

Community Sewage Pond Rejuvenation

Jasse Majra, Ropar, Punjab

Location

Jasse Majra, Ropar, Punjab

Lake Size

1 Acre

Unit Type

NanoCloud N-50 Nanobubble Generator

Project Objective

The objective of this project was to rejuvenate the polluted community sewage pond in Jasse Majra, Punjab, using Nanokriti's NanoCloud N-50 nanobubble generator. The goal was to improve dissolved oxygen levels, reduce BOD and COD, eliminate foul odors, control algae and mosquito breeding, and restore overall water quality through a sustainable, chemical-free solution.

Jasse Majra is a village in the Ropar district of Punjab with a community sewage pond of around one acre that had gradually deteriorated over the years due to the continuous discharge of untreated household wastewater.

Over time, the pond developed several serious issues. Dissolved oxygen levels had dropped to extremely low levels, while organic pollution continued to accumulate. The water became dark and turbid, thick algae covered the surface, and a strong foul smell made the surrounding area unpleasant for residents. The stagnant conditions also led to significant mosquito breeding, creating health concerns for the community.

The pond had effectively lost its ecological function and was no longer usable for any practical purposes.

Technology Deployed

Nanokriti installed the NanoCloud N-50, an air-based nanobubble generation system designed to deliver ultra-fine oxygen nanobubbles into the water.

Unlike conventional aeration methods, nanobubbles remain suspended in water for long periods and significantly improve oxygen transfer efficiency. This enhanced oxygen availability stimulates beneficial aerobic microbial activity, which helps break down accumulated organic matter in the pond.

At the same time, the oxygen nanobubbles help oxidize compounds such as hydrogen sulfide and ammonia that are typically responsible for foul odours in stagnant wastewater ponds.

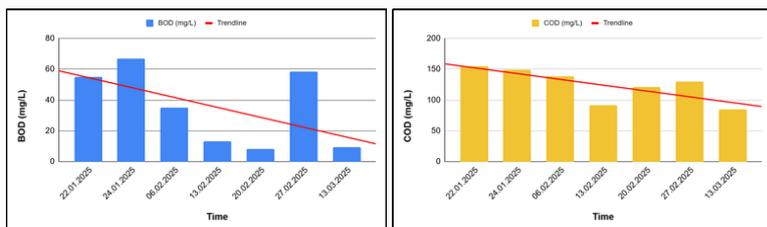
Results

Within weeks of installation, the pond showed measurable and visible improvement. BOD reduced by ~69% (160 mg/L to 50 mg/L) and COD reduced by ~53% (190 mg/L to 90 mg/L), while dissolved oxygen levels increased to support aquatic life. The foul odor was eliminated, algae growth was controlled, mosquito breeding declined, and overall water clarity improved significantly, restoring the pond's environmental and community value.

Conclusion

The Jasse Majra project demonstrates how nanobubble technology can provide a practical and sustainable solution for restoring polluted community water bodies. By improving oxygen availability and accelerating natural biological processes, the NanoCloud system helped revive a heavily polluted sewage pond without the use of chemicals.

Today, the pond stands as an example of how innovative water treatment technologies can help villages restore and reuse degraded water resources.



Community Testimonial

"The smell has gone, and the water is now clearer. This pond can now be used for secondary purposes like irrigation and aquaculture to generate revenue."

— Village Residents



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