

Nanobubble Technology in Lake & Pond Rejuvenation

Cleaner water. Reduced odour. Revived ecosystems.

Most polluted lakes and ponds suffer from low dissolved oxygen (DO), excess organic matter, algal blooms, foul odour, high BOD and COD levels, fish mortality, and loss of biodiversity. The root cause of these issues is insufficient and unstable oxygen availability throughout the water body

| Stable **DO**.
| Reduced **BOD & COD**.
| **Odour & Algae** Control.
| Improved Water **Quality**.

Main Causes of Lake & Pond Degradation = Lack of oxygen

Nanobubble technology addresses this challenge by delivering ultra-stable oxygen nanobubbles that remain suspended in water, providing deep and uniform oxygenation. This enables natural aerobic biological processes to reduce sludge, control algae, eliminate odour, improve water quality, and restore aquatic life, without the use of chemicals.

Our Results

Visible improvement in water clarity and algae reduction within 25 days of nanobubble deployment.



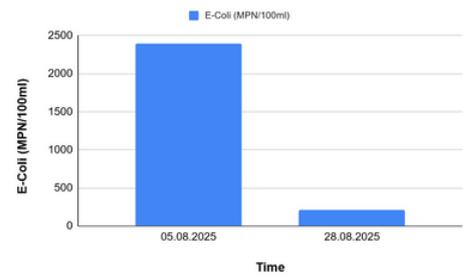
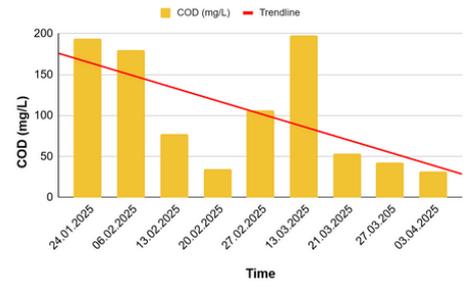
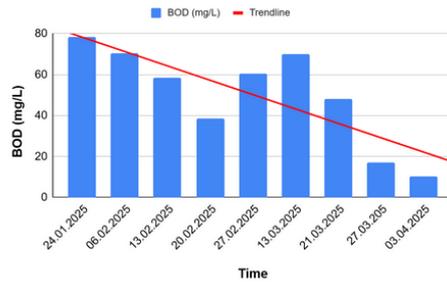
Significant reduction in algal growth. Noticeable decrease in foul odour. Reduction in BOD and COD levels. Improved and stable dissolved oxygen (DO). Reduction in E. coli and overall bacterial load

Results

NanoKriti conducted pilot interventions in multiple community ponds across Punjab that were affected by algal growth, foul odor, degraded water quality, disease risk, and mosquito breeding, limiting community use. The observed improvements following the interventions are summarized below.

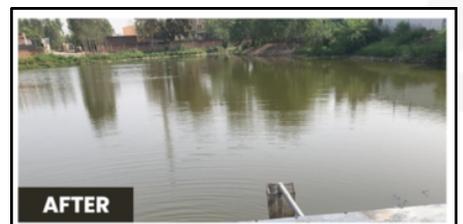
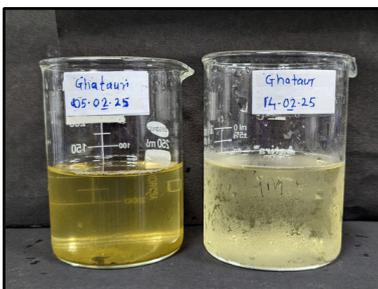
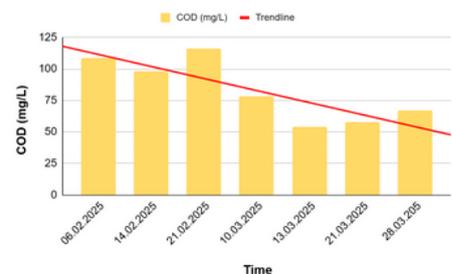
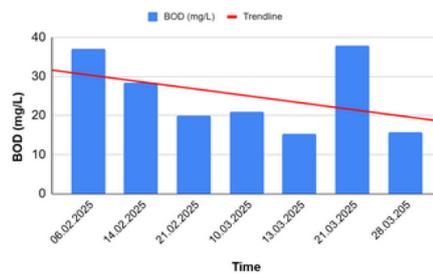
Mehrauli, (SAS Nagar) district, Punjab

(~2 Acres Pond)



