



# AN “IN-SITU **NATURE BASED SOLUTION**” TO REJUVENATE WATERBODY BY WSAFE-NBS™ PHYTOECOREMEDIATION PROCESS



IIT Delhi

Impact Assessment Partner

#startupindia

**MSME**  
सूक्ष्म, लघु एवं मध्यम उद्यम  
MICRO, SMALL & MEDIUM ENTERPRISES

We are honoured to Won the 1st position in the prestigious **Water Innovate 2024 Challenge** hosted by TiE Chandigarh, the Embassy of Israel In India, and the Haryana Irrigation and Water Resources Department  
December 2024



We are honoured to be recognized by the Atal Innovation Mission (AIM) under NITI Aayog (Government of India) as one of the 50 leading innovations in life sciences and biotechnology within the AIM ecosystem.



September 2024



**Life Sciences  
and Biotechnology**



**WSAFE Sustainability  
Services Pvt. Ltd.**

**INCUBATED AT**  
AIC - RISER PUNE SEED FOUNDATION

**FOUNDER/CO-FOUNDER**  
ATUL MOHAN AND AARTI SHARMA

**INNOVATION FOCUS**  
BIOENGINEERING

**TYPE**  
SERVICE

**STAGE**  
COMMERCIALIZED

**STATE/UT**  
DELHI

**STARTUP DESCRIPTION**

WSAFE, a young startup, positions itself as a research and result-oriented company specializing in water safety and sustainability solutions. The company drives positive, sustainable change in wastewater management, which also contributes to air pollution mitigation, control of water and vector-borne diseases, carbon sequestration, groundwater recharge, increased aquaculture yield, and prevention of flooding and overflow in water bodies.





**ABOUT THE FOUNDER/CO-FOUNDER**

Aarti Sharma, co-founder of WSAFE, is a seasoned IT professional with over 20 years of experience and a post-graduate degree in Computer Applications. PMP certified, she manages project training and implementation while leading the development of a Centralized Waterbody Management Portal to streamline processes and enhance accountability. Atul Mohan, also a co-founder, has over 25 years in IT and a strong passion for water conservation. He focuses on creating sustainable solutions through his initiative, "Catch The WasteWater," aiming to restore natural water bodies by rejuvenating their native aquatic ecology.

**POTENTIAL APPLICATION**

Focus on reviving the native microbiota of natural water bodies, resulting in the restoration of the native microbiome to consume nutrient overload, making the water reusable for all life purposes.

**MAJOR ACHIEVEMENTS**

The company has received the HDFC Bank Startup Parivartan grant and presented its paper on in-situ waterbody rejuvenation at Water Today's "WATMAN" International Conference in Chennai, March 2024.

<https://wsafe.com/>  
<https://www.linkedin.com/company/frutiviva-biochem-priv-ltd/>





# WE ARE SELECTED AMONGST THE **3** WINNERS OUT OF **80** STARTUPS IN THE FIELD OF "CLIMATE INNOVATIONS"



**WSAFE-NBS™ KEY DIFFERENTIATOR IS  
” OUR APPROACH “**

# WSAFE SOLUTION APPROACH



## WSAFE PHILOSOPHY IS BASED ON INDIAN VEDIC SCIENCE

The **Vedas** describe water (Jal) as a purifier, life-giver, and essential element for physical and spiritual well-being.

📖 **Rigveda (10.9.1)** – "*Apah Punitah Bhuvanasya Naavyam*" – **Water purifies and sustains the world.**

📖 **Atharvaveda (1.5.1)** – "*Jalameva Jeevanam*" – **Water itself is life.**

Rooted in Vedic principles, we acknowledge that waterbodies possess a natural self-healing mechanism, reliant on a healthy native microbiome for nutrient and chemical assimilation.



Waterbodies fail due to a weakened native microbiome. By applying a WSAFE Nature-Based Solution approach—(without chemicals, lab-grown microbes, or desilting) — we can restore a healthy microbiome, leading to clean, reusable water.

Rapid urbanization, population growth, and industrial expansion have overwhelmed water ecosystems, disrupting native microbiomes and natural restoration.

# Competitive Landscape



Competition is healthy and positive, but it is very important to understand the difference in two approaches. Most of the wastewater treatment industry is trying to clean water with man made chemicals, artificial aeration, burning lots of hydrocarbons and generating GHG emissions. Whereas WSAFE approach is working with the Nature and resurrecting and reviving its inherent capacity to consume and digest nutrients overload.

