

Lepuia'i Village Marine Conservation and Sustainable Fisheries Development Project

(a project funded by Sytel Limited in partnership with the Fisheries Division of the Ministry of Agriculture and Fisheries, Samoa)



Background

Sytel Limited, a privately owned software company based in the UK and the Fisheries Division on the Ministry of Agriculture and Fisheries in Samoa have established a partnership agreement to assist the village community of Lepuia'i Manono to empower and strengthen community ownership and participation in managing, development and conservation of marine resources. In September 2006, Lepuia'i Manono village renewed their Fisheries Management Plan and established a fish/marine reserve area under the Community Based Fisheries Management Programme (CBFMP) implementing by the Fisheries Division.

Sytel under its programme in supporting resource conservation in a less developed country commenced its financial sponsor to the village of Lepuai on Manono Island. This funding assists with Lepuia'i's fish reserve as well as their giant clam nursery farm. The CBFMP encouraged villagers to feel responsible for looking after their fisheries and marine resources whilst technical support is provided by the Division. The Sytel initiative to financially support Lepuia'i village commenced in July 2010 with a signed sponsorship agreement for marine conservation and sustainable fisheries development for the benefit of Lepuia'i people and other surrounding communities on Manono Island.

Objectives

The main objectives of the project were to:

1. Establish and improve stability of fish reserve area as a mean to regenerate fisheries resources
2. Active participation of the whole community in the sustainable management and development of their marine resources
3. Sustainably utilize resources for food security and also to generate income
4. Explore alternative ways to enrich marine resources
5. Build capacity and awareness of community on sustainable development and management of their resources
6. Improve partnership between Sytel Co Limited, Fisheries Division and Lepuia'i village

The outcomes of the project would be:

1. Clear demarcation of fish reserve boundaries and formulation of rules and bylaws for regular monitoring and management
2. Updated Fisheries management plan and the fisheries management committee established to oversee undertakings
3. Establish giant clam/trochus/seaweed farming for food security
4. Good understanding of village communities on sustainable fisheries development and management of resources
5. Community sharing benefit of fish reserve and project activities

Project Achievements

1. ***Establish and to improve stability of marine/fish reserve area as a means to regenerate fisheries resources.***

Marking of Fish Reserve Boundaries

One of the undertakings of Lepuia'i Village's Fisheries Management Plan was to establish a marine/fish reserve and conservation area as a habitat to allow fish and other marine species to live and breed. Any fishing activity inside this closed area is prohibited and non-compliance and poaching will be faced with the village council's authority. With the availability of financial assistance under this project, the village was provided with materials such as barrel floats/buoys, nylon rope, steel rebar and cement to demarcate the boundaries of the proposed fish reserve area. A practical training workshop was conducted in July 28th 2010 with the village youths to demonstrate rope splicing, anchor making and providing regular maintenance. The staff also conducted an initial assessment of the site to provide status of inshore resources as baseline data for ongoing monitoring. The designated area was demarcated by the village community and officially declared as "Lepuia'i Village Fish Reserve" on the 30th of August 2010.



Practical training on rope splicing



Discussing the Project with Lepuai Committee



Lepuia'i Fish reserve area clearly marked with white buoys

Fish Reserve Billboard

The project billboards were constructed opposite the fish reserve area to inform local people and the public of the importance of the fish reserve area and the project as well. The “NO FISHING ALLOWED” message was displayed on the two signboards and highly respected by the neighboring villages, pedestrians and fishers.



Lepuia'i Manono fmac members received the project billboard with thanks

2. Active community participation in the sustainable management of the fish resources.

Lepuia'i Management plan reviewed and updated

The Fisheries Division and the village council conducted a consultative meeting on the 28th July 2010 to discuss and review their village existing Management plan. The purpose was to update the village's undertakings, review community performance and provide recommendations on sustainable management practices. There are two important parts of the management plan which includes the village's undertakings and the fisheries responsibility to support the community. The followings were the changes documented after the review meeting:-

i) The village undertakings include:

- Ban the use of dynamite poisons to capture fish
- Ban coral smashing
- Ban the use of small mesh size nets
- Ban fishing in the village fish reserve
- Ban capturing of undersize fish and shellfish
- Ban sand mining
- Ban collecting sea cucumber for commercial exportation
- Collecting of crown of thorn starfish (COTs) bi-monthly
- Support Aquaculture development
- Enforcement of village bylaws and management plan rules

ii) The Fisheries undertakings include:

- Technical support on aquaculture development

- Raising public awareness on sustainable management
- Conduct on-site trainings to enhance community knowledge and skills
- Conduct monitoring surveys and assessment
- Support community on any fisheries development
- Review and provide recommendation on Fisheries Management Plan

Lepuia'i village fisheries management advisory committee (fmac)

This committee is responsible for the proactive implementation of the management plan. One of their roles is to ensure that local people are all involved and participated in monitoring activities and in the decision-making process. They coordinate and liaise with the Fisheries Division's Advisory staff on project activities and continue regular monitoring of their fish reserve. The committee consists of 10 members under the leadership of their village mayor Mr. Leiauaa Lotu.