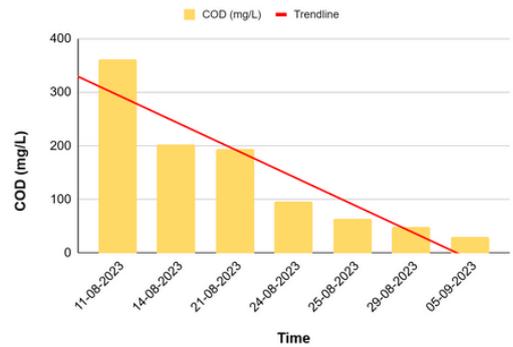
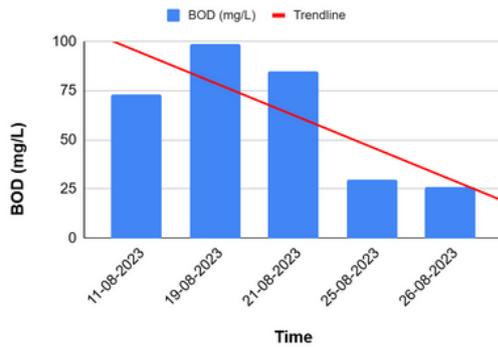
Ghataur, (SAS Nagar) district, Punjab

(~2.06 Acres Pond)



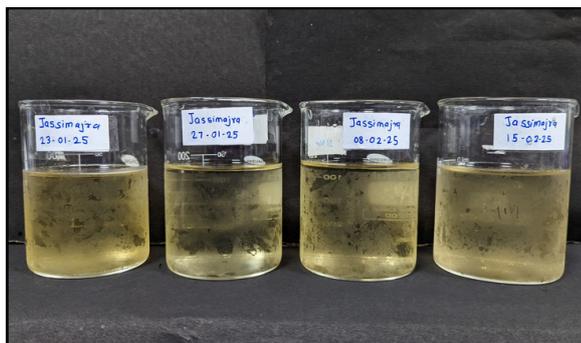
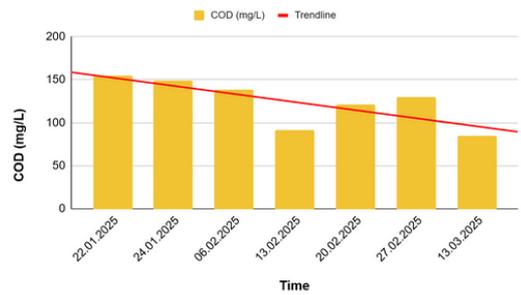
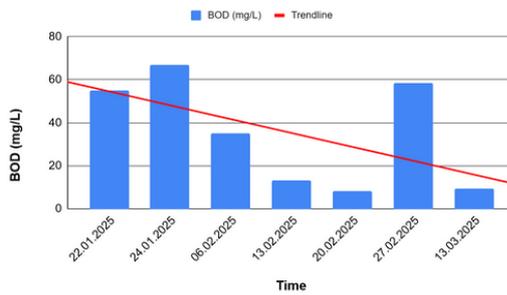
Phool Kalan, Ropar District, Punjab

0.5 Acres Pond



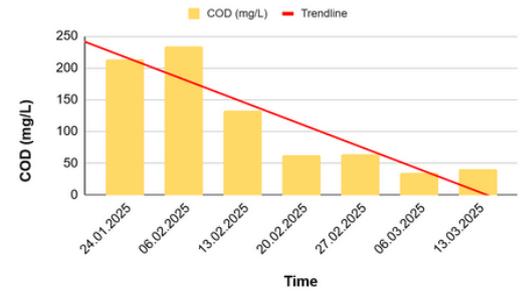
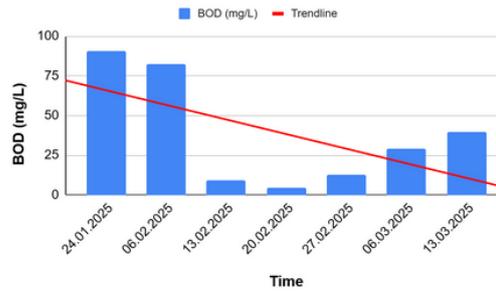
Jasse Majra, Patiala district, Punjab

(~1 Acres Pond)



Lakhmipur, Rupnagar district Punjab

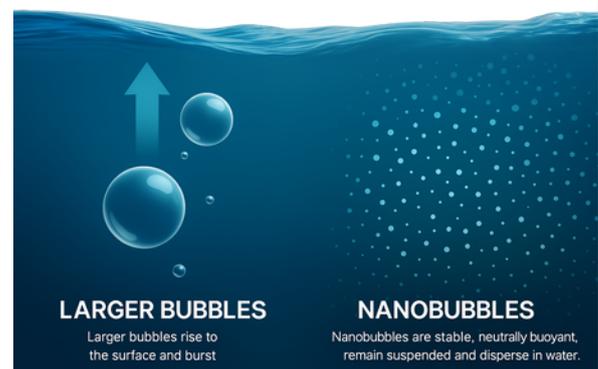
(~1 Acres Pond)



