyruvate dehydrogenase complex; CL: Citrate lyase enzyme; MDH: Malate dehydrogenase enzyme; PFL: Pyruvate formate lyase enzyme; DOC: Dissolved organic

Implementation and Impact

Abcons technology is implemented in many urban and rural water bodies like Atal Bihari Park Lake Fatehpur, Matha Talab sihora Jabalpur. Abcons technology spearheads an all-encompassing approach to address water quality challenges across urban, rural, and industrial landscapes, covering Sewage Treatment Plants (STPs), Effluent Treatment Plants (ETPs), and agricultural runoff. This eight-step process is adaptable to diverse water bodies:



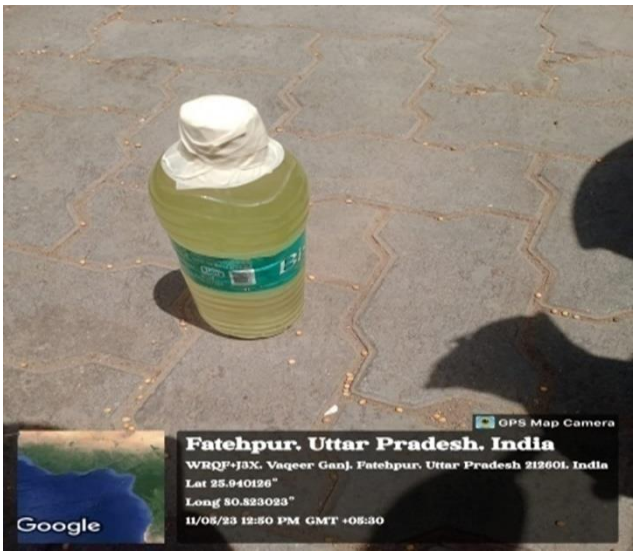
- **Preliminary Assessment:** Identify pollution sources and specific challenges in urban, rural, and industrial water bodies, including STPs, ETPs, and agricultural runoff.
- **Feasibility Study:** Assess ABCONS Technology's suitability, considering the unique characteristics of each water body, such as size, depth, water flow, and surrounding ecosystems.
- **Preparatory Phase:** Develop a detailed project plan, obtain approvals, and engage local stakeholders in urban, rural, and industrial settings.
- **Implementation:** Apply ABCONS Technology, install infrastructure, and introduce beneficial micro algae, addressing pollution from various sources.
- **Water Quality Monitoring:** Establish a regular monitoring program for continuous assessment in urban, rural, and industrial scenarios, including STPs, ETPs, and agricultural runoff areas.
- **Ongoing Maintenance:** Implement a comprehensive plan to ensure long-term effectiveness, suitable for the diverse challenges posed by urban, rural, and industrial water bodies.
- **Stakeholder Engagement:** Conduct awareness campaigns, fostering community involvement across different settings, recognizing the importance of STPs, ETPs, and managing agricultural runoff.
- **Evaluation and Reporting:** Regularly assess outcomes, prepare progress reports, and share findings to inform strategies for sustainable water management in urban, rural, and industrial contexts.

Detailed Impact (Atal Bihari Park Lake Case Study):

Impact:

