Flow-Through and Recirculatory Water Systems for Fish Tanks

Enhance fish farming efficiency with sustainable water systems, reducing resource wastage and ensuring robust fish growth.

Flow-through tanks with single use of water

Recirculatory Aquaculture Systems involve advanced setups for fish farming in tanks. They maintain essential conditions like oxygen levels and water temperature. Water is continuously filtered, ensuring a clean and healthy environment for the fish.

This technology is TAAT1 validated.

7·8 Scaling readiness: idea maturity 7/9; level of use 8/9

Gender assessment 4

Climate impact 7

Problem

- Challenges in maintaining water quality and oxygen levels for successful fish farming
- Need for effective waste management and control of pollutants in aquaculture systems
- Dependence on reliable water sources and electricity infrastructure for flow-through systems
- Cost and complexity of installing recirculatory systems compared to conventional methods

Solution

- Efficient use of limited land and water resources for higher density fish culture
- Maintenance of peak water quality conditions despite dense stocking rates
- Continuous water filtration and purification, leading to a healthier environment for fish
- Conversion of waste products into non-toxic substances for potential use in crop cultivation
- Flexibility in location choice based on water availability and electricity access

Cost: $$$ **22000 USD**

Pumping and piping for recirculation system (130 m3)

44000 USD	**1.5—5 USD**	**IP**
Recirculation System (130 m3) treatment	Settling of square meter pond construction	Open source / open access

WorldFish
Bernadette Fregene

Technology originally documented by

ProPAS

Commodities

Fish

Sustainable Development Goals

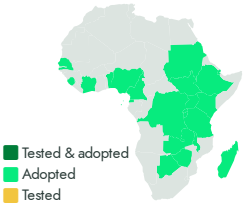
Categories

Production, Equipment, Aquaculture Systems

Best used with

- All Male Tilapia Fingerlings with Greater Yield and Uniformity ›
- Fast Growing and Hybrid African Catfish ›

Tested/adopted in



Where it can be used

This technology can be used in the colored agro-ecological zones.