

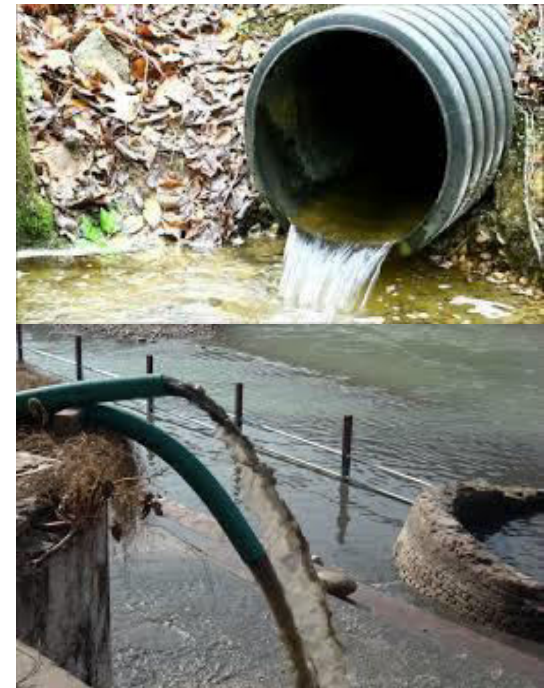


Technology Approved By:
राष्ट्रीय स्वच्छ गंगा मिशन
National Mission for Clean Ganga

PRESENTATION & CASE STUDY



Accelerated Bio-Oxygenation of Rivers, Lakes, Drains, Ponds



Ecological Concepts Pvt. Limited

A Government recognized STARTUP Company

Registered Under **startupINDIA** CERTIFICATE No.DIPP7020



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Call Us : +919278200108, ecplinnoations@gmail.com

ABOUT FOUNDER



Mr. Mahesh Uppal, The founder Of Ecological Concepts P. Limited has Valuable Industrial Expertise In The Field Of Engineering And Facility Management Services Coupled With Insatiable Passion To Excel has Helped His Organisation **TechAirMart.Com** To Emerge As One Of The Most Prominent Names In The Relevant Industry. He Is A Mechanical Engineer (1987 Batch) & MBA, With Decades Of Working Experience With Indian, Korean, USA And Japanese MNC's In The Field Ranging From Maintenance, Production, Design & Development, Process Engineering To Business Development. He Is A Promoter & Founder Of M/S **TECHAirMART.COM** An ISO-9001-2008 Certified Company In The Field Of Water Treatment, Solar Power Products, Security Devices, Bio Oxygenation of Rivers, Lakes, Ponds & Drains.



मंजिलें उन्ही को मिलती है जिनके सपनों में जान होती है
पंखों से कुछ नहीं होता हौसलों से उड़ान होती है !!



गंगा मैया को स्वच्छ बनाने के लिए फर्रुखाबाद विकास मंच के युवा कार्यकर्ताओं को तकनीकी जानकारी देते हुए श्री महेश उप्पल जी !





गंगा को स्वच्छ बनाना है
भारतीय संस्कृति को बचाना है



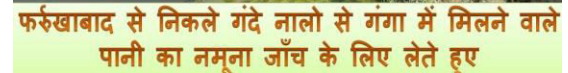
गोमुखा से हरिद्वार के बीच औद्योगिक इकाइयों का ब्योरा भी देने को कहा। एनजीटी ने पूछा कि ये इकाइयों क्या बनाती हैं। माना जा रहा है कि एनजीटी सोमवार को कानपुर में टेनरी के मुद्दे पर फैसला सुना सकता है।



Let us develop
towards

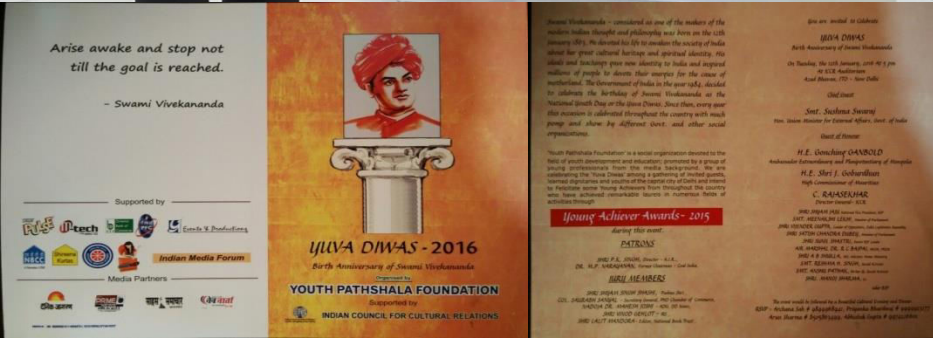


vote atleast 100 hours
Is the cause of a Cle
Nar



महेश उप्पल जी को भारत की नदियों झीलों तालाबों नालियों को साफ करने की तकनीक के प्रभावी प्रदर्शन के लिए “विशेष सामाजिक पहल” पुरस्कार मिला।

