Integrated Rice-Field Pond System (IRFPS): Linking Rice, Fish, Vegetables and Livestock

Supporting Year-Round Food and Water Availability while Diversifying Farm Income and Building Climate Resilience

WorldFish Center
Vichet SEAN

IRFPS integrates improved water and fish habitat management with rice, fish, vegetables and livestock production in existing ricefield–pond systems. Its low-input, adaptable approach combines production diversification with ecological management to strengthen food, livelihood and climate resilience.

This technology is pre-validated.

8·7 Scaling readiness: idea maturity 8/9; level of use7/9

Inclusion assessment 14 13 13

Climate impact 7

Commodities

Rice, Fish, Vegetable crop, Small livestock

Sustainable Development Goals

1 NO POVERTY · 2 ZERO HUNGER · 13 CLIMATE ACTION · 14 LIFE BELOW WATER

Categories

Production, Practices, Water management, Yield improvement

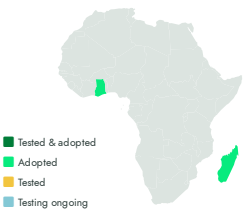
Problem

- **Climate-sensitive production:** Water variability affects rice, fish and local food production.
- **Underused aquatic resources:** Poor connectivity and habitat limit productive use of ricefield–pond systems.

Solution

- **Diversified livelihoods:** IRFPS combines rice, fish, vegetables and livestock to strengthen food and income opportunities.
- **Resilient farm systems:** Better water, habitat and ecological management strengthen climate resilience.

Tested/adopted in



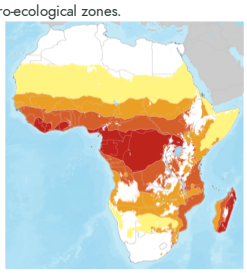
Key points to design your program

IRFPS integrates food and nutrition security, livelihood diversification and climate resilience within the same intervention, contributing to SDGs 1, 2, 13 and 14. IRFPS increased rice yields by 57% and fish yields by 67%. To integrate and scale IRFPS:

- **Target multiple needs:** Prioritize communities where food, livelihood, water and climate-resilience constraints intersect.
- **Invest in adoption:** Fund training, demonstrations and farmer-to-farmer learning.
- **Plan inclusive delivery:** Ensure targeted women and vulnerable groups can participate and benefit.
- **Build continuity:** Strengthen local extension and partnerships and engage WorldFish for technical support.

Where it can be used

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



Target groups

Development institutions, Farmers, Governments, Fish Farmers

43	57 %	67 %	250 USD/year	IP
USD/household	Increase in rice yield	Increase in wild fish production	Additional income from diversified production	No formal IP rights
Initial cost of the IRFPS				

See details ›