

Oyster and seaweed mariculture in Fiji and northern Australia



Key details

Location

Australia, Fiji

Duration

Start Apr 2024

End Mar 2029

Budget

AUD 2,962,884

Commissioned organisation

University of Sunshine Coast

Partners

Department of Industry, Tourism and Trade;
Ministry of Fisheries, Fiji; Pacific Community

Project leader

Dr Samantha Nowland

ACIAR Research Program Manager

Dr Chris Barlow

Program

Fisheries

Project code

FIS/2022/147

Research need

This project aims to support emerging oyster and seaweed farming livelihoods in Fiji and northern Australia by addressing technical, social and market considerations. It focuses on developing a safe, nutritious tropical rock oyster product, providing farmers with oyster spat, establishing community-based enterprises, building capacity for enterprise development and integrating seaweed into oyster farming systems.

Oyster aquaculture in Fiji and northern Australia is an experimental industry with limited production and economic data. However, forecasting by the Cooperative Research Centre for Developing Northern Australia predicts that an industry employing 500 people would directly increase output by \$217 million AUD, with indirect impacts resulting in an additional \$76 million AUD.

Seaweed farming, one of the largest aquaculture crops in the world, is predominantly based in Asia. Production in Pacific island countries has declined since 2000. There are currently no commercial ocean seaweed farms in production in Australia and only two small land-based operations for *Ulva* spp.

Both oysters and seaweeds are considered climate-resilient options for diversified aquatic food systems under climate change, as specific species can be targeted based on their tolerance to changing



environmental conditions. Hatchery production also enables selective breeding programs for climate adaptive traits, ensuring spat supply and not being at the mercy of natural reproductive cycles to supply farmers.

Project activities

- Providing a desktop environmental risk assessment.
- Conducting a field environmental risk survey.
- Reviewing quality assurance standard methods drawing on Australian and NZ standards for farmed oysters in Fiji.
- Undertaking testing for E. coli to assess the suitability of field and land-based depuration options.
- Conducting oyster population genetic and population surveys.



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