



## FACTSHEET

# Managing Aquatic Agricultural Systems to Improve Nutrition and Livelihoods in Cambodia



## Introduction

The EU and IFAD-funded *Managing Aquatic Agricultural Systems to Improve Nutrition and Livelihoods* project (គម្រោងប្រតិបត្តិការសម្រាប់អាហារូបត្ថម្ភ, “Small Fish for Nutrition” for short) uses an integrated aquaculture/agriculture nutrition linkages approach to support poor, rural households in wetlands systems in Cambodia to improve production and productivity of small indigenous species of fish in household aquaculture ponds, and increase consumption of micronutrient-rich small fish and vegetables.

## Background

Over the past decade, Cambodia has enjoyed strong economic growth resulting in improved livelihoods for its population of 16 million (UNDP 2015). Despite significant progress, however, 4.8 million Cambodians remain poor, with 90% living in rural areas. Subsistence farmers, members of poor fishing communities, landless people and rural youth comprise the majority of Cambodia’s poor (IFAD 2015). Generally, this demographic does not have enough food to eat for the whole year, dietary diversity is low and malnutrition remains high among children under 5 years of age.

Fish is an integral part of Cambodia’s culture, economy and food security, contributing around 7% to national GDP and supplying 66.3% of households’ animal protein intake (FAO 2011). Yet, the diet of many rural Cambodians remains heavily dependent on the staple food, rice, and dietary diversity is low. Increasing fish production and productivity, and in particular of small indigenous fish species, using the integrated aquaculture/agriculture nutrition linkages approach can provide smallholder households with increased income and support food and nutrition security.

Household aquaculture ponds stocked with both larger, marketable fish and small, nutrient-rich fish species can be managed with limited inputs to generate extra income for households and provide additional nutrient-rich food to households over an extended period of the year. In addition, ponds can be integrated into the smallholder’s farming system, providing water for homestead vegetable production on pond embankments. This integrated approach has the potential to help address the constraints faced by many rural Cambodians and improve livelihoods and nutritional outcomes.

## Cambodia



## Key Facts

**Project:** Managing Aquatic Agricultural Systems to Improve Nutrition and Livelihoods in Cambodia

**Target Areas:** Siem Reap, Battambang and Pursat provinces, Cambodia

**Donors:** The European Union (EU), and International Fund for Agricultural Development (IFAD)

**Timeframe:** May 2016–September 2019

## Project components

This project is a component of the global project *Managing Aquatic Agricultural Systems to Improve Nutrition and Livelihoods in selected Asian and African Countries: Scaling up Learning from IFAD-WorldFish Collaboration in Bangladesh*, which is being implemented in Cambodia, Zambia, Indonesia and Thailand. It builds on the successes and lessons learned from the WorldFish project *Linking Fisheries and Nutrition: Promoting Innovative Fish Production Technologies in Ponds and Wetlands with Nutrient-Rich Small Fish Species in Bangladesh* (2010–2013), which developed the aquaculture/agriculture nutrition linkages approach.

*Small Fish for Nutrition* uses a “family approach,” engaging both men and women in agricultural production. Using a combination of innovative fish and vegetable production technologies and behavior change communication methods and tools, the project works to increase household income as well as accessibility and consumption of nutrient-rich small fish and vegetables, at the community, household and individual level.

The project plans to scale up the integrated aquaculture/agriculture nutrition linkages approach targeting 300 households in Pursat, Battambang and Siem Reap provinces within 3 years.

The main components of the project are as follows:

**Develop integrated aquaculture/agriculture intervention models** that best suit the local biophysical and socioeconomic conditions in Cambodia. Cambodian floodplains present a continuum of fish production systems, from homestead ponds to seasonal ponds in rice fields, which are often under-utilized. Participatory research will be conducted to analyze the current land and water management regimes in target areas, identify these under-utilized “windows of opportunity” with regards to fish production that can be exploited, and design aquaculture models that make use of these opportunities to maximize the benefits for target households.

**Improve productivity and production of integrated household aquaculture/agriculture systems**, with polyculture of commercially valuable large fish and micronutrient-rich small fish species in homestead ponds and micronutrient-rich vegetables in homestead gardens and on pond dikes. Sound management practices based on pond ecological principles will be designed and fine-tuned to support grow-out of both large fish and micronutrient-rich small fish and optimized productivity of the pond over the culture period. Through capacity development training and ongoing coaching, stakeholders will be equipped with the necessary knowledge and skills to set up integrated household aquaculture/agriculture systems and effectively manage pond and vegetable production. Exchange visits and learning events will be held to facilitate sharing of experiences and adoption of best practices.

**Promote increased practice of essential nutrition and hygiene actions**, especially in the first 1,000 days of life, as well as in adolescent girls. Through group sessions and tailored individual support, target households will be reached with behavior change communication and education on a range of key topics for improving nutritional health. Poor nutritional health is caused not only by inadequate consumption of nutrients, but also by the abnormal loss of nutrients due to illness and the living environment. Therefore, the project will not only promote the consumption of micronutrient-rich fish and vegetables, but also improved sanitation and hygiene practices necessary to achieve positive nutritional health outcomes.

## Goal

The goal of the project is to improve nutrition and livelihoods of poor, rural households in aquatic agricultural systems in selected provinces of Cambodia by increasing micronutrient-rich small fish and vegetables intake through households’ own production, as well as through increased household income.

This will be accomplished by improving production and productivity of household ponds and dikes, increasing total and small fish production and fish species diversity in wetlands, and by supporting initiatives to increase consumption of micronutrient-rich small fish and vegetables.

Key project targets:



## Contact

Dr. Shakuntala Haraksingh Thilsted, Project Lead: S.Thilsted@cgiar.org  
Dr. Olivier Joffre, Country Project Manager: O.Joffre@cgiar.org  
Mr. Chantrea Bun, Aquaculture Specialist: B.Chantrea@cgiar.org



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## Partnerships

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- Trail Blazer Cambodia Organization (TCO)
- Village Support Group (VSG)
- Fisheries Administration (FIA)
- Department of Aquaculture Development (DAD)
- National Research and Aquaculture Development Institute (NARDI)
- NOURISH Project
- Helen Keller International (HKI)