



Coping with Climate Change in the Pacific Island Region (CCCPIR)

Adapting Coral Reef Fisheries to Climate Change with Fish Aggregating Devices

Project facts CCCPIR

Funding sources: Federal Republic of Germany through the Federal Ministry for Economic Cooperation and Development (BMZ)

Regional partners: SPC, SPREP and USP

Countries: Federated States of Micronesia, Fiji Islands, Marshall Islands, Nauru, Kiribati, Palau, Papua New Guinea, Samoa, Solomon Islands, Tonga, Tuvalu and Vanuatu

Duration: January 2009-December 2015

giz



Climate Change in the Pacific

Pacific Island Countries (PICs) are already experiencing the negative impacts of climate change, especially as these countries are of the most vulnerable to environmental hazards and often have insufficient adaptation resources. Sea-level rise, changes in precipitation patterns and rising temperatures are causing secondary impacts of coastal erosion, salt water intrusion, cyclone damage, pest and disease outbreaks, water insecurity and declining agricultural production.

The 'Coping with Climate Change in the Pacific Island Region (CCCPIR)' programme aims to strengthen the capacities of Pacific member countries and regional organisations to cope with the impacts of climate change. The programme is funded by the Government of the Federal Republic of Germany through the Federal Ministry for Economic Cooperation and Development (BMZ) and implemented through GIZ working in partnership with SPC and SPREP. At the regional level, the project aligns with the Pacific Island Framework for Action on Climate Change 2006-2015 (PIFACC) and at the national level with the Priority Action Agenda (PAA).



Climate change and its impact on Vanuatu Communities

The Island of Pele, one of the SPC-GIZ CCCPIR pilot sites, is experiencing many climate change impacts such as: coral reef degradation, coastal erosion, slope erosion, leaching of soil nutrients and increasing temperatures.

SPC-GIZ is working with the people of Pele to identify how climate change impacts on their lives, and to find innovative solutions and locally appropriate adaptation strategies. CCCPIR is also working to strengthen the capacity of the Nguna-Pele Marine and Land Protected Area Network to deliver climate change education and awareness to island communities, and encourage families to proactively adapt to climate



Declining Catches of Coral Reef Fish

Vanuatu was once known for its bountiful reef seafood. However harvests are low throughout the country. A major problem facing the fisherman on the islands of Nguna-Pele is a decline in catches of coral reef fish. Reefs are dying due to combined effects of bleaching, severe storm damage and predatory crown of thorns starfish. Overharvest for sale into the commercial markets is also taking its toll on local fisheries.

While coral fisheries are declining, many deepwater fish stocks remain in good condition. Fishing in deeper waters is costly as fishermen must pay for fuel to find pelagic fish, travel in dangerous seas and spend time away from their families and gardens. As such, deep water fish are often too highly priced for local consumption.

In effect, there is a serious mismatch between fish demand and supply in local communities that is being exacerbated by climate change.