## Competition Approach

SEGREGATE



COLLECT



WSAFE-NBS™



CONSUME

DIGEST

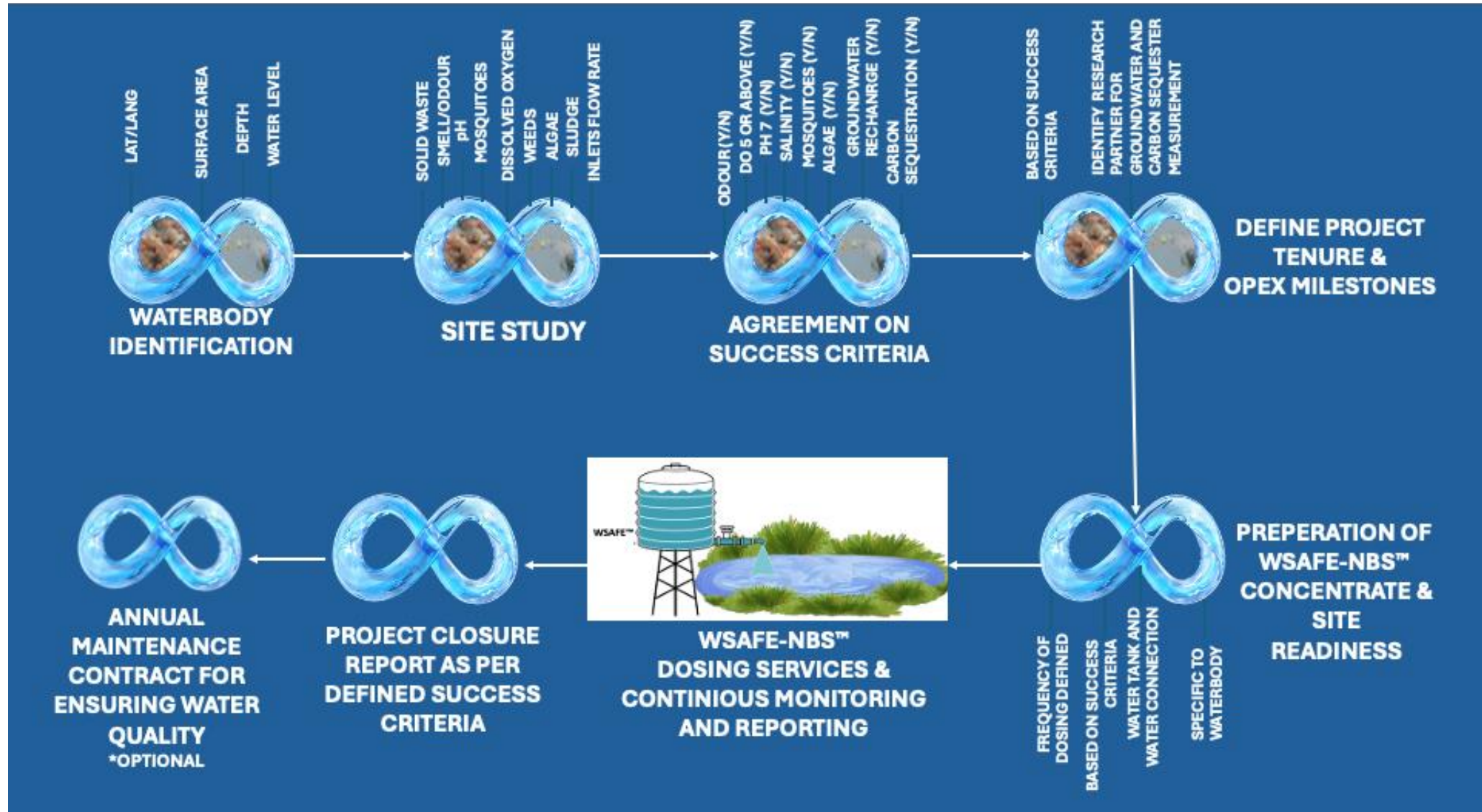


# Problem Statement

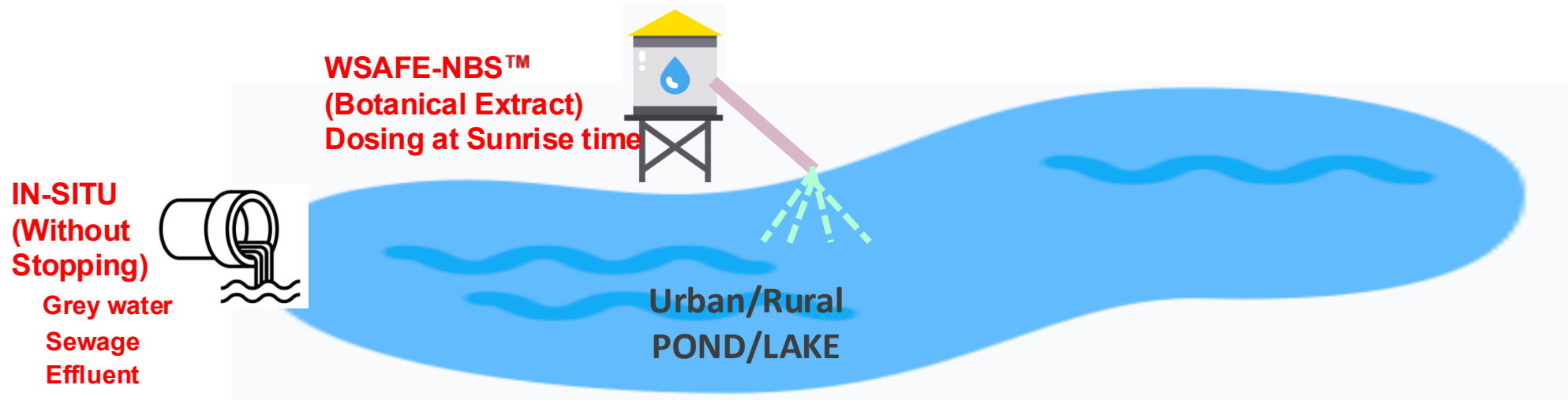
Waterbodies across India and globally are facing challenges like:

- Periodic **Silt & Sludge deposits**
- **Flooding** in Waterbodies & **Water logging** in surroundings
- **Foul smell, Algal bloom** and **Weed** infestation
- **Vector & Water borne disease** outbreak threat
- Run off and **storm Water contamination** (mixed with pesticides & other chemicals)
- **Eutrophication** (due to nutrient overload, aquatic organism excreta & leaf shedding)
- **Sewage / effluent discharge** issues

# PROJECT PROCESS FLOW

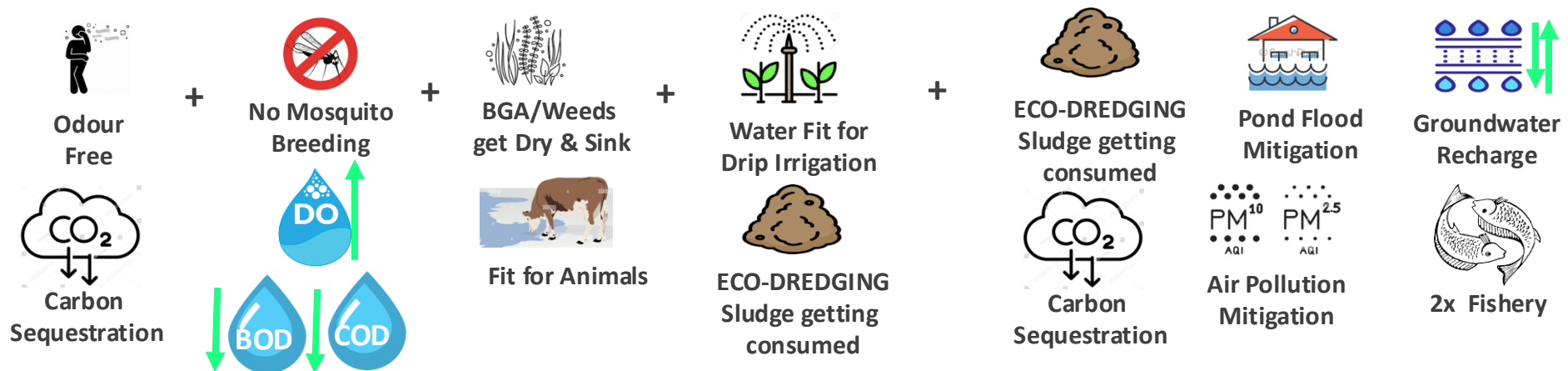


# Solution with Time Bound Results



## TIMELINE BASED RESULTS SUBJECT TO - CONDITION OF WATERBODY AND DESIRED OUTCOME

15 Days to 180 Days





# Problem & Opportunity in Canada's Freshwater Lakes

# CANADA'S LAKES ARE IN CRISIS — THE CASE OF REGENERATIVE ACTION



- **Persistent Contamination:**

- 🧪 **DDT** in New Brunswick: 10x above wildlife safety levels – still present 70 years post-ban.
- 💧 **PFAS** in Great Lakes Basin: Detected in rain, water, and air – a persistent threat.
- 🚀 **Microplastics**: 90% of samples in Great Lakes exceed ecological safety thresholds.
- 🌊 **Algal Blooms** in Lake Winnipeg: 1% phosphorus removal despite years of effort.

- **Government is Responding:**

- 💰 **\$650M Freshwater Action Plan** launched in 2023 (10-year commitment).
- 🔄 Focus on **sustainable, partner-led, and climate-aligned** restoration.

