Food Security and Sustainable Economic Development for Coastal Communities in Pohnpei, Federated States of Micronesia through Sustainable Capture -based Aquaculture of Rabbitfishes (Family *Siganidae*)

Marine and Environmental Research Institute of Pohnpei (MERIP)

Location:	Madolenihmw Municipality, Pohnpei, Federated States of Micronesia
Grant value:	$35,000
Duration:	May 2019 – October 2020
Partners:	Madolenihmw community members

Project summary

- This project was designed to enable the transfer of sustainable rabbitfish capture and farming technologies to fishing communities in Pohnpei, and to establish a pilot rabbitfish farm. The project also sought to develop market channels to support farmers in developing a consistent income from their products.
- The intention behind the project was to reduce the pressure on Pohnpei's inshore fisheries, which have experienced extensive and long-term overfishing, as a route to climate adaptation.
- A family of herbivorous species, rabbitfish settle in their millions along the Pohnpei coast and research suggests the collection of juvenile rabbitfish does not impact overall population recruitment. In addition, in this location, rabbitfish farming has no demonstrable impact on coastal ecosystems.
- The project focused on a single community surrounding a marine protected area, where ten individuals (five men and five women) were trained in the techniques of sustainable rabbitfish collection and subsequent farming.

Key project activities

1. Training of individuals to sustainably collect juvenile rabbitfish and successfully farm them to a saleable size.
2. Market research to explore the potential market for farmed rabbitfish amongst local shops and restaurants.
3. Community education campaign following a poaching incident early in the project

Fish capture. Source: MERIP.

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Top: Four species of harvested fish.
Bottom: *Siganidae randalli.*
Source: MERIP.

Project outcomes & lessons

The project began by farming six species of rabbitfish, but with experience and learning about which are the most successful, this has been reduced to a single species. The project has also led to the development of a very good understanding of where juvenile rabbitfish can be sustainably collected.

Rabbitfish farming has been demonstrated to be highly scalable. This project involved a single farming site with a small number of cages. However, as a result of this project rabbitfish farming has expanded to eight cages in three different locations in Pohnpei State, and four cages in Kosrae State, involving approximately 20 individuals in total. This expansion has also seen the use of larger, semi-commercial-sized cages. This demonstrates the scalable nature of the project, which is further emphasized by the low-cost entry requirement of rabbitfish farming, allowing almost all people in Pohnpei to participate.

A positive response to the market research was received. Farmed rabbitfish have been sold to markets, and the consistent supply that farming offers is seen to provide potential for ongoing sales both for commercial purposes and for traditional customs.

MERIP has passed the cages (and the fish within them) over to the farmers. MERIP staff will continue to help farmers with training, maintenance and technical assistance, as well as with marketing when the fish are large enough.

Rabbitfish farming presents an opportunity for the development of a sustainable means of protein production and a sustainable income for local communities that supports climate adaptation by reducing the pressure on the near-shore fishery.

This has the most potential and scalability of any project we've ever run.

Farming cage in situ. Source: MERIP.