Mahesh Uppal – Founder & Chairman of TechAirMart.Com Received one of the Best Social Initiative for Technology and Engineering “Young Achievers Award -2015-2016” “यूथ पाठशाला फाउंडेशन” कि तरफ से ..Young एचीवर अवार्ड वर्ष २०१५ -२०१६ के लिए दिल्ली में माननीय श्री सुषमा स्वराज की उपस्थिति में दिनांक 12-01-2016 को सम्मानित किया गया।



What is Accelerated *Bio Nutrien*

Oxygenation & Restoration

1. By **Bio-Oxygenation** we treat Contaminated Water.
2. Contains Nutrients for growth of **Phytoplankton**.
3. **Phytoplankton** are food of Copepods, Zooplanktons & fish.
4. **Phytoplankton** keep multiply in water.
5. Eats available contaminants like **Sewage**.
6. Producing high levels of **Oxygen**.
7. Leaving the waters **Oxygen rich**.
8. **Low BoD and CoD**.
9. With **No Sludge** balance.
10. **Treat Water Natural Way**.



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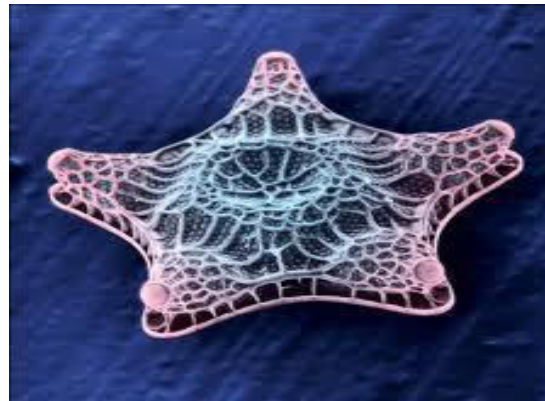
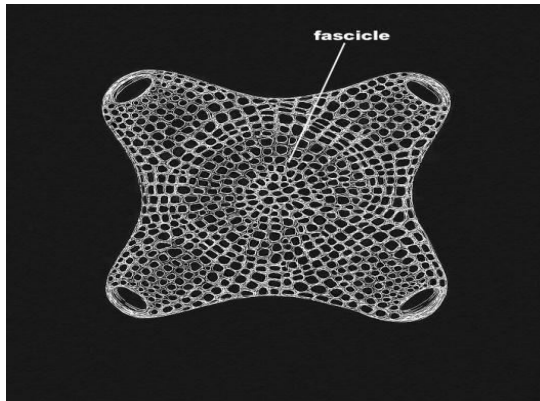
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Bio Nutrient and Phytoplankton Growth

1. Provides Nutrition for growth of **Phytoplankton**.
2. Treats Any types of waters Even Sewage base.
3. **Phytoplankton** makes colonies to live in.
4. **Photosynthesis** happens more efficiently
5. In **STP** or **Closed** environment, they can even work at night **with artificial LED lights**



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Effect of Bio Nutrient on Sludge Accumulation



1. **Sludge** is a semi-solid slurry that causes environmental disruption.
2. Presence of Sludge Makes Environment Anaerobic.
3. Releases hydrogen sulphide gas which is deadly
4. Sludge **draws out oxygen** from the water above thereby **lowering DO** levels
5. Sludge also stores up **Pathogens** which affects public health.