**Banned DDT discovered in Canadian trout decades after use, research finds**

Potential danger to humans and wildlife from harmful pesticide discovered in fish at 10 times safety limit

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**Toxic 'forever chemicals' ubiquitous in Great Lakes basin, study finds**

# CANADA'S LAKES ARE IN CRISIS — THE CASE OF REGENERATIVE ACTION



## WSAFE-NBS – A Nature-Based Regenerative Solution

A **Phytoecoremediation system** using native plants and microbes to:

- Restore lake **biodiversity**
- Break down **organic and chemical contaminants**
- Recycle and reuse **treated water for agriculture or aquifer recharge**



### How It Works:

- Pond/wetland-based modular setup
- Uses no chemicals or energy-intensive treatment
- Revives local aquatic ecosystems as **primary goal** (clean water is a byproduct)



### Why It Fits Canada:

- Aligns with **climate and Indigenous co-benefits**
- Can scale to remote or rural communities
- Complements existing **Freshwater Action Plan** goals

# TREATMENT PROCESS

# THE RESURRECTION AND RESTORATION

## THE RESURRECTION

The complete treatment process is focused upon resurrecting the native microbiota of the wetland / Waterbody. This results in eradication of foul smell & the mosquito population dwelling in the Waterbody. In laboratory reports, there is a substantial improvement shown in the DO and COD values. The Water viscosity gets reduced, colour becomes lighter and the transparency improves. Waves are back in the Water.

# THE RESTORATION

As the native microbiota get resurrected, the focus now shifts towards re-establishing the soil capillary link to aquifer through complete consumption of the sludge deposits. From the surface, the Water level appears to be lowering down or receding. The sludge deposited in the bottom, is getting “consumed and digested” due to the eco-dredging process and thus water reclaiming the space. Thus, the more sludge gets consumed, the deeper the Waterbody will become. Basically, we can call it “Restoration of the Water holding capacity of the Waterbody.”

# WHAT DOES THE WSAFE-NBS™ CONCENTRATE CONTAINS?

WSAFE-NBS™ Concentrate is a **Nature-Based Solution (NBS)** designed using **Phytoecoremediation principles**, where plant-based bioactive compounds work in synergy to restore ecological balance in water bodies. This approach leverages **botanical extracts** derived from a diverse range of **herbs, shrubs, creepers, plants, flowers, roots and trees**, carefully selected based on environmental conditions and pollutant profiles.

The final formulation of WSAFE-NBS™ is customized based on:

- **Water and Soil Conditions:** pH, mineral content, contamination type.
- **Pollution Indicators:** eutrophication levels, and algal growth.
- **Ecological Balance Factors:** Biodiversity, invasive species, and microbial health.
- **Anthropogenic Influences:** Population density, effluent discharge, and land use patterns.

By using this **holistic Phytoecoremediation approach**, WSAFE-NBS™ provides a **sustainable, in-situ solution** for water rejuvenation, eliminating foul odors, improving water clarity, and restoring native aquatic biodiversity without mechanical dredging or harmful chemicals.



# COMMERCIAL MODEL

# COMMERCIAL MODEL

## STAGNANT WATERBODIES like Pond ,Lake, Reservoir

### Cost varies based on:

- Area in Acres/Hectares
- Sludge volume in the waterbody
- Inlet wastewater volume in MLD
- Contamination: Type and Values

### Commercials (Opex only):

- Phase -1 (Initial period 1-12months)
  - Per Acre/Month
- Phase – 2 (Operations & Maintenance)
  - Per Waterbody/Month

## FLOWING WATERBODIES like Drain, River

### Cost varies based on:

- Area -in Width and Depth of Channel
- Length in Kms
- Number of discharge points
- Sludge volume in the waterbody
- Inlet wastewater volume in MLD/MGD
- Contamination: Type and Values

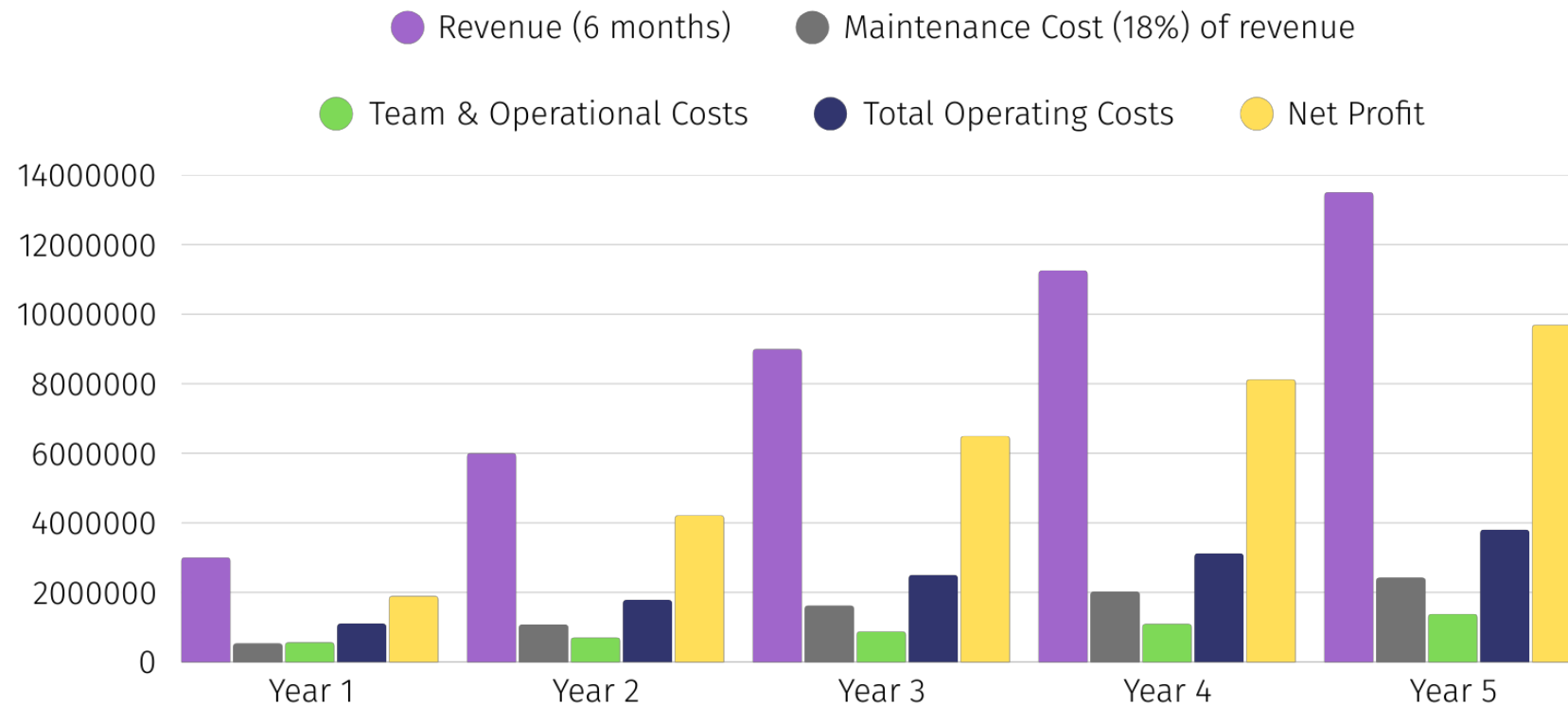
### Commercials (Opex only):

