

Rice-fish culture: Integrating rice and fish farming systems

Rice-Fish System Boosts Profits, Enhances Lowland Land Use for Food Security and Prosperity

Rice-fish co-culture integrates rice and fish farming, boosting food security and farmers' income while ensuring environmental safety by eliminating agrochemicals. It's an innovative approach for food security, economic stability, and environmental sustainability.



AfricaRice

Africa Rice
Ephraim Sekyi-Annan

Commodities

Rice, Fish

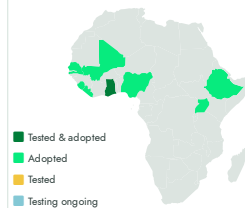
Sustainable Development Goals



Categories

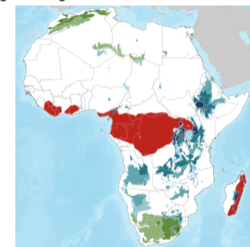
Production, Practices, Water management, Production system

Tested/adopted in



Where it can be used

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



Target groups

Farmers, Fish Farmers



This technology is **pre-validated**.



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

Gender assessment



Climate impact



Problem

- **Food insecurity:** Limited access to nutritious food, resulting in nutritional deficiencies.
- **Market vulnerability:** Dependence on rice exposes farmers to market fluctuations, contributing to economic instability.
- **Environmental pollution:** Overuse of agrochemicals leads to soil and water pollution, harming biodiversity and ecosystem health.

Solution

- **Enhanced profitability:** Rice-fish co-culture improves economic viability with a higher benefit-to-cost ratio (2.2), addressing food insecurity.
- **Market resilience:** Rice-fish farmers demonstrate greater resilience to market shocks due to diversified income sources, ensuring economic stability.
- **Nutrition security:** Fish consumption directly tackles nutritional deficiencies, enhancing food security with a diverse and nutritious diet.

Key points to design your project

To integrate this technology into your project:

1. Develop a business model outlining startup costs and sales projections.
2. Identify suitable regions for implementation, focusing on areas with rice cultivation and suitable water bodies.
3. Provide personnel training on technology operation and maintenance.
4. Consider initial investment and operational costs for budgeting.
5. Offer training and post-training support, and explore collaboration with agricultural development institutions for implementation support.

Cost: \$\$\$ **5,428 USD**

Initial Cost per Ha

ROI: \$\$\$ **115 %**

Benefit

3,016 USD

Operating Cost

18,188 USD/ha

Benefit



Open source / open access



Rice-fish culture

<https://taat.africa/kdk>

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