

March 2011

**CRISP**



Coral Reef Initiatives for the Pacific  
Initiatives Corail pour le Pacifique

**ACTIVITY REPORT**

**Strengthening sustainably  
cultured marine ornaments  
in  
Solomon Islands**

# CRISP



Coral Reef Initiatives for the Pacific  
Initiatives Corail pour le Pacifique



The CRISP Coordinating Unit (CCU) was integrated into the Secretariat of the Pacific Community in April 2008 to insure maximum coordination and synergy in work relating to coral reef management in the region.



The CRISP Programme is implemented as part of the policy developed by the Secretariat of the Pacific Regional Environment Programme to contribute to the conservation and sustainable development of coral reefs in the Pacific.

The Initiative for the Protection and Management of Coral Reefs in the Pacific (CRISP), sponsored by France and established by the French Development Agency (AFD), is part of an inter-ministerial project that began in 2002. CRISP aims to develop a vision for the future of these unique ecosystems and the communities that depend on them and to introduce strategies and projects to conserve their biodiversity, while developing the economic and environmental services that they provide both locally and globally. CRISP also, has a role in fostering greater integration in this area between developed countries (Australia, New Zealand, Japan, USA), French overseas territories and Pacific Island developing countries.

The initiative follows a specific approach designed to:

- associate networking activities and fieldwork projects;
- bring together research, management and development endeavours;
- combine the contributions of a range of scientific disciplines, including biology, ecology, economics, law and social sciences;
- address the various land and marine factors affecting coral reefs (including watershed rehabilitation and management);
- avoid setting up any new body but supply financial resources to already operational partners wishing to develop their activities in a spirit of regional cooperation. This is why the initiative was established on the basis of a call for proposals to all institutions and networks.

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This approach is articulated through a series of thematic objectives:

**Objective 1:** Improved knowledge of the biodiversity, status and functioning of coral ecosystems.

**Objective 2:** Protection and management of coral ecosystems on a significant scale.

**Objective 3:** Development of the economic potential represented by the use values and biodiversity of coral ecosystems.

**Objective 4:** Dissemination of information and knowledge; and capacitybuilding and leadership with local, national and international networks.

The CRISP Programme comprises three major components:

**Component 1A:** Integrated coastal management and watershed management

- 1A1: Marine biodiversity conservation planning
- 1A2: Marine Protected Areas
- 1A3: Institutional strengthening and networking
- 1A4: Integrated coastal reef zone and watershed management

**Component 2:** Development of coral ecosystems

- 2A: Knowledge, beneficial use and management of coral ecosystems
- 2B: Reef rehabilitation
- 2C: Development of active marine substances
- 2D: Development of regional data base (ReefBase Pacific)

**Component 3:** Programme coordination and development

- 3A: Capitalisation, value-adding and extension of CRISP programme activities
- 3B: Coordination, promotion and development of the CRISP programme
- 3C: Support to alternative livelihoods
- 3D: Vulnerability of ecosystems and species
- 3E: Economic task force

CRISP is funded by the following partners:



CONSERVATION  
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## **Introduction**

The Solomon Islands is one of six countries that are part of what is known as the “coral triangle”, an area of global significance. It is the epicentre for marine biodiversity and supports abundant coral reefs, fishes as well as peoples livelihoods. The majority of Solomon Islanders (80%) live in rural coastal villages and rely heavily on marine resources for their daily subsistence and cash needs.

Since 2005, the WorldFish Center and WWF-SI have been working with local villagers to develop sustainable marine livelihood options for rural communities. To date this has included the culture and grow out of clams and corals and post-larval capture and culture (PCC) of shrimp and lobster for the aquarium industry. The sustainable culture of marine ornamentals in the Western Province of the Solomon Islands is currently providing a modest income for a limited number of families. There is a farmers association (Nusa Aquarium Farmers Association) and a local family operated depot, which acts as the ‘connector’ between the distant farmers and the exporter based in Honiara.

To fully recognize the wider potential for sustainable aquarium trade in the Solomon Islands, the need to address markets, trade and expansion of the sustainable marine industry is paramount. This project aims to strengthen the existing sustainable culture of marine ornamentals in the Solomon Islands through; the expansion of the industry by increasing product options and developing web-based marketing and ecolabeling for Solomon Islands sustainable marine products.