- Phase -1 (Initial period 1-12months)
  - Per Km/Month
  - Per Discharge location/MLD/Month
- Phase – 2 (Operations & Maintenance)
  - Per Discharge location/MLD/Month

# 5-Year Revenue Projection (In Numbers)

YEAR	AREA (ACRES)	REVENUE (6 MONTHS)	MAINTENANCE COST (18%) OF REVENUE	TEAM & OPERATIONAL COSTS	TOTAL OPERATING COSTS	NET PROFIT
Year 1	100	\$30,00,000	\$5,40,000	\$5,64,000	\$11,04,000	\$18,96,000
Year 2	200	\$60,00,000	\$10,80,000	\$7,05,000	\$17,85,000	\$42,15,000
Year 3	300	\$90,00,000	\$16,20,000	\$8,80,250	\$25,00,250	\$64,99,750
Year 4	375	\$1,12,50,000	\$20,25,000	\$11,01,578	\$31,26,578	\$81,23,422
Year 5	450	\$1,35,00,000	\$24,30,000	\$13,76,964	\$38,06,964	\$96,93,036

# 5-Year Revenue Projection (Bar Chart)



# Assumptions for Financial Projections

## 1. Revenue Assumptions

Revenue per acre per month: \$5,000

Revenue duration: 6 months annually (reflecting seasonal or operational constraints)

Targeted lake area each year:

- Year 1: 100 acres
- Year 2: 200 acres
- Year 3: 300 acres
- Year 4: 375 acres
- Year 5: 450 acres

Annual revenue calculation:  $\$5000 \times 6$  months

Revenue growth: Proportional to the acres targeted each year, assuming full and effective utilization of targeted land area.

# Assumptions for Financial Projections

## 2. Cost Assumptions

### 2.1 Team, Staff, and Operational Costs

Starting monthly costs (Year 1) : \$47,000

#### Breakdown

*COO*: \$12,000/month

*Project Manager*: \$10,000/month

*Four Assistants*: \$5,000/month each (total of \$20,000)

*Cost increase*: 25% annually to account for staffing expansion, inflation, and operational scaling.

#### Annual Costs Calculation: Monthly Cost\*12

- Year 1 : \$564,000
- Year 2 : \$705,000
- Year 3 : \$880,250
- Year 4 : \$1,101,578
- Year 5 : \$1,376,964

# Assumptions for Financial Projections

## 2. Cost Assumptions:

### 2.2 Operational Expenses

Initial monthly operational expense: \$5,000

Growth: Increase in tandem with staffing costs by 25% annually.

## 3. Maintenance Costs:

Calculation: 18% of the revenue generated over 6 months (for ongoing maintenance and follow-up).

Annual maintenance costs: Increase proportionally with revenue.

## 4. Other Assumptions:

- The project operates continuously as planned, with no unexpected disruptions or delays.
- Costs cover staffing, management, operational expenses, and ongoing maintenance.
- Revenue and costs scale predictably with targeted land area.
- External funding, grants, or revenue from alternative sources are not included unless specified.

# Traction and Milestone

## **A CASE STUDY FOR “IN-SITU” GREYWATER MANAGEMENT IN VILLAGES”**

# Traction and Milestone

## **A CASE STUDY FOR SADPURA POND, FARIDABAD**

# PROBLEM STATEMENT



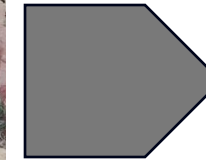
**SADPURA VILLAGE, FARIDABAD,  
HARYANA**

**AREA – 3.01 ACRES**



**HOUSEHOLD GREYWATER  
AND SEWAGE INLETS  
ANIMAL WASTE INLETS  
SOURCE OF WATER AND  
VECTOR BORNE DISEASES  
WATER NOT FIT FOR EVEN  
ANIMAL BATHING/DRINKING**

# SOLUTION APPROACH PRE-INTERVENTION



**BASIS THE SURVEY AND  
WATER QUALITY REPORT**

**RESEARCH TEAMS PREPARE A  
MEDICINE – 100% BOTANICAL  
EXTRACT IN LIQUID FORM**

**SHIPPED TO THE LOCATION**

**NOTE:  
NO CHEMICALS USED  
NO BIOENZYMES USED**

**DETAILED SITE SURVEY WAS DONE**

**PRE-INTERVENTION WATER QUALITY SAMPLES COLLECTED**

**COMMUNITY FEEDBACK COLLECTED**

# SOLUTION APPROACH – SITE PREPARATION



**WATER TANK INSTALLATION  
WAS DONE AT SITE FOR  
DOSING PURPOSE**



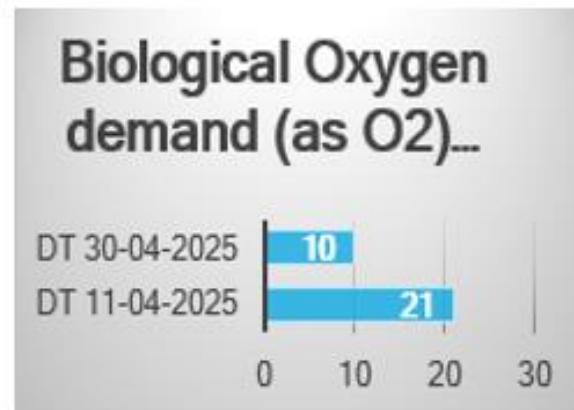
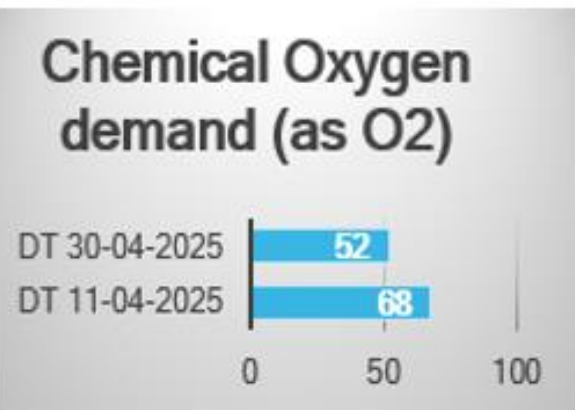
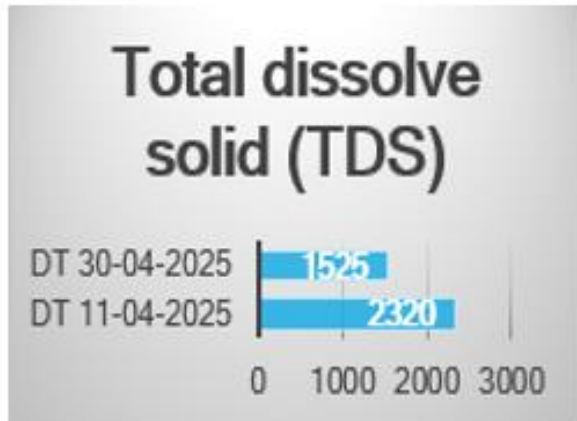
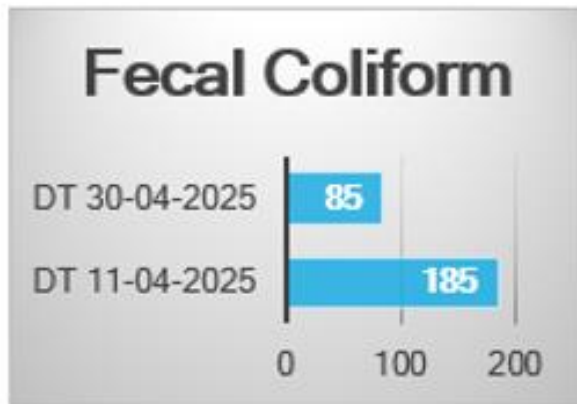
**COMMUNITY ENGAGEMENT  
AWARENESS ABOUT THE INTERVENTION**