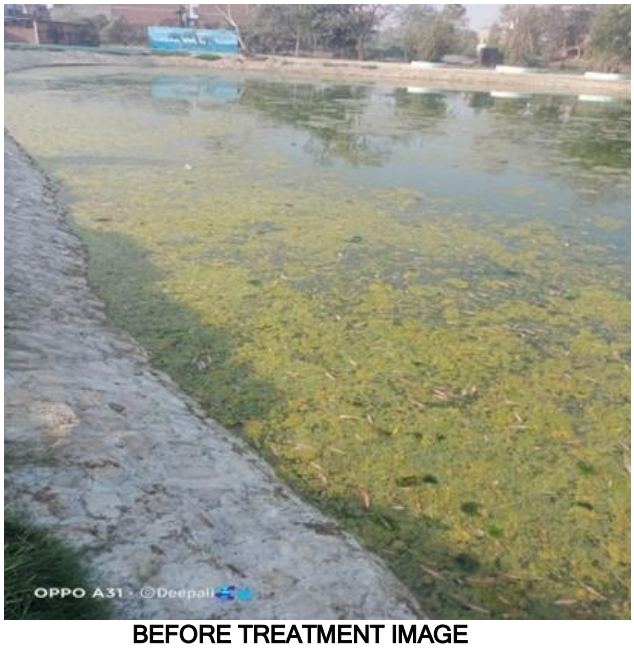
- **Water Quality Compliance:** Achieved regulatory compliance in urban, rural, and industrial water bodies.
- **Nutrient Reduction:** Successfully reduced nutrients, preventing algal overgrowth.
- **Dissolved Oxygen Improvement:** Significantly enhanced dissolved oxygen levels, vital for aquatic life.
- **Reduction of Pollutants**: Targeted and reduced pollutants, improving overall water quality.
- **Algae and Water Weed Control:** Effectively controlled growth, enhancing water clarity and ecological balance.
- **Odor Elimination:** Eliminated foul odours, creating a pleasant environment.
- **Enhanced Biodiversity:** Supported ecosystem restoration, fostering diverse aquatic life.
- **Sustainable Management:** Promoted eco-friendly practices, minimizing harsh chemical use.
- **Compliance with Environmental Regulations:** Ensured adherence to environmental regulations throughout the process.
- **Improved Recreational Value:** Enhanced the appeal of water bodies for recreational activities.

The comprehensive implementation and impactful outcomes underscore ABCONS Technology's effectiveness in diverse water scenarios, providing a sustainable solution for ecological restoration and water management.



BEFORE TREATMENT SAMPLE

AFTER TREATMENT SAMPLE



BEFORE TREATMENT IMAGE

AFTER TREATMENT IMAGE

ABCONS TECHNOLOGY FROM PRE-ASSISMENT TO RESULT

ABCONS INFRA LLP

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CASE STUDY

ATAL BIHARI PARK POND TREATMENT USING ABCONS TECHNOLOGY.

Introduction:

Atal Bihari Park POND, located in Vaqeerganj, Fatehpur, Uttar Pradesh, covers an area of 2.85 acres with a depth of 12 feet. The POND receives treated sewer water from a 1 MLD sewage treatment plant (STP). The executing agency responsible for the POND's maintenance is Vasudha Sanrakshan Pvt Ltd. However, the POND has been facing several challenges, including excessive growth of blue-green algae (BGA) on the surface and bottom of the POND, foul smell emanating from the water, dark green water color, and high nutrient content.

