



Half-pearl industry development in Tonga and Vietnam

Overview

Round pearl culture from the black-lip pearl oyster (*Pinctada margaritifera*) is the largest aquaculture industry in the Pacific islands, generating about \$200 million in export income in Polynesia and growing as an export earner in the western Pacific.

The industry provides considerable livelihood opportunities and so has been introduced to many island communities in Polynesia.

Production of half-pearls, or 'mabé', is unique to Tonga. Produced by the winged pearl oyster (*Pteria penguin*), half-pearls are generally less valuable than round pearls, but individual oysters can produce multiple half-pearls (unlike round pearls). Pearl production can be accomplished by community members (with appropriate training) over a 10-month culture period, compared to about two years for round pearls.

Cultured half-pearls now generate significant income in coastal communities in Tonga including down-stream livelihood activities through handcraft production, mainly by women. ACIAR projects have supported the expansion of half-pearl farming from the industry hub of Vava'u to other island groups.

Technical support is now required to maintain current industry momentum and assist development of new community-based pearl farms. *Pteria penguin* oysters are also found in Vietnam but are not utilised for mabé or handcraft production, despite the significant tourist market.



KEY FACTS

ACIAR Project No. FIS/2016/126

Duration: September 2017 to June 2021 (4 years)

Target areas: Tonga and Vietnam

Budget: A\$1,230,500

Project Leader

Professor Paul Southgate, University of the Sunshine Coast

Key partners

- Ministry of Agriculture, Forests, Food and Fisheries, Tonga
- Research Institute for Aquaculture No.3 (RIA3), Vietnam

ACIAR Research Program Manager

Dr Ann Fleming

Objective

The overall aim of this project is to support further expansion of community-based pearl farming in Tonga and demonstrate the feasibility of similar development in Vietnam.

The project's three main objectives are to:

- Improve husbandry methods to support increased oyster production for sustainable industry expansion.
- Assess the potential of half-pearl farming in Vietnam.
- Evaluate socioeconomic aspects of half-pearl culture in Tonga and Vietnam.

Expected scientific results

- Simplification and improvement of *Pteria penguin* hatchery culture methods for better take up by project partners.
- Development of improved culture methods for juvenile and adult *Pteria penguin* for better take up by project partners.
- Data on pearl farming that will be used to inform national pearl industry planning and development.

Expected outcomes

- Expansion of half-pearl culture and associated activities in Tonga providing broader income generating and livelihood options at community level and improved potential to generate export income.
- Establishment of a new aquaculture commodity in Vietnam contributing to domestic and export earnings of a country with an established aquaculture industry.
- Economic and social impacts resulting from more reliable oyster culture methods and industry expansion, including increased opportunity for export income, greater opportunity for individuals and community groups to engage with pearl culture and associated activities (i.e. handicraft production), and improved livelihood opportunities particularly for women and youth.
- Increased capacity for sustainable culture of pearl oysters within partner organisations and more broadly within industry stakeholders.