# PROJECT IMPACT ASSESSMENT

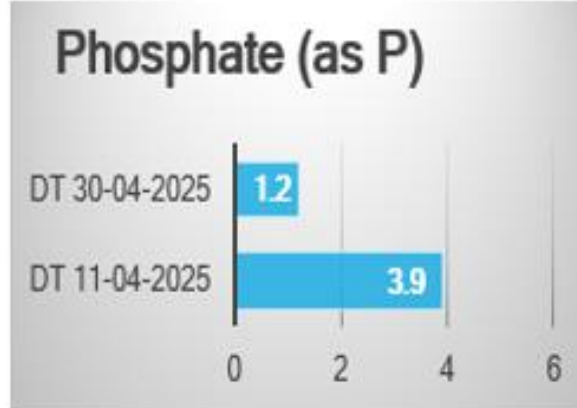
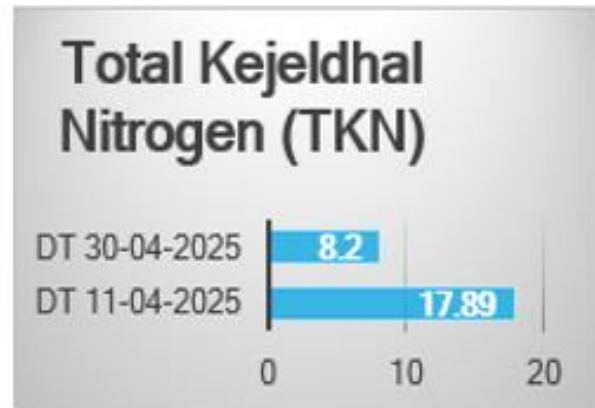
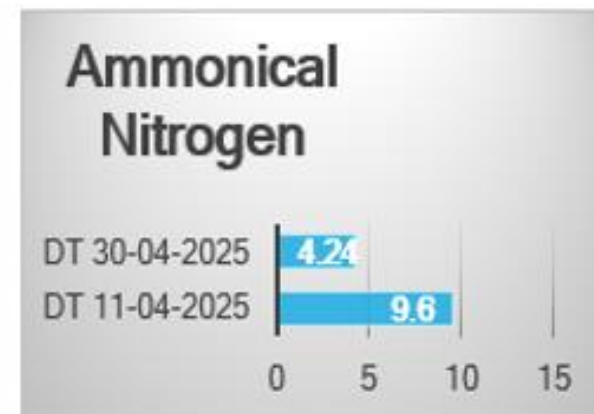
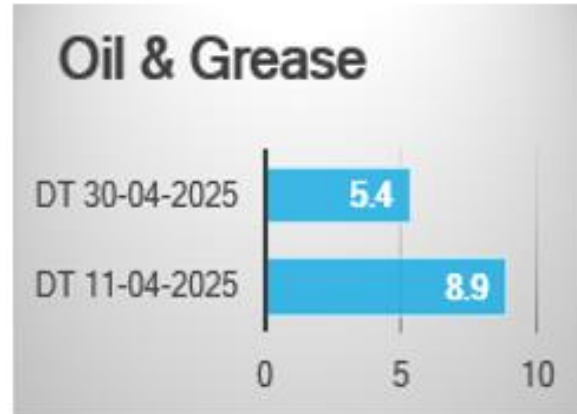
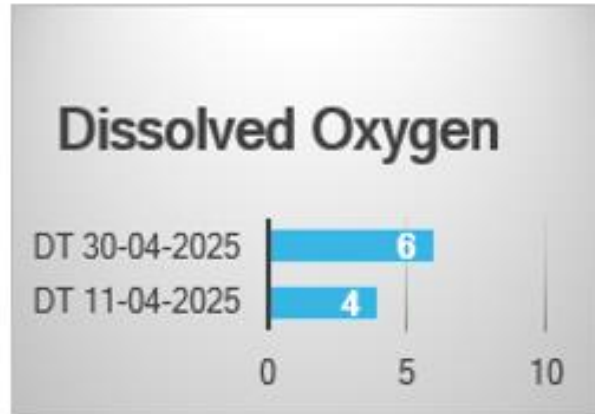
# POST INTERVENTION RESULTS - VISUALS