POND location and area

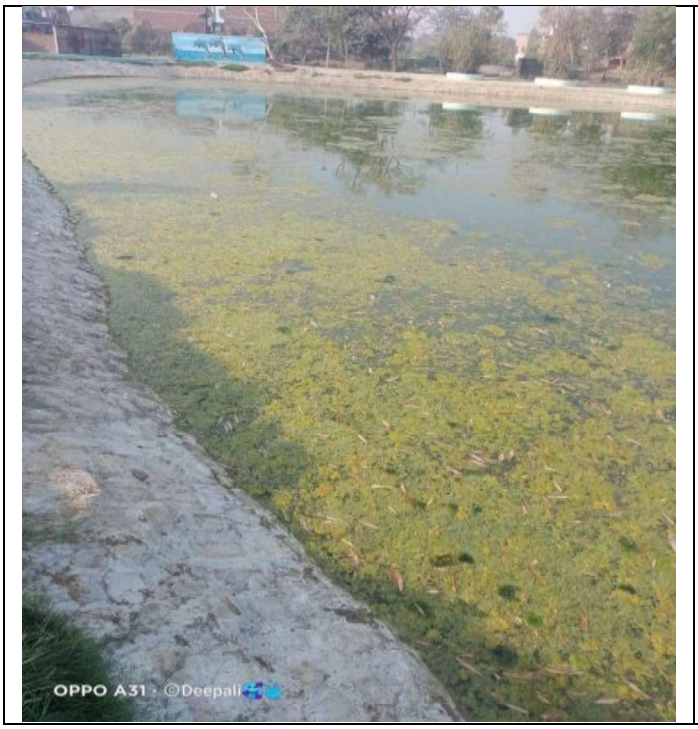
ATAL BIHARI VAJPAYEE PARK POND
GOOGLE LOCATION: 25.940116, 80.823042
SITE ADDRESS: VAQEER GANJ, FATEHPUR,UTTAR PRADESH-212601
POND AREA: 2.85 ACRE.
DEPTH 12 FEET.
WATER SOURCE: TREATED SEWER WATER FROM 1 MLD STP.
EXECUTING AGENCY: VASUDHA SANRAKSHAN PVT LTD.
START DATE: 11MAY2023.
END DATE: 07/062023.
PROLEM STATEMENT ADDRESSED:

a. BGA BLOOM ON SURFACE AND BOTTOM OF POND.
b. FOUL SMELL FROM WATER.
c. WATER COLOUR WAS DARK GREEN
d. WATER WAS NUTRITION RICH.

Objective: The objective of this case study is to address the problems faced by Atal Bihari Park POND through the implementation of Abcons Technology, specifically phycoremediation. Phycoremediation is a sustainable and eco-friendly method that utilizes microalgae to restore water quality by reducing nutrient levels and controlling algae blooms.

POND condition before treatment

The POND is heavily contaminated with blue green algae (BGA) mainly Microcystis sp. BGA is present as a suspension in the water column all over the Inlet water coming from STP is also contributing to BGA input. BGA mat is removed manually on a daily basis. Foul smells emanate from the POND and also from places were POND water is used for horticulture.

