



## Feed the Future Sierra Leone Agriculture Project



### Introduction

The United States Agency for International Development (USAID)-funded Feed the Future Sierra Leone Agriculture Project supports the development of rice and fish farming systems to increase productivity and improve food and nutrition security and incomes. The project focuses on Tonkolili District, which has the highest prevalence of stunting and underweight among children under 5 in the country.

### Background

Sierra Leone, with a population of 6.3 million, ranked 181 out of 188 countries in the 2014 Human Development Index. Although the country has substantial natural resources and is committed to attaining middle-income status, the institutional damage caused by the 10-year civil war and the recent Ebola virus disease outbreak have significantly constrained social and economic development.

Fish consumption in Sierra Leone is critical for ensuring food and nutrition security. Marine and inland fisheries contribute about 9.4% to the country's gross domestic product, and fish is the most important animal-source food in the diets of Sierra Leoneans, providing about 80% of animal protein intake. Food insecurity and malnutrition are national concerns, as 22% of the population is undernourished.

Fish contains a significant quantity of micronutrients, minerals, essential fatty acids and proteins and is a valuable supplement to diets that are lacking in essential vitamins and minerals. The consumption of fish is particularly important during pregnancy and the first 2 years of a child's life, as the fatty acids it provides promote optimal brain and neurological development.

Fish supply in Sierra Leone derives from marine and inland fisheries, with only limited production from aquaculture. While government policy seeks to support further development of aquaculture, there has been mixed success. There is good potential for aquaculture, with recommendations focusing on commercial tilapia and catfish farming and rural integrated agriculture-aquaculture farming systems. The development of diversified integrated farming systems involving rice (the country's staple food), fish and vegetables appears to offer particular potential for improving self-sufficiency in rice production, raising incomes through more productive use of land and water, and improving nutrition through diversification of crops and subsequent consumption patterns.

### Sierra Leone



### Key Facts

**Project:** Feed the Future Sierra Leone Agriculture Project

**Donor:** USAID

**Timeframe:** July 2015–September 2016

## Project components

The project has four areas of work:

### Farming systems and value chain assessments

Assessments are being made of present aquaculture, fisheries, inland valley swamps, and agricultural farming systems and value chains, with an emphasis on rice and fish value chains and integrated farming systems. Particular attention is being paid to Tonkolili District, which has large areas of rice farming associated with inland valley swamps. These assessments are intended to deliver understanding of the present status of rice and fish value chains, agro-ecologies and farming practices, and farming systems, and to identify options for improvement and upgrading.

### Integrated rice-fish farming system and value chain pilots

Assessments are being used to design and support implementation of interventions into farming systems and value chains on a pilot basis in order to identify promising interventions for scaling. They presently include the following:

- productivity-enhancing and nutrition-sensitive interventions into integrated rice-fish-vegetable farming systems
- restarting aquaculture ponds and/or water drainage systems to boost farmed fish supply and farmer incomes
- improving access of farmers to quality inputs, such as fish seed and feed
- enhancing support services, including agriculture business centers and damaged government fisheries stations and fish hatcheries.

The project is also exploring the introduction of nutrient-rich foods made from small nutritious fish for young children. Fish and locally available foods will be used to make products (e.g. chutney). Women and youth will be specifically targeted to lead enterprises producing these foods.

### Capacity development

Training will be provided to local government, nongovernmental organization partners, local staff, and women, men and youth farmers during implementation of the integrated agriculture-aquaculture pilots. Training will also be offered to potential small- to medium-scale entrepreneurs to enable them to step into fish farming businesses. Special attention will be devoted to creating opportunities that empower women and youth in Tonkolili District.

### Learning and scaling

During its initial phase in 2015 and 2016, the project will capture learning and identify the possibilities for longer-term investments into rice- and fish-based farming systems within Sierra Leone in ways that improve the nutrition and income status of rural women, men and children at wider scale. WorldFish, in consultation with partners within the CGIAR system and beyond, will be able to draw on wider learning to support and enhance this initiative in Sierra Leone, including learning from other WorldFish Feed the Future collaboration in Bangladesh and Cambodia.

Participatory action research (PAR) in all 23 pilot communities has engaged 412 farmers in a process to identify the root causes of malnutrition, low income and low productivity and how integrated aquaculture and agriculture systems might improve them. An output of the process was a five year community vision including an action plan with roles and responsibilities. Seasonal food availability calendars were also developed through PAR to illustrate year round access to a diversity of foods and track the effect of seasonality on consumption. An activity that successfully captured learning on how to direct the project's strategy was the development of the theory of change during a Training on Agriculture and Aquaculture Farming Systems and Nutrition. Participants included staff from the Ministry of Agriculture, Forestry and Food Security; the Ministry of Fisheries and Marine Resources; the USAID Sustainable Nutrition and Agriculture Promotion Project; and Caritas, as well as farmers from target communities. The theory of change maps out areas of opportunity, interventions and outcomes so that the project can design an effective strategy. As a stakeholder developed output, the theory of change is a key learning tool that strengthens the project's direction and also creates an opportunity to reflect on progress. Participants were also given training on healthy diets and the importance of fish.

## Goal

The goal is to identify and implement interventions to improve productivity of rice- and fish-based farming systems and value chains in ways that deliver enhanced food, nutrition and livelihood outcomes for people living in Tonkolili District. The project provides a foundation of knowledge and capacity for scaling interventions in aquatic-agricultural farming systems, particularly those associated with inland valley swamps.

**22%**  
Population that  
is undernourished

**29%**  
Children under 5  
who are stunted

**80%**  
Animal-source protein provided by  
fish in Sierra Leone

Sources: 22% - 2015 FAO State of Food Insecurity in the World  
29% - Sierra Leone National Nutrition Survey (Ministry of Health and Sanitation Sierra Leone and UNICEF, 2014)  
80% - FAO's Fisheries and Aquaculture Department. [http://www.fao.org/fishery/countrysector/naso\\_sierraleone/en](http://www.fao.org/fishery/countrysector/naso_sierraleone/en)

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## Partnerships

- CARE
- Caritas
- Sustainable Nutrition and Agriculture Promotion Project
- Catholic Relief Services
- Food and Agriculture Organization of the United Nations (FAO)
- International Institute of Tropical Agriculture (IITA)
- Njala University
- Sierra Leone Agricultural Research Institute (SLARI)
- Sierra Leone Ministry of Agriculture, Forestry and Food Security (MAFFS)
- Sierra Leone Ministry of Fisheries and Marine Resources (MFMR)
- Sierra Leone Ministry of Health and Sanitation (MOHS)