

Second Progress Report

Project for Promotion of Grace of the Seas for Coastal Villages
in Vanuatu, Phase 2
(October 2012)

Japan International Cooperation Agency
IC Net Limited

Summary

1. Introduction

The Second Progress Report describes the progress of the Project for Promotion of Grace of the Seas for Coastal Villages in Vanuatu, Phase 2 (hereinafter the “Project”) from June until the Second Joint Coordinating Committee held on September 13 2012, and implementation plan of the Project until the end of March 2013.

2. Progress and Issues Related to the Project

2.1 Output 1

2.1.1 Improve the management capacity of the VFD in seed production and ranching of marine shellfish

(1) Formulation of the management plan of the hatchery facility

- The member of the Project in charge of marine shellfish propagation formulated the draft management plan of the hatchery facility by taking into consideration the biological characteristics of each marine shellfish species.
- The roof in the green snail seed production area was worn out, which resulted in the high mortality of the seeds owing to rainwater dripping into the tank and causing low salinity. In response, the Project fixed the roof.

(2) Support for the production and release of shellfish seeds

The Project released 299 individual green snails (average size: 56.3 mm, average weight: 55.5 g), produced in 2007, and 349 individual *Trochus* (average size: 51.7 mm, average weight: 51.1 g), with a mixed production year, on Uripiv Island as a tool for CBCRM.

(3) Confirm the current condition of broodstock groups and the addition of new broodstock

Green snail: Observations by the Project confirmed that the released broodstock group settled into the environment. Moreover, it is highly likely that the broodstock group is already reproducing. Young, small green snails, which appeared to have been reproduced from the broodstock group, were found around Hat Island.

Tridacna gigas:

Tridacna gigas, released by Phase 1 of the Project, are growing without any problems. The Project will consider producing an easy-to-use brochure to provide information to community members and tourists.

(4) Begin monitoring the released broodstock and seeds

The Project requested that the Secretariat of the Pacific Community (SPC) collect and synthesize information on the green snail broodstock release around north Efate.

(5) Begin establishing standard methods for community ranching of marine shellfish

- The VFD and community members are currently implementing the trial of formulating the broodstock group for green snails and *Trochus*. Regarding the green snails, no precedent exists elsewhere. The Project may be able to achieve the most positive output.
- Concerning *Tridacna maxima*, the Project is currently implementing trials of resource enhancement through an ocean nursery on Moso Island (a community of Sunae and Tasiriki).

(6) Establish the CBCRM plan including the shell marketing plan

The Project is considering the possibility of developing a business model with *Tridacna squamosa* as an ornamental fish utilizing the experience of the Phase 1 of the Project.

2.1.2 Improve the capacity of the VFD to provide coastal fishing communities with technical assistance for CBCRM

(1) Hold a training program to support CBCRM

The Project conducted a workshop on Institutional Development and Organization Strengthening (ID/OS) to analysis how the VFD can strengthen CBCRM, and formulate draft strategies.

2.2 Output 2

(1) Conduct a participatory socioeconomic survey and coastal fisheries resource evaluation at the target sites

The Project conducted a baseline survey from mid-May to mid-August 2012. The survey consisted of three parts: (1) the socioeconomic structure of target communities by questionnaire, (2) problem/objective analysis workshops for CBCRM and a fishing ground map and fish calendar workshop with the Rapid Rural Appraisal (RRA), and (3) a workshop on the institution analysis for the VFD.

(2) Analyze issues on the basis of the results of the coastal fisheries resource evaluation and socioeconomic survey

The Project extracted the issues on the CBCRM in each site from the comprehensive analysis of the baseline survey results.

(3) Share the results of the baseline survey with the coastal fishing communities

The Project shared the main results of the baseline survey with the communities in August 2012.

2.2.3 Organize coastal fishing communities and formulate the CBCRM plan for the respective target sites with the VFD

(1) Support and strengthen the organization of coastal fishing communities

The Project encouraged participants to analyze their own problems comprehensively and reach a consensus through the participatory workshops held three times in each of the target areas

(2) Formulate draft CBCRM plans at the respective target sites

(2)-1 Extract the issues from the existing CBCRM

Following issues are identified

- The existing CBCRM plans have rules and enforcement measures for CBCRM. However, they do not mention concrete activities, institutions, and organizations to support CBCRM .
- More concretely, CBCRM plans mention fishing diversification and alternative income generation through tourism development; however, they do not mention how these will be accomplished or who is in charge of what activities.

(2)-2 Planning the draft approaches for coastal resource management

The Project identified the issues in each target site and formulated the strategy to address the issues.

3. Others

3.1 Second Joint Coordinating Committee (JCC)

The second JCC was held on September 13, 2012, in Port Vila. The results of the discussion were summarized in the Minutes of the Meeting (M/M).

4. Schedule from October 2012 to March 2013

4.1 Improve the management capacity of the VFD in seed production and ranching of marine shellfish

(1) Formulate a management plan of the hatchery facility

The Project created the first version of the plan in July 2012. The Project will review and update the plan in January 2013.

(2) Support the production and release of shellfish seeds

Seed production

The spawning trial for *Tridacna squamosa* is planned in October 2012. The spawning trial for green snails is planned in November 2012.

Support for the release of shellfish seeds

The Project plans no more releases of shellfish seeds. However, the VFD keeps 36 broodstock of green snails. The Project will consider releasing this broodstock after the spawning trial.

(3) Confirm the current condition of broodstock groups and the addition of new broodstock

The Project is coordinating the survey to confirm the condition of green snail broodstock on Moso Island to confirm the current condition of the released broodstock of green snails and their reproduction along the coast of north Efate in collaboration with the VFD and SPC.