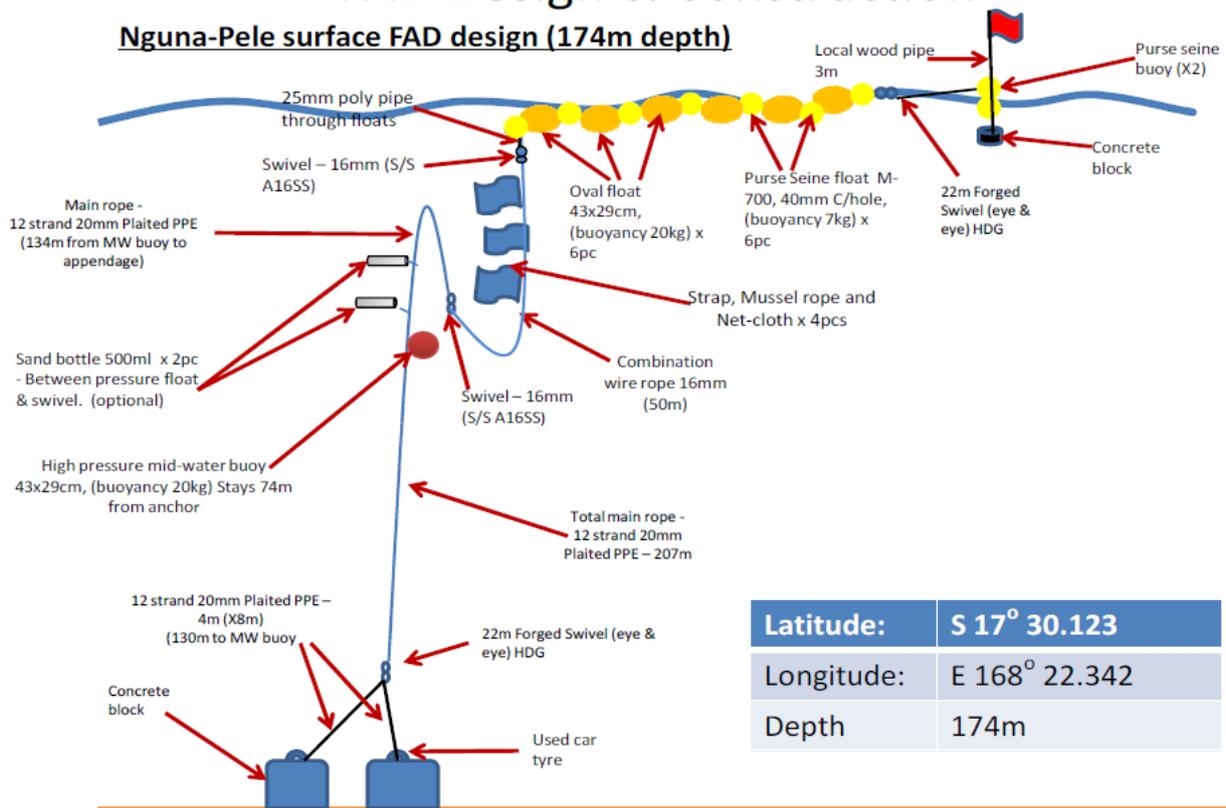
Fish Aggregating Devices (FADs)

To overcome the hardships faced by local fisherman. The Vanuatu Department of Fisheries and the SPC-GIZ Climate Change Program have installed a Fish Aggregating Devices (FAD). The FAD attracts deep water pelagic fish (like tuna, mahi-mahi and marlin) close to local villages. The FAD enables adaptation to climate change by:

1. A nearby source of food security
2. Easy revenue generation
3. A release of fishing pressure on vulnerable coral reefs.

FAD Design & Construction

Nguna-Pele surface FAD design (174m depth)



The location of the FAD is between the islands of Nguna, Pele and Efate, providing easy access to over 30 communities on North Efate. Even fishermen using canoes can access the FAD easily.

The FAD also hopes to take advantage of a slow climate-related shift in the location of valuable tuna stocks away from the equator and towards Vanuatu.

Hands-on, sustainable projects

FADs work by providing a surface on which algae can grow. The algae attract small fish, which in turn attract larger fish. FADs in the Pacific can be made from a variety of materials and with many designs. The FAD built by the SPC-GIZ project uses a design that is more resilient to the regular tropical cyclones experienced by Vanuatu.

The FAD is made relatively inexpensively with two concrete block anchors, a main rope, straps, mussel rope and net cloths and surface floats. FADs can also be made of bamboo and other locally available resources.

The FAD is easy to maintain and will start attracting fish within one month of being deployed.

