

Objectives of the project

The project aims to improve food and nutrition security by transforming low-yielding, climate-risky traditional rice-fish production systems into more climate-resilient, high-yielding, resource-use-efficient systems in Liberia.

Background

Liberia's basic infrastructure was devastated and access to most productive inputs, services and markets was significantly reduced. The current agenda in Liberia for agriculture focuses on value chains through private sector participation and markets, innovative financing, export-oriented industrial policy and enabling business environment. Rice is the main staple food in Liberia and forms a significant (33%) part of the Liberian food chain, accounting for about 50% of the adult calorie intake. Rice and aquaculture are both included in the national government's priority value chains. Agricultural research is critical to national development as it ensures the availability of demand-driven and transformed technologies such as, viable seeds, good quality planting materials, animal breeds and quality fingerlings, which are essential to agricultural production and productivity. Extension services delivery and coverage is another major bottleneck in agriculture sector development.



Theory of change to achieve the objectives

To develop integrated, climate-smart rice-fish production systems sustainably the project will balance interventions on participatory research on rice-fish farming, development of successful extension service delivery systems, value chain development with special attention to farmer strategies for value chain access, capacity building of actors involved and stakeholder platforms to create and sustain an enabling environment for adopting such integrated systems. Throughout the project women will receive dedicated support to increase their chances of benefiting from these new systems.

Participative, research-oriented activities will be conducted at the Central Agricultural Research Institute (CARI) and introduced to the field by AfricaRice, WorldFish, the Ministry of Agriculture (MoA)'s Extension Services Division in cooperation with CARI and the National Fisheries and Aquaculture Authority (NaFAA), along with private extension service agents and active participation of farmers. Thus, rice and fish systems technologies will be introduced and adopted in five counties. Our objective by 2022 is to conduct experiments on and introduce 15 climate-smart technologies on rice and fish, with 164 households adopting the climate-smart rice-fish technology out of 365 participating producers in the target area (45% adoption rate) and with 240 ha as appropriate habitat for integrated rice and fish production. A specific effort will be made to strengthen national research capacity. CARI fish department will be equipped and six experimental fish ponds will be implemented, ten scientists and technicians will be trained, and two technicians from CARI and NaFAA will be trained to obtain an MSc degree in integrated rice/fish systems.

To support this extension and adoption process, the project will develop the capacities of public and private sector extension officers and seek to bring about behaviour and social change (e.g. using educational tools such as roadshows, radio, mural paintings) regarding innovation in rice-fish farming systems. The project will test and implement by 2022 two pilot extension service delivery systems (e.g. engaging model farmers as lead agents) and will train 500 persons in integrated rice-fish systems of whom at least 20 are government officers. Participatory research and more efficient extension will

lead to a greater adoption of climate-smart management practices by smallholder rice and fish farmers for increased productivity through improved resource-use efficiency.

However, the development of new rice-fish farming systems depends on the functioning of the rice and fish value chains. Therefore, market output and input strategies (e.g. organising smallholder farmers into clusters for greater access to inputs or facilitate their sales) will be designed and tested with private and public sectors to enhance the productivity of smallholder farming systems. Improved production and more efficient value chains will contribute to an increased access to and consumption of farmed rice and fish in the selected counties for enhanced food and nutrition security, especially of women and children.

To orient this participatory research, the project will support functional multi-stakeholder innovation platforms capable of better informing aquaculture-integrated rice-based farming research and development efforts with gender-equitable aquaculture strategies and policies in Liberia. These platforms will also be used for enhanced knowledge sharing and learning, as well as for facilitating advocacy sessions with authorities and value chain actors to create a conducive environment to develop and sustain integrated rice-fish farming systems.

The interventions will look for gender equality outcomes (e.g. increase in the number of women owning ponds, cultivating fish and rice, controlling the incomes generated from rice and fish sales) through research on gender norms and development of communication materials to address harmful norms, attitudes, practices and power relations.

Main activities

The main activities of the project are the following:

- ✓ assessments of rice-fish value chains
- ✓ experiments at CARI on integrated rice-fish farming systems
- ✓ research on gender norms that may influence adoption of integrated rice-fish farming systems
- ✓ training of technicians on new technologies and extension service delivery
- ✓ capacity building of public and private actors in extension service delivery
- ✓ participatory replication of rice-fish farming systems experiments with selected producers
- ✓ support to farmers to design ponds and properly manage their new farming systems
- ✓ design and testing of input and output market strategies for farmers
- ✓ train households on social and behaviour change and nutrition
- ✓ design of communication tools to influence successful adoption of newly introduced systems and their benefits, with particular attention to women
- ✓ establishment of stakeholder platforms to engage all value chain actors in further developing and maintaining integrated rice-fish farming systems.

Organisation

The lead implementing partner (AfricaRice) will work with a designated team of World Fish and staff of institutional beneficiaries (MoA, CARI, NaFAA) who are appointed/seconded to the project. The project will employ a project coordinator, an administrative assistant, an M&E expert, an accountant, an agro-mechanisation expert, an agro-processing specialist, two CARI scientists (on aquaculture and rice) and five field technicians based in the five counties. Part-time consultants are part of the team: one aquaculture value chain specialist, one rice-fish farming technology adoption specialist, one market analysis specialist, one social and behaviour change communication specialist, one multi-stakeholder platform specialist, one participatory action research specialist, one extension delivery

specialist, one smallholder business planning specialist and one hatchery and feed development specialist.

A steering committee to monitor the progress of the project activities will be put in place and representatives of the following institutions will be member: AfricaRice, WorldFish, the European Union, MoA, CARI, NaFAA, the Federation of the Aquaculture Association in Liberia, and the National Rice Federation of Liberia (NRFL).

Evaluation and validation will involve all targeted communities and interchanges between value chain actors and research units.

Implementing organisations

AfricaRice and WorldFish.

Partners of the project

The government counterparts responsible for national agricultural research (CARI) and extension systems (MOA, NaFAA), the private sector and other donor-funded projects are partners in this project. All the sector players, including farmers (Gbarpolu, Grand Gedeh, Maryland, Margibi, and River Gee Counties) and their representative organisations, civil society, academic and research institutions, environmental regulators, and value chain actors (producers, input providers, marketers and consumer organisations), are stakeholders in this project.

Region

Gbarpolu, Grand Gedeh, Maryland, Margibi, and River Gee Counties in Liberia

Funding and co-funding

EU	€ 3,500,000
AfricaRice, CARI, Ministry of Agriculture	€ 138,047
Total budget	€ 3,638,047

Duration

36 months (2020-2023)