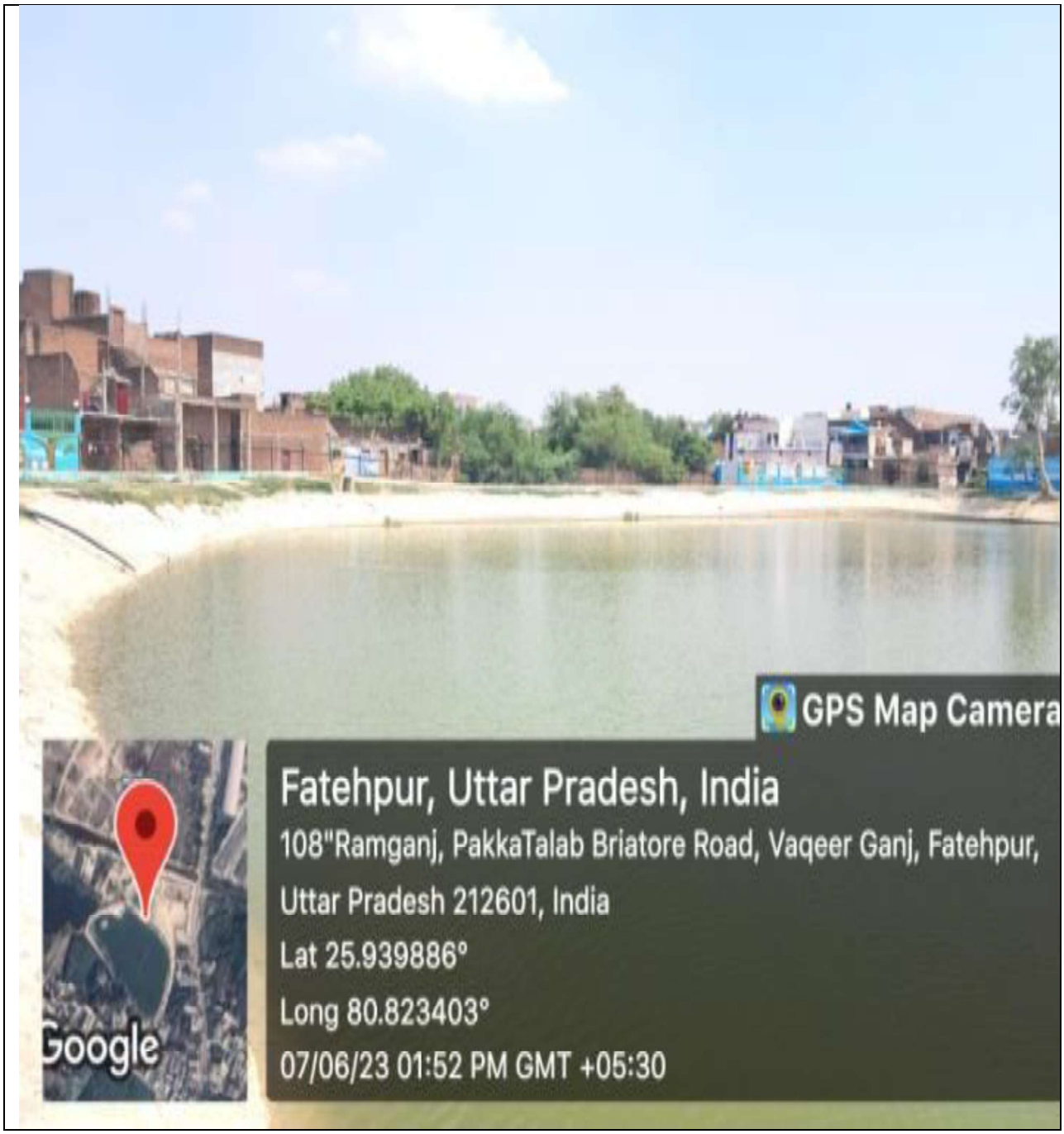


Picture 1. POND condition before treatment at different locations.

