



Revival of Bir Pind Village Pond with Nanokriti Nanobubble Technology

Client Case Study: Community Sewage Pond, Bir Pind Village, Punjab

Location	Lake Size	Unit Type	Client	Project Objective
Bir Pind, Punjab	~1 Acre	NanoCloud N-50 (Air-based Nanobubble Generator)	Punjab Rural Development Authority	Ecological Restoration & Community Pond Remediation
Project Type Community Sewage Pond Remediation				

Challenges:

- Critically low Dissolved Oxygen (DO), unsuitable for aquatic life.
- High BOD & COD levels, indicating severe organic contamination.
- Strong foul odor due to hydrogen sulfide and ammonia buildup.
- High coliform count, making water unsafe for the community.
- Algae blooms and suspended solids, reducing water clarity.
- Mosquito breeding, contributing to disease spread.

Results Achieved

- BOD reduced by ~32%
- COD reduced by ~33%
- DO levels improved by ~35%
- Faecal coliform reduced by ~40%
- TSS lowered by ~47%
- Foul odors eliminated
- Algae growth suppressed
- Reduction in mosquito breeding

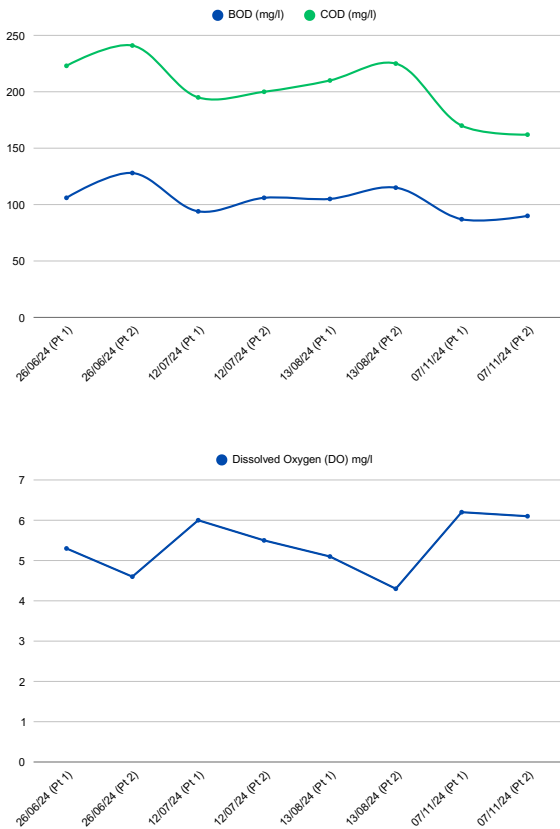
In June 2024, Nanokriti installed its NanoCloud N-50 air-based nanobubble generator in the Bir Pind pond. The system generates trillions of ultra-fine nanobubbles that stay suspended in water for longer durations, providing a sustained release of oxygen. This not only increases dissolved oxygen (DO) levels but also helps oxidize foul gases such as hydrogen sulfide and ammonia. As a result, algal growth and organic load were suppressed, while water clarity improved significantly, all achieved without the use of any chemicals.

Key Results (June–November 2024)

- BOD reduced from 128 → 87 mg/l (32% improvement).
- COD reduced from 241 → 162 mg/l (33% improvement).
- DO increased from ~4.6 mg/l → 6.2 mg/l (healthy for aquatic life).
- Faecal coliform reduced, improving sanitation and safety.
- Foul odor was significantly reduced, making the pond environment more livable.
- Signs of ecological balance returning with reduced algae and healthier water conditions.

Conclusion

The Bir Pind village pond restoration demonstrates how Nanokriti’s nanobubble technology can transform severely polluted sewage ponds into cleaner, healthier ecosystems without chemicals. Within months, the intervention improved dissolved oxygen, reduced BOD & COD, lowered coliform levels, and suppressed foul odors—creating a positive impact on community health and sanitation. Following this success, Bir Pind stands as another strong case for scaling nanobubble technology across Punjab’s rural water bodies to ensure sustainable pond management and improved village living conditions.



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Learn more about how nanobubbles improve lakes and ponds. Visit our website: www.nanokriti.com