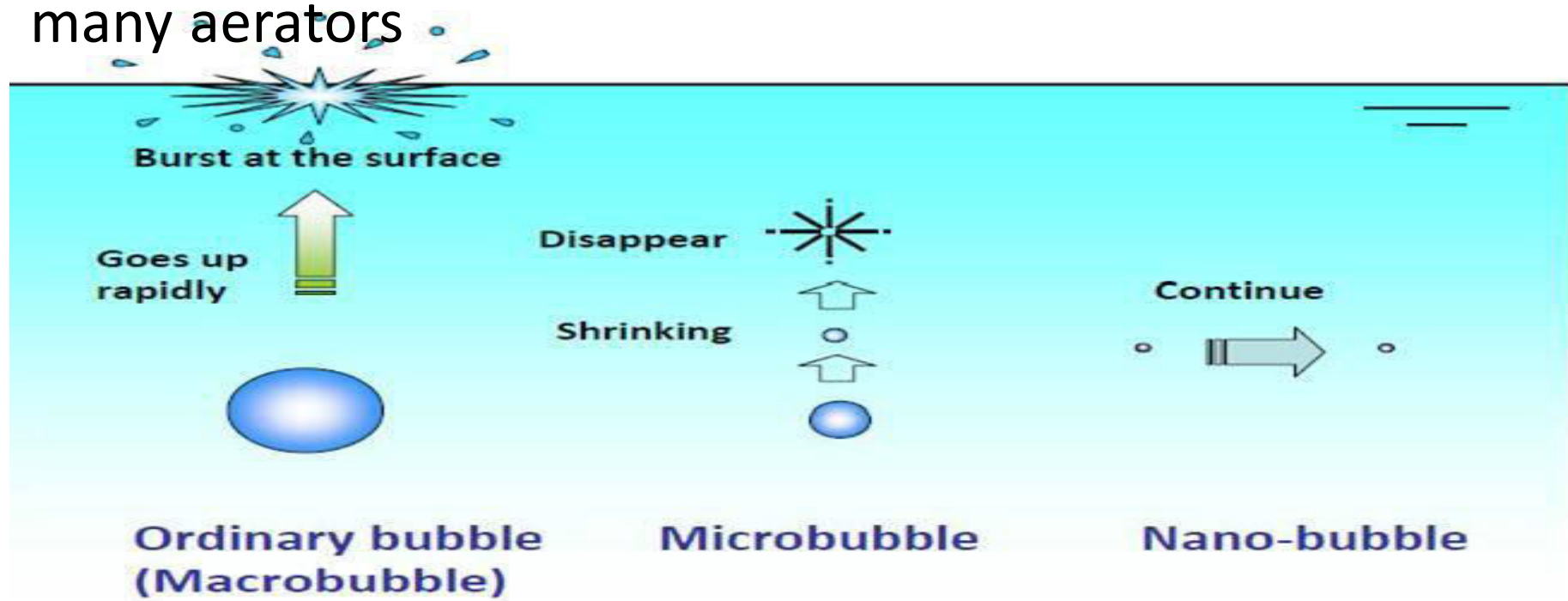
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Properties of OXY-Bubbles

Phytoplankton produces oxygen in the form of Nano bubbles, and not as coarse bubbles as in the case of many aerators



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Properties of Nano-Bubbles

Suspension in Water Nano bubbles may remain suspended in water for months which is important for increase in dissolved oxygen in water bodies.