## **Project Objectives**

The overall goal of this project was *“to strengthen the sustainable mariculture of ornamentals in the Solomon Islands through; the expansion of the industry by increasing product options and developing web-based marketing”*. This was achieved through two primary objectives:

1. To promote the demand for Solomon Island sustainably maricultured ornamentals; and
2. To increase the supply of sustainably maricultured ornamental products in the Solomon Islands

## **Project Achievements**

### ***Objective 1 Promote the demand for Solomon Island sustainably maricultured ornamentals***

There were two activities focused towards promoting the demand for Solomon Island sustainably maricultured ornamentals. These activities were centered on the marketing

aspects of Solomon Island marine products, through the development of a website and an ecolabel.

## Activity 1-1 Website Development

There is an increasing global demand for marine ornamental products for the aquarium industry and this is mirrored by an increase in the demand for sustainably cultured products. To open the market for the trade of these organisms in the Solomon Islands, this project has developed a website for marketing our products.

The website “www.SolomonSeaSustainables.com” was developed in consultation with the Solomon Islands Ministry for Fisheries and Marine Resources (MFMR), and exporters of Solomon Island aquarium products.



There are five main page areas on the website:

1. HOME: The home page gives background information about the Solomon Islands and the importance of keeping marine resources healthy. The home page provides links to a number of the major pages (Manage Resources, Farm, Buy and sustainable technologies).
2. ABOUT: This page provides information about the sustainable technologies used for farming different marine products as well as providing information about Nusa Aquarium Farmers Association, the Maraqaata depot and the actual farmers. This page also houses general information about farming techniques, information about marine resources and their management.

3. **MANAGE RESOURCES:** This page is a dedicated page for SILMMA to provide information about community-based marine resource management in the Solomon Islands. The page holds information about SILMMA, marine resource management tools, SILMMA information resources and information about SILMMA communities.
4. **FARM:** This page provides information about farming different marine products. Currently included on the site are: clam farming, coral farming, post-larval capture and culture (PCC) of fish and invertebrates, sponge farming and seaweed farming.
5. **BUY:** This page is the access point for consumers (or importers) interested in buying Solomon products. The page provides links to the appropriate exporting company in Solomon Islands.

In order to maintain the website beyond this project, staff from the Ministry of Fisheries and Marine Resources and SILMMA were trained by the website consultant (Victoria Grice) on how to manage the content of the website. On the 3<sup>rd</sup> March 2010, six people attended the training workshop; three WorldFish staff members, two MFMR staff members (one of which was from the IT section) and the SILMMA administrative officer. Through the training it was established that the SILMMA administrative officer will take on the role of updating and maintenance of the website, with support provided from WorldFish and MFMR.

The website consultant provided a “Content management guide for administrators of the SolomonSeaSustainables website” to ensure knowledge is maintained, even when staff members change.

### **Activity 1-2 Ecolabeling**

The development of an ecolabel for Solomon Island marine products was a counterpart activity to the development of the SolomonSeaSustainables website. The ecolabel is comprised of a unique icon, designed by a local Solomon Island artist. The ecolabel itself was designed as a sticker that has been sent to distributors of Solomon Island aquarium products (primarily targeting the US market). The concept of the sticker is that it can be placed on the fish tank at the wholesalers and retailers shops to promote Solomon Island products. The sticker itself provides a link to the SolomonSeaSustainables website, where consumers can gain further information and insight about the product that they purchase.



## ***Objective 2 – Increase the supply of sustainably maricultured ornamental products in the Solomon Islands***

There were three primary activities that were undertaken as part of this project to increase the supply of sustainably maricultured ornamental products in Solomon Islands;

- Conduct experiments to establish new coral species that are currently not being cultured in Solomon Islands for the aquarium trade.
- Develop a coral identification guide for local communities
- Undertaken training of new coral farmers

### **Activity 2-1 Product expansion**

There are currently a number of local communities in Solomon Islands that are exporting cultured clams (*Tridacna derasa*), cultured corals (hard corals - mostly *Acropora* sp. and some soft corals) and PCC coral banded shrimp, anemone shrimp and lobster for the aquarium trade. At this stage the market for these items has not reached its potential (in particular for the PCC products and corals) and reviews have highlighted that to increase the current export of cultured products from the Solomon Islands, there is a need to expand the product base, i.e. have a variety of species, sizes and colour.