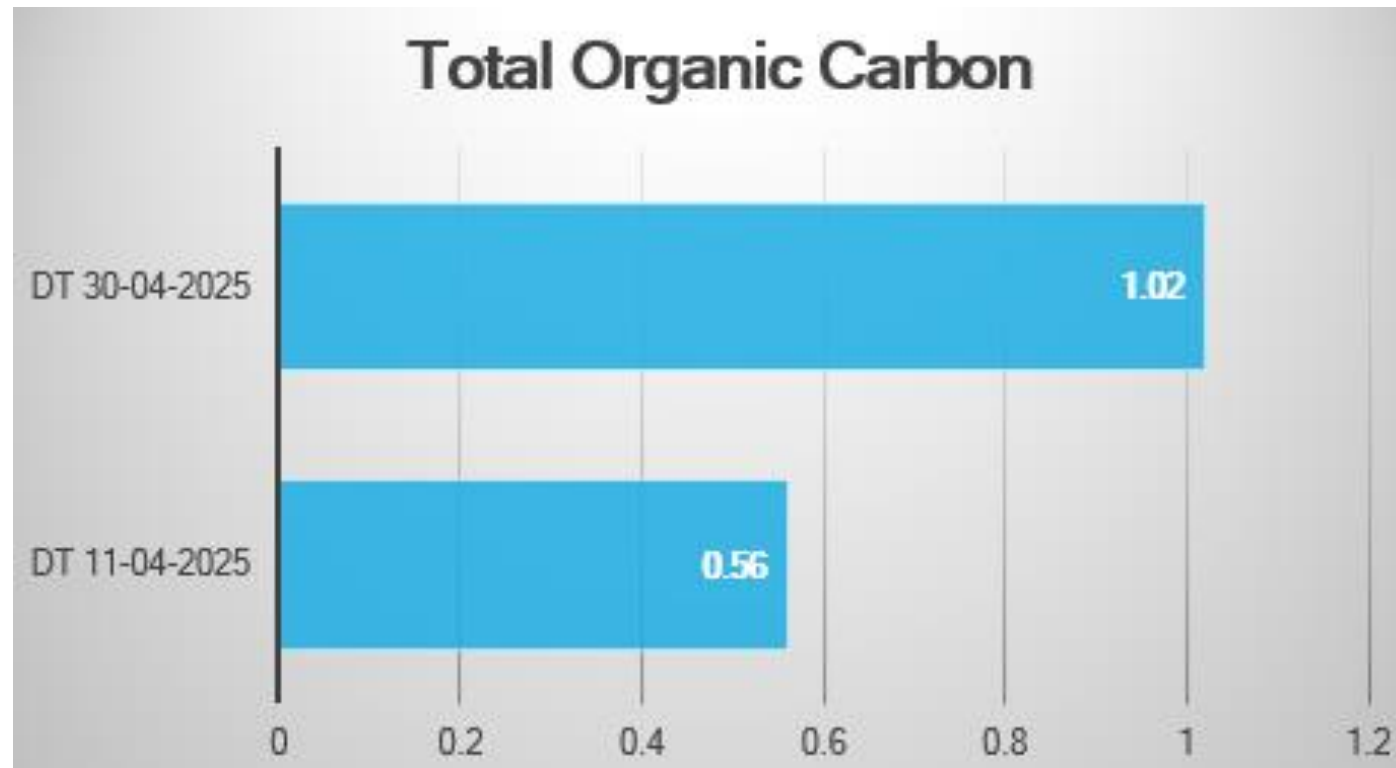
# POST INTERVENTION RESULTS – WATER QUALITY



# POST INTERVENTION RESULTS – WATER QUALITY



# POST INTERVENTION RESULTS – CARBON FIXATION



# Traction and Milestone

## **A CASE STUDY FOR HASSANPUR POND, MURTHAL**

# PROBLEM STATEMENT



**LONGITUDE/LATITUDE:**  
**29°03'18.0"N 77°04'16.8"E**

**HASSANPUR VILLAGE  
COMMUNITY POND, MURTHAL,  
HARYANA**

**AREA – 3.24 ACRES**



**FOUL SMELL**

**SOLID WASTE DUMPYARD  
HOUSEHOLD GREYWATER  
AND SEWAGE INLETS  
ANIMAL WASTE INLETS**



**MOSQUITO BREEDING**

**SOURCE OF WATER AND  
VECTOR BORNE DISEASES  
WATER NOT FIT FOR EVEN  
ANIMAL BATHING/DRINKING**

# SOLUTION APPROACH PRE-INTERVENTION



**BASIS THE SURVEY AND  
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**RESEARCH TEAMS PREPARE A  
MEDICINE – 100% BOTANICAL  
EXTRACT IN LIQUID FORM**

**SHIPPED TO THE LOCATION**

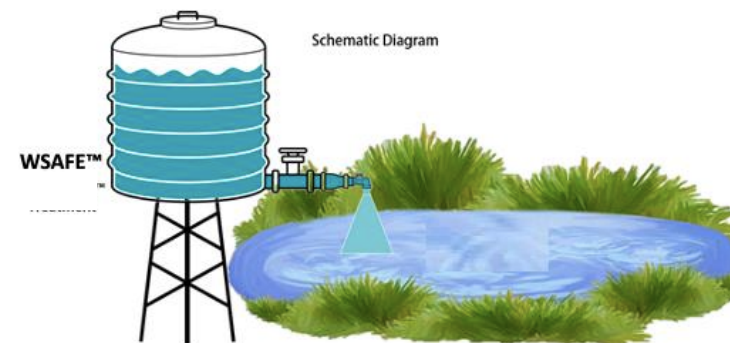
**NOTE:  
NO CHEMICALS USED  
NO BIOENZYMES USED**

**DETAILED SITE SURVEY WAS DONE**

**PRE-INTERVENTION WATER QUALITY SAMPLES COLLECTED**

**COMMUNITY FEEDBACK COLLECTED**

# SOLUTION APPROACH – SITE PREPARATION



**COMMUNITY ENGAGEMENT**  
**AWARENESS ABOUT THE INTERVENTION**  
**VILLAGE COMMITTEE WAS FORMED FOR**  
**EXECUTION OF THE PROJECT**

**WATER TANK INSTALLATION**  
**WAS DONE AT SITE FOR**  
**DOSING PURPOSE**

# SOLUTION APPROACH – DOSING INTERVENTION



**VILLAGE COMMITTEE PERSON TAKES THE  
RESPONSIBILITY OF DOSING AT THE EARLY  
MORNING 5AM-7AM TIME**

**AFTER PUTTING THE MEDICINE IN TANK MIX IT WELL  
POST THAT RELEASE IT IN THE WATERBODY**



**SITE DOSING VIDEO**

# SOLUTION APPROACH – PHYSICAL INTERVENTION



**SOLID WASTE REMOVAL**



**MESH INSTALLATION  
AT INLETS**

**NOTE:**

**NO DEWATERING**

**NO DESILTING**

**NO DREDGING**

# PROJECT IMPACT ASSESSMENT

# POST INTERVENTION RESULTS - VISUALS



# POST INTERVENTION RESULTS – SUCCESS CRITERIA

S.No.	Project Success Criteria	Achieved/Not Achieved	Remarks
1	Entire <u>foul smell</u> in the vicinity due to anaerobic digestion will vanish	Achieved	Villagers' testimony
2	The <u>Water viscosity</u> shall reduce to give its natural flowing status	Achieved	Waves were back, captured in Photos/Video
3	The entire <u>mosquito colonies</u> shall be abolished, finishing the threat of vector borne diseases in the vicinity	Achieved	Villagers' testimony
4	All the <u>Water weeds like BGA, lilies, Hydrilla</u> etc. will start to dry and sink in Water clearing the entire surface of the waterbody	Achieved	No BGA/Waterweeds observed till the time of treatment
5	Natural photosynthesis shall start in Water and <u>emission of oxygen</u> in air shall start making the air quality better	Achieved	Animal drinking water and increase in DO as per Lab report

# POST INTERVENTION RESULTS - BIODIVERSITY



**As observed by Villagers, new flock of birds started coming, buffalos seen drinking water from the pond, monkeys seen taking bath in the pond water.**

