

AgriTech

Intelligent waterbody management system for water body rejuvenation and inland shrimp aquaculture

APPLICATION

The management system have huge application in rejuvenating the water bodies, brackish water inland aquaculture, urban water body rejuvenation.

COMPANY NAME	TECHNOLOGY READINESS LEVEL (TRL)	INTELLECTUAL PROPERTY
Bariflo Labs Pvt Ltd	TRL: 8 (Deployed units in close collaborations with government bodies)	Granted Indian Patent: 424370, 420900, 482450 Design Application Filed PCT: WO/2021/260732 NP in US: US20230263141A1 Canada: 3183622
FOUNDER'S NAME		
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PROBLEM ADDRESSED

The approach of novel invention focused on farmers who are unable to produce a profitable output because of hypoxic circumstances caused by excess feed and excreta accumulation in the sediment in moderate density shrimp farming. Also, traditional farmers use a time-consuming manual procedure of tying a rope in the middle of a pond and spraying feed by traveling around it in a dinghy, which prevents farmers from providing feed precisely in the habitable space. To address the issue, an intelligent mobile multipurpose feed spraying dispenser AIMSD for feeding shrimps and probiotic administration in a livable space has been developed.

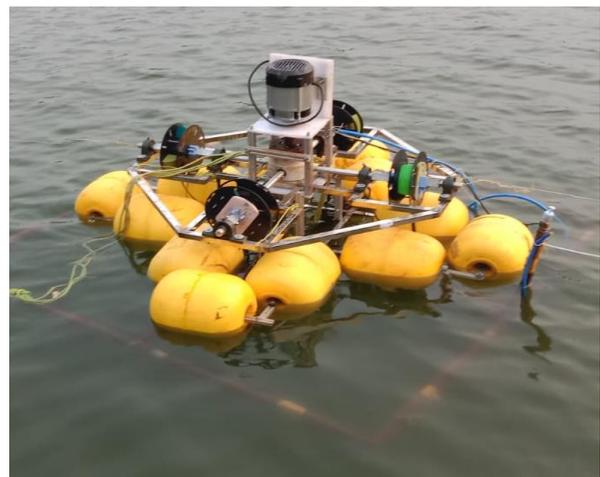
ABOUT THE TECHNOLOGY

The invention discloses an intelligent maneuvering hypolimnetic aerator with an internet of things monitoring system that can autonomously navigate to different coordinates and aerate the hypolimnetic region of a water body to improve dissolved oxygen demand (DO) and thus maintain water quality standards.. The generated data then transmitted and then can be used to rebuild a 3D image of the bathymetry, temperature distribution, DO distribution, and ORP distribution of the waterbody. Furthermore, the aeration system oscillates vertically in a sinusoidal way, resulting in the generation of standing waves horizontally, resulting in wave propagation to transmit DO farther from the device position and It also improves mixing at the sediment-water interface, allowing DO to penetrate into the sediment.

FUNDS RAISED/ACHIEVEMENTS

- BIRAC BIG grant of INR 50 Lakhs
- BIRAC SEED fund of INR 25 lakhs
- DST NIDHI PRAYAS fund of INR 7 lakhs
- MeitY TIDE 2.0 grant of INR 7 lakhs
- MeitY SASACT grant of INR 20 lakhs
- Startup Odisha fund of INR 15 lakhs
- RKVY RAFTAAR Grant of INR 20 lakhs
- Recognized as top 10 Agri-startup in Agri-Udaan
- TDB, DST Debt Investment of INR 89.00 Lakhs

PRODUCT IMAGE



USP

- Intelligent Sediment aeration system
- Intelligent weather and water quality monitoring system
- Intelligent nutrient control module
- Auto-corrected dissolved oxygen, Un-ionized ammonia, phosphate sensors, carbon dioxide, methane sensors
- Disease and water quality prediction DSS

END USERS/CUSTOMERS

- Brackish water farmers
- Freshwater aqua farmers
- FPOs
- Contractors
- Govt bodies