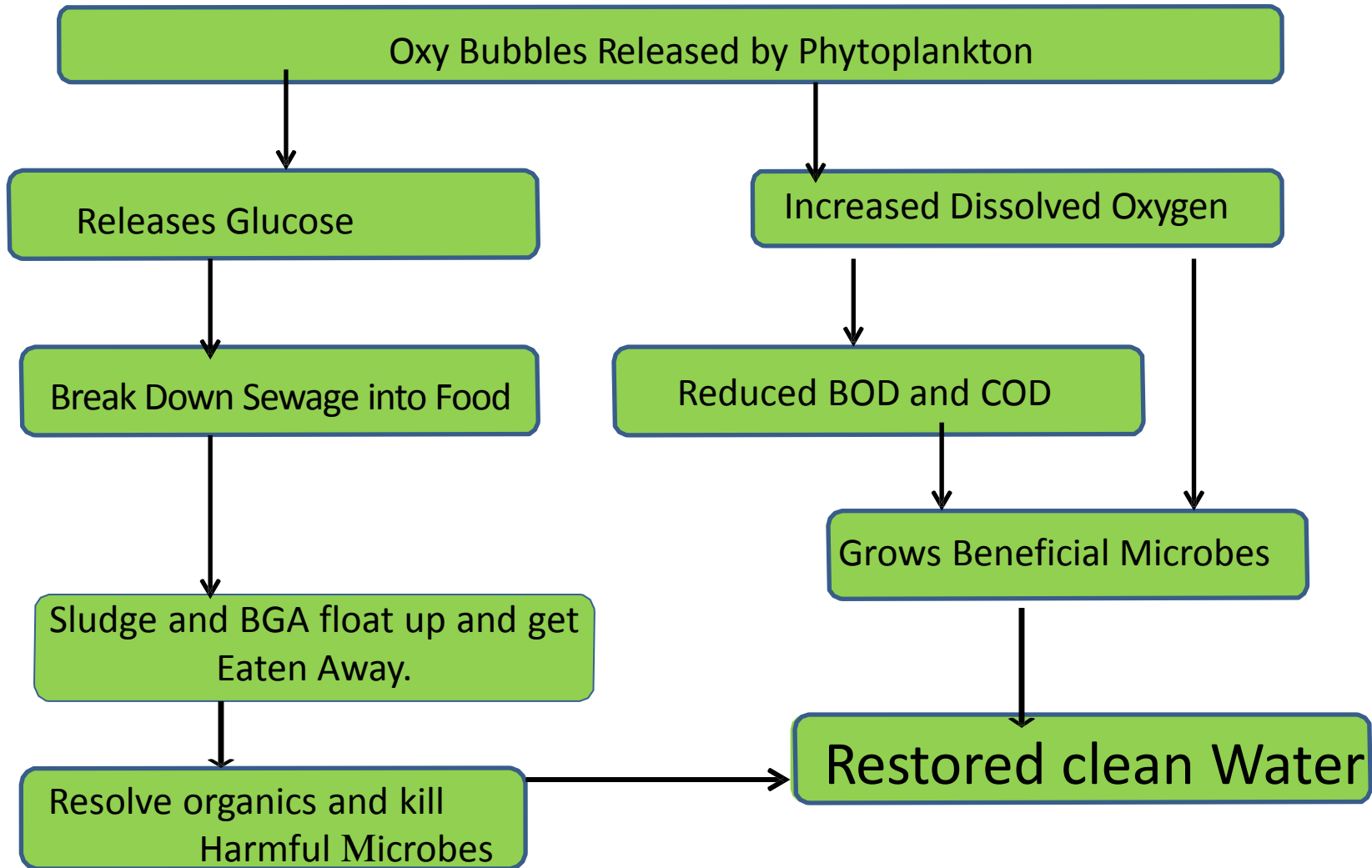


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How Do We Do This

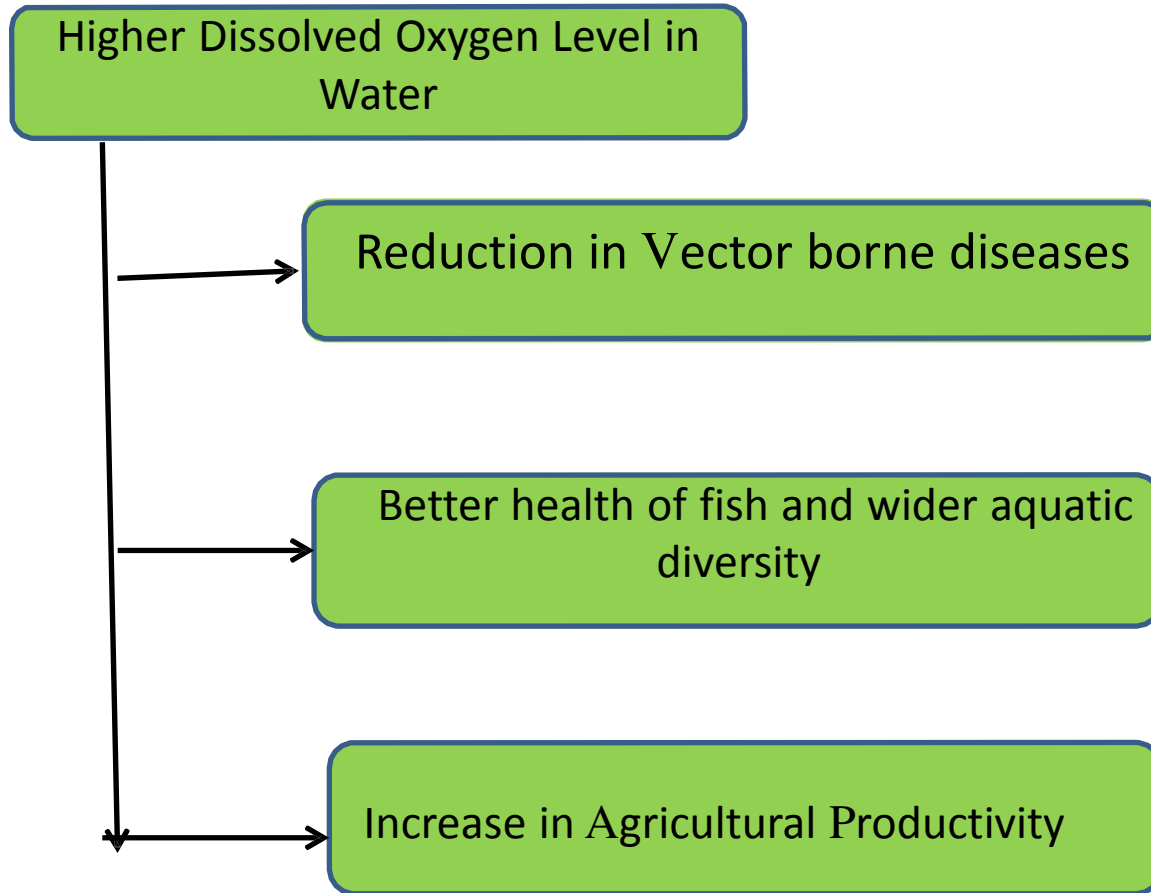


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Other Beneficial Effects of Bio-Nutrient



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Rivers (helps in reducing BoD levels and water borne pathogens, Type A/B within 12 months of start of dosing)

Industrial waste water (helps in reducing CoD levels, metal concentration)

Lakes (helps in mitigation of BGA and unwanted weeds).
Achieves nutrient balance within 4 to 6 months

Uses of Bio
Nutrient

Combined Sewers (helps by sharply reducing the levels of BoD, H₂S emissions, vector borne diseases, sludge and pathogens).
Noticeable difference within 4-6 months

STP (helps in aeration , can work under night conditions in LED lighting too, improves quality of effluents)

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What
We have
already
Achieved

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Sahibabad Drain @ Brij Vihar



Dosing of Bio Nutrient



Bubbles of oxygen rising to the surface and creating ripples on the surface.



Pre Treatment Sample



Post Treatment Sample

Pre & Post Treatment Water Test Reports

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Microbiological Analysis:					
1	Total coliform, MPN/100 ml	3,00,000	300	IS-1622	Levels decreased by 99.9%
2	Faecal coliform, MPN/100ml	22000	240	IS-1622	Levels decreased by 98% +
Phytoplankton's:					
3	1. Blue, per ml	8700	6800	IS-1622	Reduced by 20% approx
	1. Green per ml	45000	55000	-do-	
	1. Di-atomic, per ml	15000	17500	-do-	Increased by 16.6%