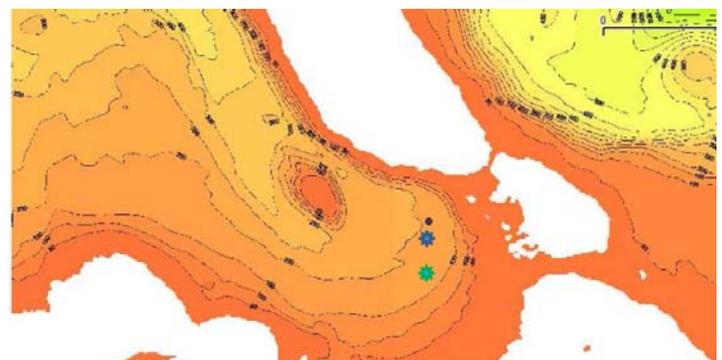
The Vanuatu Department of Fisheries worked with local fishermen and village leaders to develop a FAD management plan, which was endorsed by all area paramount chiefs. The plan outlines best use guidelines and upkeep and maintenance activities.

A success story for Ni-Vanuatu people

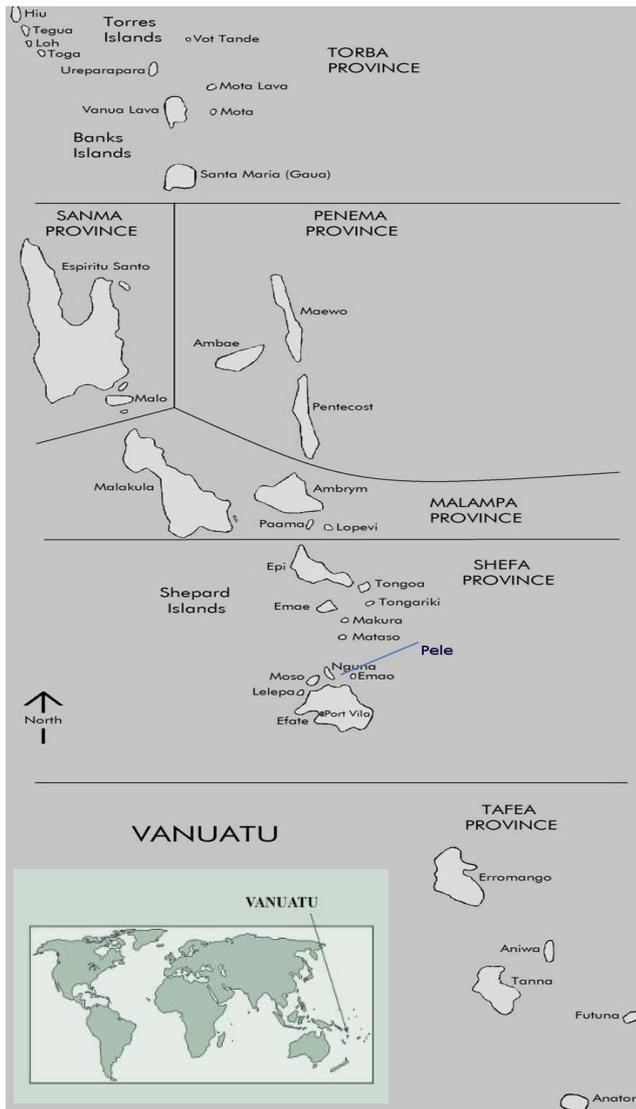
On 26 March 2013, chiefs from all the villages on the islands of Nguna and Pele joined hands to sign an agreement on the use and management of the FAD.

Paramount Chief Mariwota, Taloa Village

"The FAD is helping our fishermen meet their needs and the needs of their families. Now our fishermen, can fish close to home and be guaranteed good catches, saving them time and money. Finally, we have a solution to the overharvesting of our dying coral reefs"



Latitude:	S 17° 30.123
Longitude:	E 168° 22.342
Depth	174m



GIZ is a federally-owned enterprise that supports the German government in the field of international development cooperation. For more than 30 years, GIZ has been cooperating with Pacific Island partners in strengthening the capacity of people and institutions to improve the lives of communities for this generation and generations to come. GIZ is an implementing agency providing support through technical cooperation to balance economic, social and ecological interests through multi-stakeholder dialogue, participation and collaboration.

SPC/GIZ Coping with Climate Change in the Pacific Island Region (CCPIR)

PO Box 306
 Port Vila
 Vanuatu
 phone: +678 555 2187 / 29594
 E-Mail: Christopher.Bartlett@giz.de

