

## **Watershed management strategy supporting aquatic biodiversity**

### **A. Ecological and Conservation-Based Watershed Strategies**

In 2024, the School of Fisheries at Centurion University, Paralakhemundi, Odisha, implemented a watershed-based management programme focusing on biodiversity conservation, ecosystem monitoring, and the mitigation of human-induced impacts on local water bodies. Awareness programmes on waste management and non-point pollution control reached 3rd year and 4th year B.F.Sc students in 2024. The students are actively participating in the eradication of aquatic weeds in Ram Sagar in March 2024.



**Figure 1: Cleaning drive for the eradication of aquatic weeds in Ram Sagar**

**B. Community Participation to promote responsible water and fish resource management.**

One training programme was conducted for 50 cooperative members of the fishermen's cooperative at Centurion University PKD Campus in restoration measures, including desilting, riparian vegetation planting, native species conservation and avoidance of invasive species introduction. Farmers were encouraged to adopt sustainable practices, such as the use of organic fertilisers, reduced pesticide application, and the establishment of vegetative buffer strips. Eco-friendly fishing and cage-culture techniques were introduced to reduce disturbance and promote the recovery of aquatic habitats.

A partnership was established with the Department of Fisheries, Government of Odisha, to provide knowledge to 150 farmers on watershed-based aquaculture models in the Gajapati district. This integrated initiative demonstrates the university's commitment to restoring aquatic ecosystems through scientific assessment, community participation, and environmentally responsible management. Farmer training programmes emphasise species selection tailored to local ecology, disease management, and water conservation. These activities not only preserve biodiversity but also strengthen community resilience through sustainable water and fisheries resource management.



**Figure 3: Imparting knowledge on the conservation of fish resources to the fish farmers**