# POST INTERVENTION RESULTS – VILLAGERS TESTIMONY

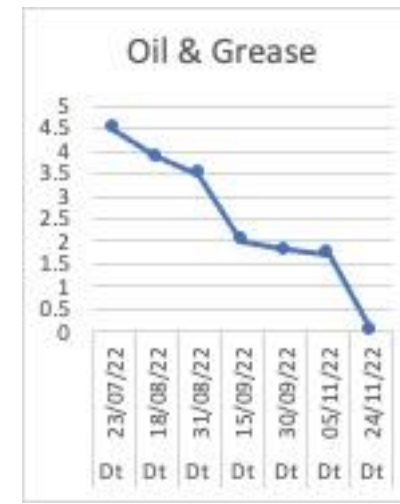
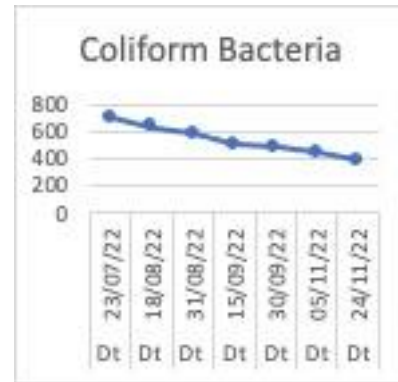
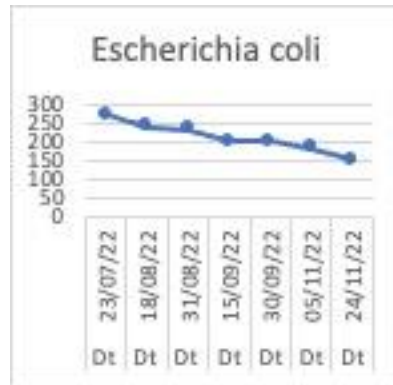


**Great difference in Odor  
Mosquito breeding reduced  
Very Happy with the Intervention**

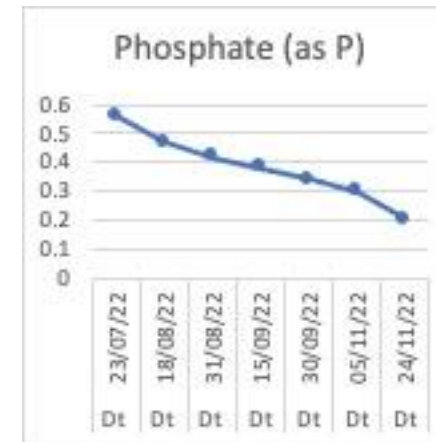
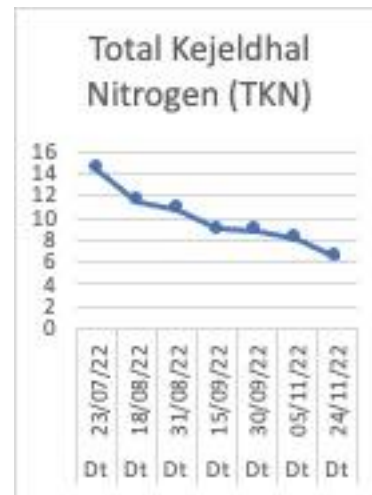


**Water clean and clear  
Animal started drinking water from Pond  
Very Happy with the Intervention**

# POST INTERVENTION RESULTS – WATER QUALITY



# POST INTERVENTION RESULTS – WATER QUALITY



# POST INTERVENTION RESULTS – WATER QUALITY

Parameter	Dt 23/07/22	Dt 18/08/22	Dt 31/08/22	Dt 15/09/22	Dt 30/09/22	Dt 05/11/22	Dt 24/11/22
Escherichia coli	270	240	230	200	198	183	150
Coliform Bacteria	700	630	580	500	480	446	390
Fecal Coliform	270	241	232	206	201	187	155
Salmonella	Absent	-	Absent	Absent	Absent	Absent	Absent
pH Value	7.6	7.7	7.71	8	7.5	7.5	7.62
Colour	65	55	50	50	45	28	20
Total Suspended Solid (TSS)	42	36.54	32	43	40	36	34
Total dissolve solid (TDS)	1108	986.12	976	980	974	880	845
Chemical Oxygen demand (as O <sub>2</sub> )	128	115.58	108	100	98	92	78
Biological Oxygen demand (as O <sub>2</sub> ) (3 days at 270C)	36	32	29	25	24	22	16
Dissolved Oxygen	0	1	1.2	3	3.4	3.6	4.1
Oil & Grease	4.5	3.87	3.5	2	1.8	1.72	BDL(<1.0)
Ammonical Nitrogen	6.5	5.2	5.1	3	2.9	2.71	2.1
Total Kejeldhal Nitrogen (TKN)	14.4	11.52	10.8	9	8.9	8.2	6.5
Phosphate (as P)	0.56	0.47	0.42	0.38	0.34	0.3	0.2
Salinity	0.25	0.23	0.22	0.19	0.16	0.15	0.12

# PROJECT COMPLETION CERTIFICATE

Ref No.: WSAFE/001

Date: 13<sup>th</sup> Oct 2023

## To Whomsoever It May Concern

This is to certify that M/s. WSAFE Sustainability Services Pvt Ltd. has been awarded work for In-Situ ecological rejuvenation of Hassanpur Pond (Area 3.2 Acres), Murthal, Haryana vide Agreement/ order No. IL092\_p2B1/6DEL\_DPRG/WSAF/2022-23/007 dated 20th July 2022.

They have carried out work from 29th July 2022 to 10th December 2022 for the period of 5 months using the "Nature Based Solution".

The work for ecological rejuvenation of Hassanpur Pond by M/s. WSAFE Sustainability Services Pvt. Ltd. has been found to be satisfactory and following improvements have been observed:

1. Control of foul smell of decaying biomass.
2. Improvement in viscosity of Water (waves restored on water surface).
3. Water Quality improvement - as confirmed by laboratory report, there was 55% correction in BOD, 39% correction in COD, 400% correction in DO, 64% correction in Phosphate and significant improvement in other parameters.
4. Water became drinkable for Animals - as observed by villagers.

We, therefore, award them with this completion certificate for 5 months successful treatment for In-Situ ecological rejuvenation of Hassanpur Pond for resurrection of Native ecology of the wetlands.

For Jal Seva Charitable Foundation

  
Archana Rathore

Director-Finance & IT

Jal Seva Charitable Foundation

Associate Member of WaterAid International

A not for profit company registered under Section 25 of the Companies Act, 1956 | CTN U651 003 2010NP1200169

Module, J/o. 054 and 055A, Ground Floor, N-5/C Gardens Park, NSIC Complex, Okhla Industrial Estate, New Delhi-110020

Tel: 011 6811 4400 | Email: [wsaidsa@wateraid.org](mailto:wsaidsa@wateraid.org)

[www.wateraidindia.in](http://www.wateraidindia.in)



# A CASE STUDY FOR “IN-SITU” RIVER REJUVENATION

# RIVER REJUVENATION PILOT PROJECT

Pre-Treatment



Post-Treatment



## TESTIMONIAL



## MEDIA COVERAGE

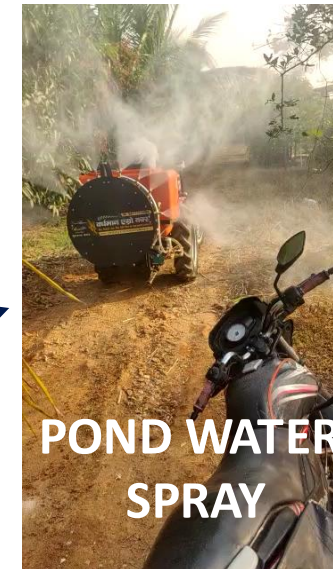


# **Diseases, Pest, Weeds and Weather Resilient FARMING with WSAFE-NBS**

# FARMING WITHOUT ANY USE OF Fertilizer/Pesticide/Insecticide/Weedicide



WSAFE-NBS  
DOSING



Actual  
Videos  
From Farm  
In Raipur



ANIMAL WASTE



# CASE STUDY – RAIPUR FARM – CHATTISGARH

## FARMING WITHOUT ANY USE OF Fertilizer/Pesticide/Insecticide/Weedicide



# Certifications & Awards



CERTIFICATE NO:  
DIPP83206



#startupindia

## CERTIFICATE OF RECOGNITION

This is to certify that **WSAFE SUSTAINABILITY SERVICES PRIVATE LIMITED** incorporated as a Private Limited Company on 15-04-2021, is recognized as a startup by the Department for Promotion of Industry and Internal Trade. The startup is working in 'Green Technology' Industry and 'Others' sector as self-certified by them.