There was a focus within this project on expanding the types of corals farmed by the local village members. Experiments were established to investigate coral growth rates and coral attachment methods for existing and some new coral species.

Different methods were trialed for coral attachment to the cement bases, in particular focusing on the use of different glue types, compared to the common method of using fishing line. These experiments showed that fishing line remains the cheapest option for attaching most coral types, if time is not the limiting factor although productivity can be enhanced through the use of glue. Some corals species were only able to be attached to the base if glue was used.

Four new species were trialed for farming (Orange sponge ; *Hydnophora* sp., *Tubastrea* sp. and Zooanthids). The results from these trials showed that the orange sponge is easy to culture (if handled carefully) as was *Hydnophora* sp. and *Tubastrea* sp.. Zooanthids were difficult to establish and difficult to culture. Further discussions with the exporter indicated that the three species identified would be of interest for the aquarium trade, although these are 'specialty' species, and the demand may not be as high as some other species. The exporter stressed the need for farmers to maintain a diversity of corals. The information gained from these experiments was used in the development of the coral ID guide.

As part of this activity, broodstock corals were to be distributed to local coral farmers, however based on the comments received from the exporter, together with the fact that farmers were beginning to grow appropriate broodstock corals themselves, this did not occur.

In partnership with the University of Queensland, a new action was able to be achieved as part of this activity. In December 2010 a coral farming training workshop was undertaken for people involved in marine resource management in the Gatokae region of Marovo Lagoon. In total 25 people were trained on how to farm corals using sustainable techniques. As part of this training a representative from each the Tetepare Descendants Association (TDA) and the Roviana Conservation Foundation (RCF) were invited to attend the training as part of an exercise to increase the capacity of SILMMA partners. These representatives were going to use the training to establish demonstration farms within their respective regions.



WorldFish (through this project) provided the training and training manual aspects, while UQ contributed the start-up equipment required by the farmers. This has resulted in an expansion of the existing number of coral farmers in Solomon Islands.

### **Activity 2-2 Develop ID field guide for local communities**

The identification of coral species suitable for export and desired by the international market can be difficult for farmers in rural communities, to whom colour and sometimes subtle differences in species are often considered immaterial. A field manual dedicated to the identification of locally available and sought after corals was developed to assist local growers.

The guide was developed using scientific (including the use of results from experiments conducted as part of activity 2.1) and local project staff knowledge on the identification, growth rates, farming methods and natural environment requirements of different coral species. The corals in the guide have been 'approved' by the international buyer of these products. This product will directly support the increased supply of sustainable marine products by providing farmers with information on which are the most efficient corals to grow and the best way to grow them.

### **SOLOMON ISLAND AQUARIUM FARMING**

### **Hard and Soft Coral Identification Guide**

Regon Warren, Fatson Bees & Joelle Albert



## Summary

Through this project, there has been significant strengthening of the sustainably cultured marine ornamentals in Solomon Islands. Through this project we have been able to;

- Produced a new and innovative website to promote Solomon Island marine products, in particular for the aquarium trade. We have had very positive feedback from stakeholders in particular from clients within the aquarium industry – as the website provides an access point for interested buyers. [www.solomonseasustainables.com](http://www.solomonseasustainables.com)
- Ensure the future of the Solomon Sea Sustainables website beyond this project. SILMMA, together with support from MFMR and WorldFish have taken on the role to maintain the site.
- Develop a unique logo specific for Solomon Island sustainably produced marine products and a sticker which is being sent to retailers to promote our products. This provides a short term option for an 'ecolabel' for Solomon Island products in the absence of a regional process for the aquarium trade. The sticker provides a link for buyers to access the information available on the website.
- Expand the coral farming capacity in Solomon Islands - Twenty-five new village farmers in the Marovo region have been trained as a part of a capacity building and partnership project partially supported by CRISP and the University of Queensland. Two members from locally based NGO's (Tetepare Decendants Association and Roviana Conservation Foundation) were included in this training for capacity building and future expansion of the industry.
- Develop a Solomon Island specific coral identification guide with coral specific farming methods.

The outcomes from the project have resulted in a significant expansion of the aquarium trade in Solomon Islands, which provides a sustainable mechanism for a small income for these largely subsistent rural people. The website and coral identification manual will provide a long-term mechanism to support the sustainable ornamental mariculture industry in the Solomon Islands after the cessation of this project.