Fisheries

Increasing technical skills supporting community-based sea cucumber production in Vietnam and the Philippines

Australian Government
Australian Centre for International Agricultural Research

Overview

Overfishing and poor fisheries management of sea cucumber fisheries in many parts of the tropics has created severe declines in sea cucumber stocks, and even the closure of some fisheries. This has had major impacts on income generation opportunities for coastal communities.

However, strong demand for dried sea cucumbers from China and South-East Asian markets, where they can make $200-$400 per kg, provides significant sea cucumber mariculture opportunities for coastal communities throughout South-East Asia, northern Australia and the central Pacific.

There have been significant developments towards commercial-scale hatchery and grow-out technologies for sandfish (one of the more valuable tropical sea cucumber species). However improved technical skills are required to increase reliability of current culture methods and support increased production capacity of community-based sandfish culture in Vietnam and the Philippines.

KEY FACTS

ACIAR Project No. FIS/2016/122
Duration: October 2018 to August 2023 (5 years)
Target areas: Vietnam, Philippines
Budget: A$2,565,001

Project Leader
Professor Paul Southgate, University of the Sunshine Coast

Key partners
- Marine Science Institute, University of the Philippines
- SEAFDEC, Aquaculture Department, Research Division, Philippines
- Institute of Fisheries Research and Development, Mindanao State University at Naawan, Philippines
- Guiuan Development Foundation Incorporated, Philippines
- Ministry of Agriculture and Rural Development, Research Institute for Aquaculture No.3, Vietnam

ACIAR Research Program Manager
Dr Ann Fleming

Objective

The overall aim of this project is to further develop technical skills and improve the reliability of culture methods to support increased production capacity and further expansion of community-based sea cucumber farming in Vietnam and the Philippines.

The project's specific objectives are to:

- Optimise and standardise hatchery production strategies for sandfish using micro-algae concentrates.
- Optimise productivity of juvenile culture systems.
- Refine pond culture methods and investigate co-culture potential in Vietnam.
- Develop strategies to improve livelihood outcomes through sandfish culture.

Expected scientific results

- Simplification and improvement of sandfish hatchery culture methods.
- Development of a protocol for large scale hatchery culture based on commercially available micro-algae concentrates.
- New information on field-based culture of juvenile and adult sandfish used by community sea cucumber farmers to help develop improved culture methods and yields.
- New information relating to potential improvement (nutrient input) and diversification (co-culture) and short-cropping of pond culture methods for sandfish.
- Application of maps, economic and socio-economic data on sandfish farming to inform national and regional planning and development.
- International Symposium on Sea Cucumber Culture for sharing of project outputs and research advances.

Expected outcomes

- Expansion of sandfish culture in partner countries providing improved income generation and livelihood options in communities.
- Economic and social benefits of more reliable culture methods facilitating expansion of sandfish culture and improved productivity.
- Greater opportunity for community groups to engage with sandfish culture and improved livelihood opportunities, particularly for women.
- Increased capacity for sustainable culture of sandfish.
- Improved sandfish farming skills and increased sandfish production.
- Development of sandfish culture technology to a point supporting scale-out to new sites and communities.
- Economic and social impacts realised in communities across partner countries.

Australian Aid

ACIAR
aciar.gov.au