Village bylaws updated

The Lepuia'i management plan undertakings have been drafted into village bylaws, a process of recognizing village rules in the court of law. These bylaws can apply equally to all locals of Lepuia'i as well as neighboring villages of Manono Island. The communities will enforce these bylaws after 14 days of official endorsement by the legal authorities.

3. Sustainable utilization of resources for food security and income alternatives

Giant clam farm established

Giant clams were acquired from local fishermen who collected native species of giant clams (*Tridacna maxima*) from the wild and these were raised and farmed in their reserve area. The aim is to conserve and let them breed naturally in order to repopulate and restock nearby reefs. The Fisheries staff assists in recording length measurement every two months to determine growth rate whereas Lepuia'i's fmac is responsible for regular monitoring. In addition, a community workshop was conducted on giant clam farming techniques, maintenance of cage and fence, predators that feeds on giant clams as well as marketing. Currently, there are 94 individuals range from 13 to 28cm farmed at Lepuia'i village's giant clam nursery.



Fisheries staff recorded measurements of giant clams (*T. maxima*)

Restocking of Trochus niloticus

A total of 200 individuals of *T. niloticus* were disbursed on the reef slope under the Fisheries Division's reef enhancement programme for the Tsunami 2009 recovery plan. Like farming of clams, terms and conditions of monitoring procedures were provided during the village's community workshop. The village mayor and his committee were very delighted and willing to support the progress of these developments. The trochus were stocked on the reef at medium tide on the 22nd October 2010.



Trochus shellfish stocked on the reef



Training and awareness for giant clams and trochus

Coral replanting and artificial fish houses

Also under the Fisheries Division's Tsunami Recovery Plan, Lepuia'i community participated and engaged in fish houses cementing and construction work on the 13th July 2010. There were 64 fish houses constructed and a total of 150 coral structures were deployed inside and outside the reserve area. Coral rubbles mainly branching coral were collected from the reef and tight/attached firmly to the structures using tie wire. The pioneer aim of this work is to provide shelters for fish and shellfish so as to increase live coral coverage in the village lagoon area.



Village communities engaged in fish house construction work



Artificial fish houses constructed

Coral replanting on fish houses – lagoon areas left barren by the tsunami

4. *Improve capacity and awareness of community on sustainable development and management of their resources*

Project induction meeting

The Fisheries Division met with the village council of Lepuia'i Manono on the 21 July 2010 to officially introduce the project, discussed the partnership agreement and facilitated the work plan. The meeting was very successful as the council nailed their approval and encouraged everyone to support the project. They also acknowledged the generous support of the Sytel Limited in providing this funding assistance.

Community awareness workshops/trainings conducted

The project conducted several workshops and trainings not only to increase community awareness on fisheries management and conservation measures but also transferring skills and practical knowledge to the community members to continue with regular monitoring activities. Power point presentations, information sheets, group discussion, demonstrations and field activities were conducted to enhance community knowledge and ensure better understanding on fisheries management procedures. As of to date, the project has achieved the following workshop/trainings:

- Community training on fish house & coral structures construction 13 July 2010
- Lepuia'i coral replanting demonstration 28 July 2010
- Lepuia'i village management plan update and review 28 July 2010
- Rope splicing and anchor making workshop 28 July 2010
- Demarcation of Lepuia'i village Fish reserve 30 August 2010
- Community workshop on Aquaculture development & Village bylaws (giant clam/trochus/seaweed) 23 February 2011

5. **Conclusion**

The project successfully achieved most of the proposed activities as stipulated in the action plan. The community showed tremendous support and the project has been recognized by other neighboring activities. This project assisted in re-activating the village's management plan, empowering local communities to engage in fisheries management and development activities and providing benefits for themselves. The Fisheries Division continued to engage and collaborate with Lepuia'i village's fmac to accomplish other remaining activities and ensure long term sustainability of the project.

Future Activities

There are still some activities to be conducted in the next 2 months such as:-

- Trial farming of seaweed (*Caulerpa racemosa*)
- Regular monitoring of the fish reserve area and aquaculture projects
- Purchasing of more clams (awaiting a request given to Tonga Fisheries Department in purchasing of giant clams)
- Continue capacity building and community awareness.

The village is supporting these developments and initiative to improve their marine environment in which they depend much on to continually provide for their livelihood, and also new development such as seaweed farming in securing alternative ways of earning income by the village and families in the future.