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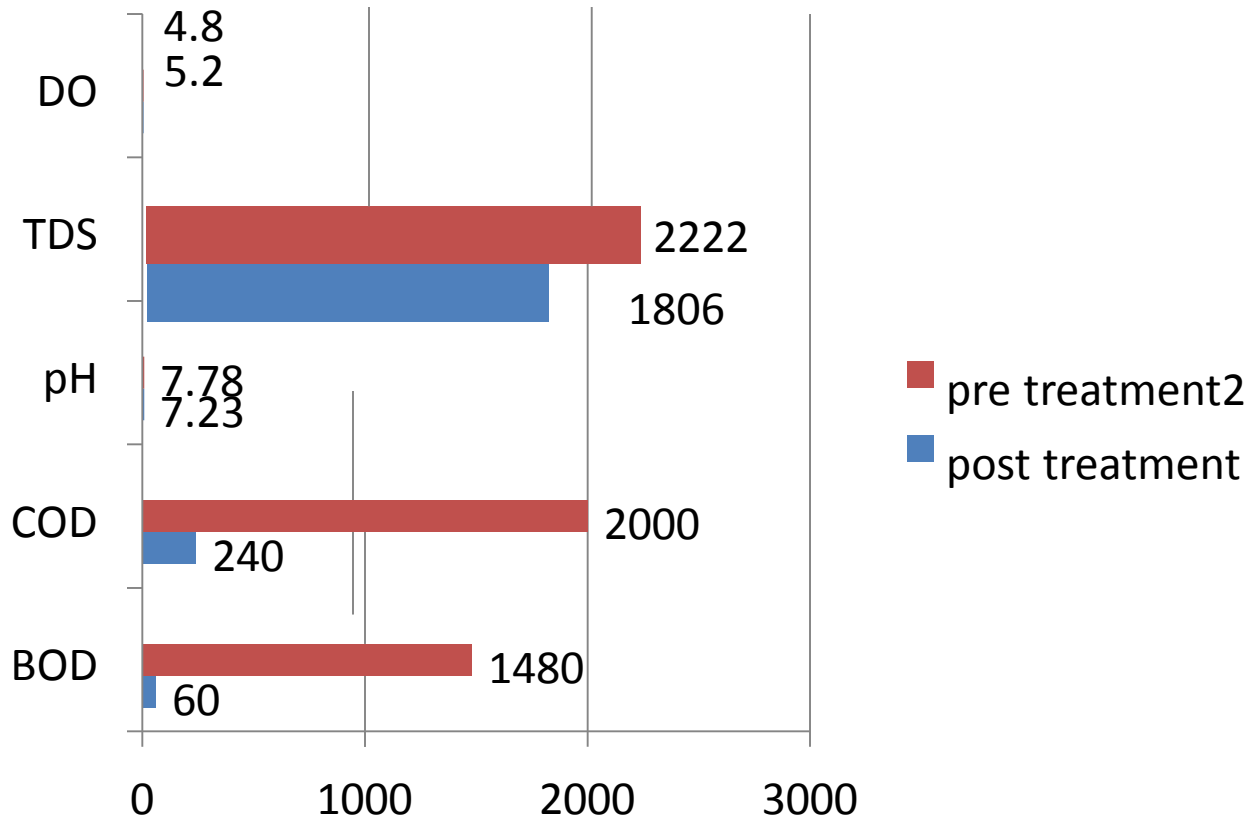
7	Total Kjeldahl nitrogen, mg/L	14.84	3.64	-do-	
8	Total phosphates, mg/L	59.65	128.64	-do-	
9	Dissolved oxygen, mg/L	4.8	5.2	IS-3025 (P-38)	
10	COD, mg/L	2000	240	APHA Edt	88% decrease in CoD levels in 10 days of treatment.
11	BOD, mg/L	1480	60	-do-	95% + decrease in BoD levels in 10 days
12	Nitrate, mg/L	7.36	4.28	APHA Edt	
13	Silica, mg/L	60.34	784.8	APHA Edt	
14	Surfactants, mg/L	0.036		APHA Edt	
15	Total dissolved solids, mg/L	2222	1806	IS-3025 (P-16)	
16	Free chlorine residual, mg/L	ND	0.6	APHA Edt	

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Comparison of Pre and Post Treatment Results



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Some More Success Stories

Pictorial Description of Pre and Post
Treatment by
Accelerated Bio Nutrient
Bio-Oxygenation & Restoration

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15 Million Litre Rural Pond at Village Bahadurpur Hardwar

Pre Treatment (Algae Ridden)



Post Treatment Transparent Water



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36 Million Litre Dabki Lake at
Village Dabki
Hardwar

Pre Treatment



Post Treatment



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Golf Course Lake, Roorkee

Pre Treatment



Post Treatment



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Water Channel along Rajpath New Delhi

Pre Treatment



Post Treatment



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Unitech lake, NOIDA

Pre Treatment



Post Treatment



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Fish and Bio Nutrient Karna Lake land Karnal Haryana

Fish Aggregating near the NSN Dose



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Water Quality which can be **Achieved** through this process

Targeted Outcomes:

- ❖ BoD down by up to 90%
- ❖ DO levels up by 3 times
- ❖ Mitigated foul smell reduced H₂S and CH₄ emission level.
- ❖ E Coli reduced by 90%.
- ❖ Net Result: Cleaner Drain and Lower pollution into RIVERS
- ❖ Decrease in Fecal Coli-form level by 75%
- ❖ Foul Odor Reduction.
- ❖ Mitigates re-growth of water hyacinth and weeds
- ❖ The water clarity becomes much better
- ❖ Reduction of mosquito larvae mitigating disease like Malaria, Dengue, ChikanGuniya
- ❖ Toxic algae are removed.
- ❖ Usage of Drain Water for Organic Farming
- ❖ Treated Water for Constructions for Government Or Private Builders Projects

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