



MAROU

THE POWER OF COMMUNITY

CLIMATE RESILIENCE AND ADAPTATION FOR ISLAND COMMUNITIES

Marou Village, located on Naviti Island in the Yasawa archipelago of Fiji, is a coastal settlement of 67 households facing critical challenges in the context of a changing climate. Like many remote island communities, Marou experiences periods of severe drought during the dry season and flooding during heavy rains. Rising sea levels threaten to contaminate freshwater wells, while reliable access to electricity remains limited. Currently, cold storage for fish and medical supplies is unavailable locally, and fuel for basic energy needs is both costly and difficult to transport. The island's steep terrain, shallow coastal approach, and dependence on tide-sensitive boat access add layers of complexity to any infrastructure project.

"Marou: The Power of Community" responds to these challenges through an integrated design that combines renewable energy generation, water harvesting, and community functions in a single, land-based infrastructure. The project is centered on three energy towers that rise from the landscape—each drawing aesthetic and structural inspiration from traditional Bure Kalou (spirit houses) and Fijian sailing vessels. These towers anchor the site visually and functionally, housing solar photovoltaic panels on their north-facing facades to optimize solar exposure. Additional panels are placed on building roofs throughout the site, contributing to a minimum installed capacity of 75 kW.

Rainwater is harvested in a variety of ways: from rooftops, through gravity-fed channels that guide stormwater into a series of filtration ponds, and through a fog-harvesting system that captures moisture from the air – helping to address water scarcity during the dry season. The integrated water system supports both drinking water storage and agricultural use.

Local materials form the foundation of the project, with approximately 85% of construction components sourced from Naviti Island. Thatched coconut or sago palm roofs, timber framing, and magimagi (woven coconut fiber) lashings reduce reliance on imports and lower carbon emissions. These methods are familiar to many residents and invite broad community participation in the construction process—encouraging mutual learning, cultural continuity, and local economic opportunity.

The site functions as more than an energy and water hub. It incorporates shared spaces for agriculture, aquaculture, small-scale animal farming, play, and waste management. These elements are designed to work together as a system, creating interdependencies between people, landscape, and infrastructure. A waste management system converts organic waste into biogas, providing a backup energy source when solar generation is low. This approach supports a circular system where food, energy, water, and waste are interconnected, reinforcing both resilience and local livelihoods.