This certificate shall only be valid for the Entity up to Ten years from the date of its incorporation only if its turnover for any of the financial years has not extended ₹ 100 Cr.

14-07-2021  
DATE OF ISSUE

14-04-2031  
VALID UPTO

UDAM  
REGISTRATION CERTIFICATE

UDAM REGISTRATION NUMBER: UDAM-DL-09-000020

NAME OF ENTERPRISE: MS WSAFE SUSTAINABILITY SERVICES PRIVATE LIMITED

TYPE OF ENTERPRISE: MICRO

SECTOR: SERVICES

SOCIAL CATEGORY OF ENTREPRENEUR: GENERAL

NAME OF ENTITY: WSAFE SUSTAINABILITY SERVICES PRIVATE LIMITED

OFFICE ADDRESS OF ENTERPRISE: Plot No. 87-S, Sector-7, Jasola Vihar, New Delhi, South Delhi, Delhi, 110025, India

DATE OF INCORPORATION / REGISTRATION OF ENTERPRISE: 15/04/2021

DATE OF COMMENCEMENT OF PRODUCTION/BUSINESS: 15/04/2021

NATIONAL INDUSTRY CLASSIFICATION CODES:

DATE OF UDAM REGISTRATION: 15/07/2023

## Certificate of Registration

This is to Certify That  
Quality Management System of

**WSAFE SUSTAINABILITY SERVICES PRIVATE LIMITED**

FLAT NO. 87-S, SECTOR-7, JASOLA VIHAR, NEW DELHI, SOUTH DELHI, DELHI, 110025, INDIA.

has been assessed and found to conform to the requirements of  
**ISO 9001:2015**  
for the following scope :

DEALS IN IN-SITU TREATMENT OF RURAL & URBAN WATERBODIES, RAINWATER HARVESTING & GROUNDWATER RECHARGE, AIR POLLUTION MITIGATION, WATER ABUNDANCE FOR DRINKING AND IRRIGATION, GREY WATER/SEWAGE PROBLEM SOLUTION, ECOLOGICAL DREDGING, WATER AND VECTOR BORNE DISEASES ERADICATION, BIODIVERSITY CONSERVATION

Certificate No : **23MEQPL49**  
Initial Registration Date : 02/01/2024 Issuance Date : 02/01/2024  
Date of Expiry : 01/01/2027  
1st Surve. Due : 02/12/2024 2nd Surve. Due : 02/12/2025



Memorandum of Understanding  
between  
Rishihood University, Sonapat, India  
&  
WSAFE Sustainability Services Private Limited



The objective of this Memorandum of Understanding (MoU) is to develop collaborative work strategy to prepare "Jal Leaders" with academia-industry joint strategy programs for developing a new crop of "Waterpreneurs" who are aware academically as well as prepared professionally to pick up and execute Water projects for Resurrection, Restoration and Rejuvenation (RRR) of Water Bodies and Wetlands in their respective regions of operation.

University aims to produce successful entrepreneurs in each district of India, while WSAFE Sustainability Services Private Limited, intends to handhold these "Jal Leaders" till they are independent enough to start and sustain their respective start-ups in their own geographic region.

This Memorandum of Understanding (Understanding ("MoU")) is made on 31st August 2022 by and between:

- Where, **RISHIHOOD UNIVERSITY**, (CIN U80302DL2011NPL225256) located in Sonapat, India (hereinafter referred as RU) is an impact oriented initiative governed and owned by the Rishihood Foundation, with an aim to actively engage and nurture an ecosystem for its academic areas as well as for the larger growth of the nation and society, that is established under the law of the Republic of India, and is located at NH-44, (GT Road),



Pankaj Kumar Gupta, Ph.D. (IIT Roorkee)  
Ramanujan Fellow  
Adjunct Assistant Professor, University of Waterloo, Canada

INDIAN INSTITUTE OF TECHNOLOGY (IIT) DELHI  
New Delhi - 110 016, INDIA  
Centre for Rural Development and Technology (CRDT)  
Email: pankaj.kumar.gupta@rdai.iitd.ac.in  
pk3gupta@uwaterloo.ca  
Website: drpankajgupta.in  
Contact Number: +91-9760910741

Dated: 21/03/2023

To,

Ms. Aarti Sharma  
WSAFE Sustainability Services Pvt. Ltd.  
87-S, Sector - 7, Jasola Vihar,  
New Delhi - 110025.

Dear Ms. Aarti

As per your letter dated 20/03/2023, we would be happy to collaborate & cooperate with you, on your projects for environmental restoration, using the CowNomics® Technology from Valdic Srijan LLP.

We agree to conduct the environmental impact assessment studies of the projects, considering the following parameters:

- All scientific observations and laboratory tests on:
  - Soil Ecology Restoration
  - Water Health Assessment
  - Air Pollution Mitigation
  - Aquifer Recharge & Correction
  - Carbon Sequestration Measurement



# Founders



**Atul Mohan**  
**Co-Founder**

A. Mohan is a seasoned IT professional who has developed a strong interest in water conservation and revitalizing water ecosystems. He firmly believes in the restorative abilities of natural waterbodies, provided that their native aquatic ecology is revitalized. A. Mohan is dedicated to advancing year round water conservation efforts through his initiative “Catch The WasteWater,” which aims to promote the significance of water conservation beyond just seasonal “Catch the Rain” campaigns.



**Aarti Sharma**  
**Co-Founder**

Aarti is a highly skilled IT professional with over 20 years of experience and has a post-graduate degree in Computer Applications. She is also PMP certified. She is responsible for the training and management of projects on the ground, ensuring smooth implementation and successful outcomes. Additionally, she is leading the development of a Centralized Waterbody Management Portal, which aims to simplify the implementation process and provide greater accountability. Her expertise and dedication are instrumental in driving the success of the initiative.



**Manoj Danda**  
**Co-Founder**

Manoj is a versatile professional with expertise in both IT and water rejuvenation. With a background in infrastructure, software, and cloud computing, he effectively integrates technology into water conservation efforts. His innovative approach and strong problem-solving skills help drive sustainable solutions and environmental preservation. Manoj’s leadership and adaptability make him a valuable asset in advancing technological and ecological goals.