# 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.

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.

**WorldFish**
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This technology is TAAT1 validated.

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

Gender assessment 4

Climate impact 4

## 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

## Key points to design your project

Steps to integrate RAS into a project:

- Assess water management needs based on farm settings and investment requirements.
- Acquire skills for installing and operating equipment under optimal conditions.
- Test water quality to determine pre- and post-treatment requirements.
- Estimate technology quantity and costs, including pumping, piping, and treatment expenses.
- Consider delivery costs, import clearance, and duties for project sites in relevant countries.
- Allocate resources for training and post-training support.
- Collaborate with agricultural development institutions to facilitate technology adoption.
- Explore integration with complementary technologies for enhanced efficiency.

Cost: $$$ **22000 USD**

Pumping and piping for recirculation system (130 m3)

**44000 USD**
Recirculation System (130 m3) treatment

**1.5—5 USD**
Settling of square meter pond construction

**IP**
Open source / open access

Technology from

ProPAS

Commodities

Fish

Sustainable Development Goals

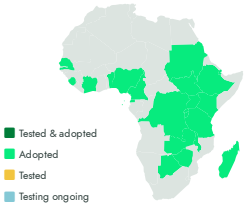

Categories

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.