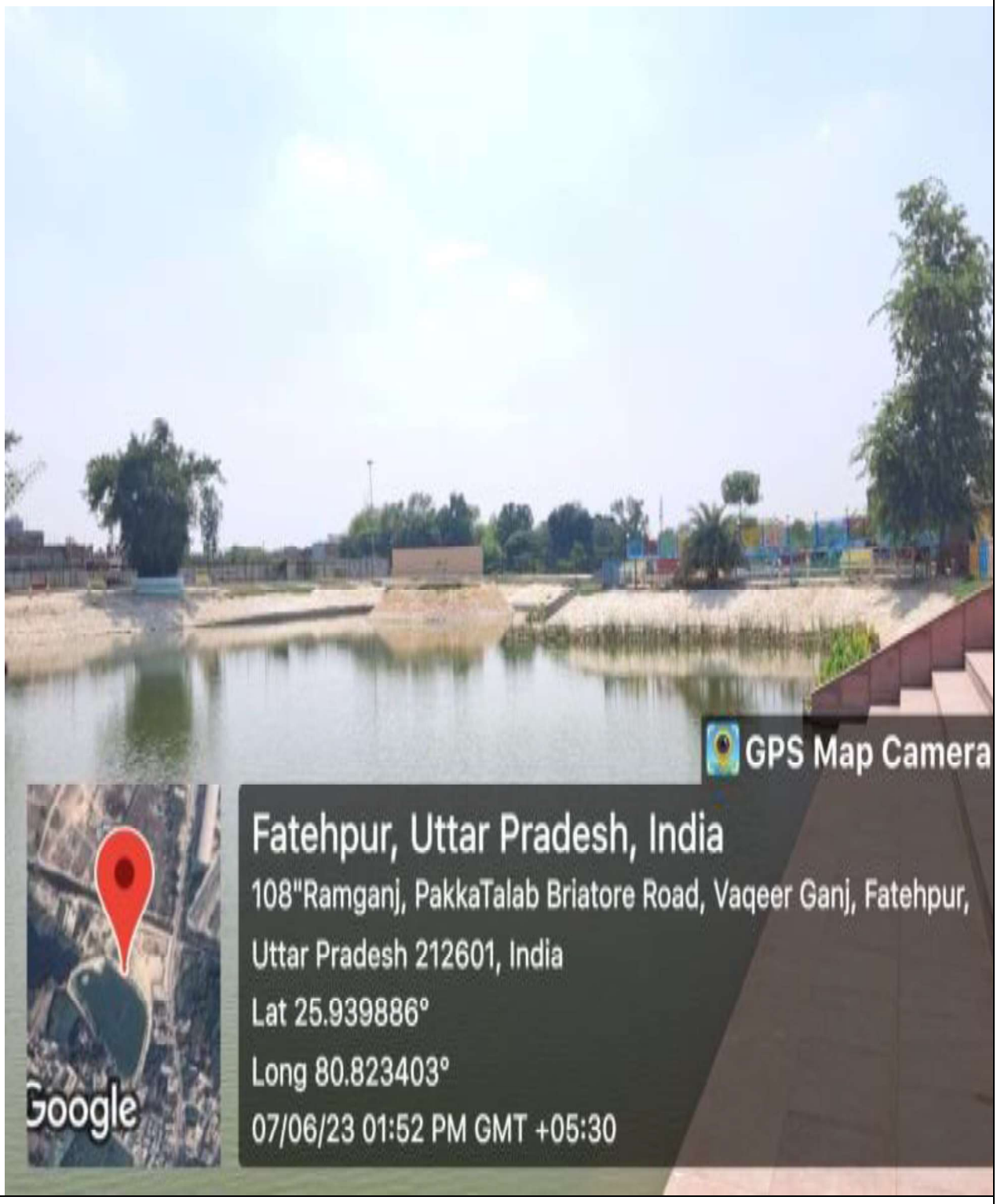
Treatment using Abcons Technology(Phycoremediation):

POND treatment was started on May 11, 2023 (Day 01), with the addition of 2 l of Abcons Concentrate with a subsequent addition of 1 l on days 10, respectively. Abcons Technology was added along the sides of the pond by using a spray, and water samples for testing were collected before addition. Water condition on the day of addition was heavily contaminated with BGA growth and the BGA layer is formed towards the side of POND.

Results: After the implementation of phycoremediation, significant improvements were observed in the water quality of Atal Bihari Park



POND. The growth of BGA on the surface and bottom of the POND was effectively controlled. The foul smell emanating from the water reduced, and the water color transitioned from dark green to a healthier appearance.



Picture 2. POND condition after treatment at different locations.

WATER SAMPLE COLLECTED ON THE STARTING DAY

WATER SAMPLE COLLECTED ON THE CLOSING DAY

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LABORATORIES PVT LTD.

ECOMEN LABORATORIES PVT. LTD.

Second Floor Hall, House No. B-1/8, Sector H, Aliganj, Lucknow - 226 024
Phone No. : 0522 - 4079201/2746282
E-mail: contactus@ecomen.in, Website: www.ecomen.in, CIN - U74210UP1989PTC010601,GSTIN : 09AAACE6076H1ZI

TC-9539

An approved Laboratory from Ministry of Environment, Forest and Climate Change, Govt. of India, New Delhi