Observed Benefits and Results

- ✓ Significant reduction in algal growth and surface scum.
- ✓ Elimination of foul odour by suppression of anaerobic conditions.
- ✓ Reduction in organic load, with observed decreases in BOD and COD.
- ✓ Sustained increase in dissolved oxygen (DO) levels
- ✓ Improved water clarity.
- ✓ Revival of aerobic microbial activity and gradual ecosystem recovery.
- ✓ Reduction in stagnant conditions, helping limit mosquito breeding.
- ✓ Improved suitability of pond water for secondary uses such as washing and cleaning.
- ✓ Positive community feedback on improved pond condition and usability.

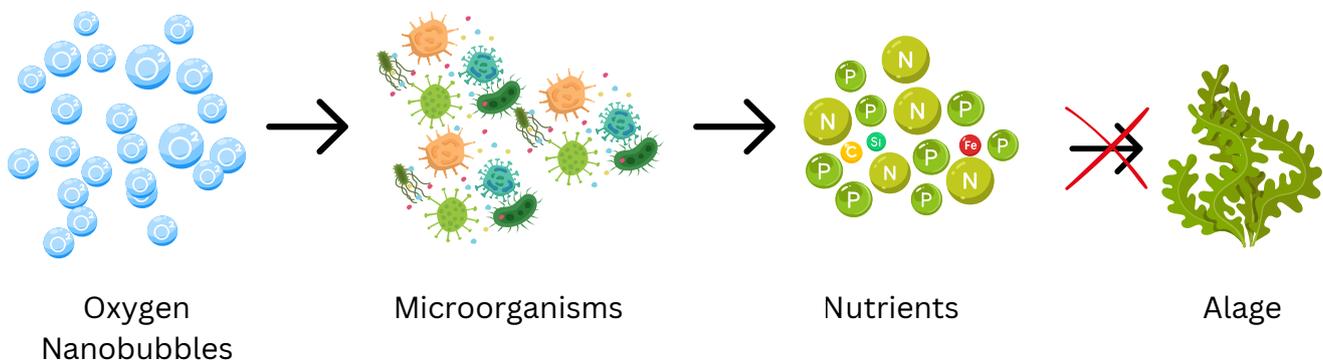
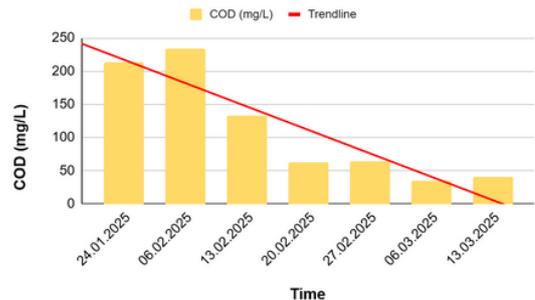
Nanobubbles are highly stable, nano-sized gas bubbles that enable efficient and uniform oxygen delivery in water bodies. Their prolonged presence enhances dissolved oxygen levels, supports natural biodegradation processes, and helps restore degraded lakes and ponds sustainably.



How Nanobubbles Help in Lake and Pond Treatment

Reduction of BOD and COD

Higher dissolved oxygen allows aerobic microorganisms to break down organic matter more efficiently. This directly lowers BOD and COD levels, improving overall water quality.

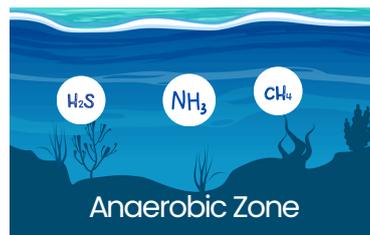


Control of Algae

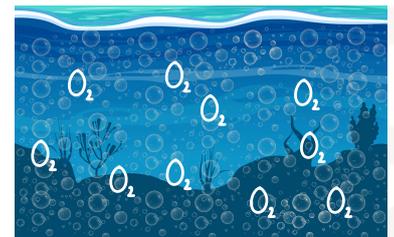
Improved oxygen balance and better microbial activity help limit conditions that favour excessive algal growth. Over time, this leads to clearer water and reduced surface scum.

Odour Reduction

Foul odours are often caused by anaerobic decomposition and the release of gases such as hydrogen sulphide. Nanobubbles suppress anaerobic conditions by maintaining adequate DO, reducing odour formation.



Low oxygen → Anaerobic bacteria → Foul gases & odors.



Nanobubbles → Oxygen supply → Microbes thrive → Gases oxidized → No odor.

CONTACT US

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