



Fisheries

FishTech: Integrating technical fisheries solutions into river development programs across South East Asia

Overview

Fish are an important protein source and trade/barter commodity across most of South East Asia, as well as a vital source of micronutrients in diets. Rice is equally important for food security and household income and its cultivation is also widespread. But fisheries are under threat from the irrigation infrastructure required to manage water flows along rivers and into wetlands to improve rice production efficiency.

While irrigation infrastructure is advantageous for rice growing, it blocks important migration pathways for fish seeking access to nursery and feeding habitats. Over recent decades riverine communities have experienced a deterioration in their ability to catch fish, and some species have disappeared from their catch altogether.

Two past ACIAR projects (FIS/2006/183; FIS/2009/041) demonstrated that fishways integrated into low-head irrigation structures (i.e. weirs, regulators, embankments <6m high) can mitigate impacts of irrigation development, with lasting economic and social benefits for river-dependent communities. These projects also highlighted the key role that research, policy, governance and institutional capacity play in wide-scale application. Based on these findings, this project is taking a three-pillared approach that ensures evidence generated through research is used to drive institutional adoption, that institutional capacity is built across relevant stakeholder groups, and that fish passage is adopted in governance frameworks and policy agendas led by donors and government agencies.



KEY FACTS

ACIAR Project No. FIS/2018/153

Duration: January 2020 to 30 June 2025

Target areas: Myanmar, Cambodia, Lao PDR and Indonesia

Budget: A\$7,413,310

Project Leader

Dr Lee Baumgartner, Associate Research Professor (Fisheries and River Management), Charles Sturt University.

Key partners

- Charles Sturt University
- Inland Fisheries Research and Development Institute, Cambodia
- Ministry of Agriculture and Livestock, Myanmar
- Ministry of Marine Affairs and Fisheries, Indonesia
- National University of Laos, Lao PDR

ACIAR Research Program Manager

Prof Ann Fleming

Objective

The aim of this new work is to synthesise, and generate, research facilitating greater adoption of fishway technology in South East Asian countries through improved capacity and governance structures.

The project has four broad objectives:

- To understand the motivations of donors, investors and irrigation agencies for choosing whether or not to include fish passage within development projects.
- To define institutional capacity needs to enable design and implementation of future fish passage programs and facilitate uplift in fishways capability.
- To fill critical knowledge gaps needed to demonstrate proof of concept to donor agencies.
- To identify policy needs of the partner countries and donors

Expected scientific results

- Publication in several international journals and accepted proof of concept.

Expected impact/outcomes

- Providing a platform for informed, evidence-based decision-making (donors, government agencies) across South East Asia on fish passage construction programs.
- Developing a targeted capacity building program geared towards addressing long-term institutional needs in the field of fish passage.
- Ensuring that research has guided the development of fish passage policy and legislation in Myanmar, Cambodia, Lao PDR and Indonesia.
- Improving capacity for government decision-makers, local researchers, managers and communities to apply fish passage technology.
- Improving local economies for men and women through increased fisheries production, and nutritional and economic impacts
- Improving floodplain fisheries diversity and sustainability wherever fishways are constructed.
- Adoption of regulatory and legal instruments which are informed by world-class scientific and environmental research.