TEST REPORT

FORMAT NO. ECO/QS/FORMAT/07

NAME & ADDRESS OF CUSTOMER:	**M/s Vasudha Sanrakshan Private Limited, 886, Old Katra, Prayagraj Prayagraj, Uttar Pradesh 211002**	**ULR No.**	**TC953923000000000F**
		Test Report No.	**ECO/LAB/WW/0001/0000/05/2023**
		Issue Date of Test Report	**18.05.2023**
Type of Sample	Waste Water		
Sample Registration No.	0001	**Name of Location**	Ramganj Pakka Talab (Fatehpur)
Sampling Method	APHA	**Sample Collected By**	By Party
Date of Sample Collection	11.05.2023	**Time of Sample Collection**	11:50 AM
Date of Sample Received	12.05.2023	**Time of Sample Received**	10:45 AM
Start Date of Analysis	12.05.2023	**End Date of Analysis**	18.05.2023
Laboratory Environmental Condition	Temperature: 25 ± 2 °C	**Sample Quantity**	As per requirement
	Humidity: 50 %	**Sample ID Code**	ECO/LAB/0000/05/2023

Sl. No.	TESTS	Unit	PROTOCOL	DETECTION RANGE	RESULT
1.	pH	-	APHA, 23rd Ed. 2017,4500 H+ A+B	2-12	9.32
2.	Total Suspended Solid as TSS	mg/l	APHA, 23rdEd. 2017, (2540D)	5-5000	77.0
3.	Biochemical Oxygen Demand as BOD (5 days at 20°C)	mg/l	APHA, 23rd Ed. 2017, 5210 A+B	5-10000	34.8
4.	Chemical Oxygen Demand as COD	mg/l	APHA, 23rd Ed. 2017, 5220 A+C	5-50000	264.0

Statement of Conformity: The above tested parameters results are related to the sample tested.

Note:

1. Test results relate to the items sampled & tested.
2. Test report shall not be reproduced except in full without approval of the laboratory.
3. The test samples will be disposed of after one Month from the date of issue of test report

----End of Report----

Verified By

Technical Manager
(Vikas Kumar)

Authorized By

Ecomen Laboratories Pvt. Ltd.
Second Floor Hall, House No. B-1/8,
Sector-H, Aliganj, Lucknow-226024

LAB REPORT OF THE SAMPLE TAKEN ON THE START DATE.

ecoMen
LABORATORIES PVT LTD.

ECOMEN LABORATORIES PVT. LTD.
Second Floor Hall, House No. B-1/8, Sector H, Aliganj, Lucknow - 226 024
Phone No. : 0522 - 4079201/2746282
E-mail: contactus@ecomen.in, Website: www.ecomen.in, CIN - U74210UP1989PTC010601,GSTIN : 09AAACE6076H1ZI

TC-9539

An approved Laboratory from Ministry of Environment, Forest and Climate Change, Govt. of India, New Delhi

TEST REPORT

FORMAT NO. ECO/QS/FORMAT/07

NAME & ADDRESS OF CUSTOMER:	**M/s Vasudha Sanrakshan Private Limited 886, Old Katra, Prayagraj Prayagraj, Uttar Pradesh 211002**	**ULR No.**	**TC953923000000562F**
		Test Report No.	**ECO/LAB/WW/0057/0562/06/2023**
		Issue Date of Test Report	**10.06.2023**
Type of Sample	Waste Water		
Sample Registration No.	0057	**Name of Location**	Ramganj Pakka Talab (Fatehpur)
Sampling Method	APHA	**Sample Collected By**	By Party
Date of Sample Collection	07.06.2023	**Time of Sample Collection**	-
Date of Sample Received	08.06.2023	**Time of Sample Received**	10:45 AM
Start Date of Analysis	08.06.2023	**End Date of Analysis**	10.06.2023
Laboratory Environmental Condition	Temperature: 25 ± 2 °C	**Sample Quantity**	As per requirement
	Humidity: 50 %	**Sample ID Code**	ECO/LAB/0562/06/2023

St. No.	TESTS	Unit	PROTOCOL	DETECTION RANGE	RESULT
1.	pH	-	APHA, 23rd Ed. 2017,4500 H+ A+B	2-12	8.78
2.	Total Suspended Solid as TSS	mg/l	APHA, 23rdEd. 2017, (2540D)	5-5000	67.8
3.	Biochemical Oxygen Demand as BOD (5 days at 20°C)	mg/l	APHA, 23rd Ed. 2017, 5210 A+B	5-10000	26.0
4.	Chemical Oxygen Demand as COD	mg/l	APHA, 23rd Ed. 2017, 5220 A+C	5-50000	156.0

Statement of Conformity: The above tested parameters results are related to the sample tested.

Note:
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3. The test samples will be disposed of after one Month from the date of issue of test report

----End of Report----

Verified By

Technical Manager
(Vikas Kumar)

Authorized By

Quality Manager
(Reena Tripathi)

LAB REPORT OF THE SAMPLE TAKEN ON THE CLOSING DATE.

Change in visible water condition and physiochemical parameters

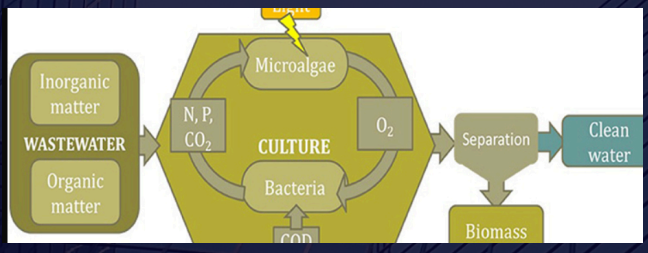
Water quality of the pond changed considerably when we investigate at visible changes of pond surface and also the change in water quality parameters tested before treatment on 11 may 2023 and after treatment on 7/06/2023 after treatment a significant reduction in total dissolved solids (TDS) was observed from the initial reading, similarly, COD and BOD were also reduced respectively. Nutrient levels also reduced with nitrate reduction and phosphate also reduced over a period of 27 days after the addition of Abcons Technology.

2. Conclusions

The successful application of Abcons Technology's phycoremediation approach in Atal Bihari Park POND demonstrates its effectiveness in addressing the challenges associated with excessive BGA growth, foul smell, and nutrient-rich conditions. The implementation of this eco-friendly solution has resulted in improved water quality and enhanced aesthetics of the POND. Phycoremediation offers a sustainable and cost-effective method for POND Remediation, ensuring a healthier and more enjoyable environment for visitors.

ABCONS INFRA LLP

INNOVATIVE WATER SOLUTIONS FOR A SUSTAINABLE FUTURE



Who We Are:

- Abcons Infra LLP is dedicated to pioneering sustainable water solutions through advanced phycoremediation technology.

Our Technology:

- Phycoremediation: Harnessing the natural power of diatoms to purify and rejuvenate water bodies.
- Eco-Friendly: Our methods are environmentally sustainable, using nature's own processes to clean water.

Our Impact:

- Cleaner Water Bodies: Restoring and maintaining water quality in oceans, rivers, lakes, and ponds.
- Healthier Communities: Reducing waterborne diseases and promoting public health.
- Biodiversity: Supporting aquatic ecosystems and enhancing biodiversity.

Get in Touch

Website: www.abcons.in
Email: abconsinfrallp@gmail.com
Phone: 9167022303

ABCONS INFRA LLP

Why Choose Abcons Infra LLP?

- Innovative Solutions: Our phycoremediation technology is at the forefront of sustainable water management.
- Proven Impact: Demonstrated success in improving water quality and supporting ecological balance.
- Collaborative Approach: Partner with us to implement effective water treatment solutions and create lasting positive change.

- Get Involved:
- Partner With Us: Collaborate on projects to restore water bodies and promote sustainability.
- Support Our Mission: Invest in innovative solutions that benefit the environment and society.
- Spread Awareness: Share our vision and raise awareness about the importance of clean water and ecological restoration.