(4) Begin monitoring the released broodstock and seeds

The Project will consider the monitoring method for green snails in north Efate based on the survey conducted by IRD and SPC.

(5) Begin establishing standard methods for community ranching of marine shellfish

The Project will continue the trial of broodstock group formulation for green snails and *Trochus*. Project will stop the trial of the community ocean nursery conducted with *Tridacna maxima* in February 2013 to review technical and social issues and update the program.

The Project will also collect information on community activities, such as a nursery for *Tridacna gigas*, private stocking of clam shells, and a community-managed clam garden and assess their effectiveness for CBCRM.

(6) Establish the CBCRM plan including the shell marketing plan

The *Tridacna maxima* grown by the community will be commercialized to confirm its economic value after growing through the community ocean nursery. The Project will then conduct a midterm evaluation on the ocean nursery program.

4.2 Improve the capacity of the VFD in its implementation and data analysis of baseline surveys

(1) Formulate and verify database formats for survey results

In response to the comment by the second JCC, the Project will conduct an additional survey to supplement baseline information along with the draft CBCRM evaluation form.

4.3 Improve the capacity of the VFD to provide coastal fishing communities with technical assistance for CBCRM

(1) Hold a training program for proper approaches to CBCRM

(2) Hold a training program for supporting CBCRM

The implementation of (1) and (2) consists of three steps.

Step 1 (Review and update the existing CMCRB plan)

Step 2 (Monitoring the activities)

Step 3 (Analysis of the monitoring result and standardization of the training method)

4.4 Organize coastal fishing communities and formulate the CBCRM plan for the respective target sites with the VFD

(1) Support and strengthen the organization of coastal fishing communities

The Project strengthens the organization of coastal fishing communities so that they can continue resource management on their own initiative with support from the VFD, even after the Project is completed.

(2) Formulate draft CBCRM plans at the respective target sites

The VFD staff and resource management committee members will formulate the draft CBCRM plan

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1. Introduction

The First Progress Report described the activities of the Project for Promotion of Grace of the Seas for Coastal Villages in Vanuatu, Phase 2 (hereinafter the “Project”). The main contents of the report are as follows: (1) the interpretation of the Project Design Matrix (PDM) and its indication to foster a common understanding of the report among Project stakeholders; (2) progress on output 1 of the Project, which specifies that the “capacity of the Vanuatu Fisheries Department (VFD) to support community-based coastal resource management (CBCRM) is strengthened”; (3) progress on output 2, which states that “communities in the target areas acquire necessary skills and knowledge of CBCRM approaches and tools,” especially a detailed plan for the community participatory baseline survey; and (4) the entire implementation plan of the Project between June and September 2012.

The Second Progress Report covers the progression of the Project between June and September 13, 2012, the day on which the second Joint Coordinating Committee (JCC) and the implementation plan of the Project through March 2013 are explained, along with Appendix 1 (Implementation schedule of the Project).

2. Progress and Issues of the Project

2.1 Output 1

2.1.1 Improve the management capacity of the VFD in seed production and ranching of marine shellfish

(1) Formulation of the management plan of the hatchery facility

<D-1-1 in the implementation schedule of the Project>

The VFD has been producing marine shellfish seeds according to the yearly plan for each species on the basis of basic management indicators, such as the rotation of the breeding water tanks. In order to improve the effectiveness and efficiency of production, the member of the Project in charge of marine shellfish propagation formulated the draft management plan of the hatchery facility by taking into consideration the biological characteristics of each marine shellfish species.

Based on the plan, the Project organized an implementation structure of marine shellfish seed production until 2014, when the Project ends. (Refer to Appendix 2 “Management plan of the VFD hatchery facility.”)

Maintenance of the hatchery facility

To implement the plan, all of the facilities must be ready for use. The roof in the green snail seed production area was worn out, which resulted in the high mortality of the seeds owing to rainwater dripping into the tank and causing low salinity. In response, the Project fixed the roof.

Pump and water inlet facility

Currently, the pump and water inlet facility is working without problems. However, there is no backup system, and the risk of the water supply halting remains high in cases of machine or electricity failure. The project will encourage the VFD to establish a backup system using its own budget.

(2) Support for the production and release of shellfish seeds

<D-1-2 in the implementation schedule of the Project >

Current production

Winter is between June and September in Vanuatu. Because of the low water temperature, the VFD is not currently conducting seed production. However, the Project confirmed natural spawning of *Trochus* in the hatchery, with more than 100 individual young and small *Trochus* (estimated to be less than six months old). The priority of seed production for *Trochus* is low, especially considering their high natural reproductive capacity. The Project contends that the VFD should focus on species that experience difficulty in producing seeds, such as the green snail, which the VFD has paid attention to, but the technique for seed production has not been established.

Support for the release of shellfish seeds

Based on the management plan of the hatchery facility, the Project started cleaning the hatchery. Two tanks were made available for the next seed production by releasing 67 individual *Tridacna squamosa*, produced in 2007, on a private¹ beach for tourists. The beach is close to the capital city of Vanuatu, Port Vila, and is a popular destination for tourists who have limited time. Wild *Tridacna squamosa* and *Tridacna gigas* are released on the same beach, and tourists can swim around the clams. The *Tridacna squamosa* released by the Project are not mature at five years old (average size: 20 cm, average weight: 1.7 kg). They are in the “grow out” period and no longer require protection². The Project released 299 individual green snails (average size: 56.3 mm, average weight: 55.5 g), produced in 2007, and 349 individual *Trochus* (average size: 51.7 mm, average weight: 51.1 g), with a mixed production year, on Uripiv Island as a tool for CBCRM.

(3) Confirm the current condition of broodstock groups and the addition of new broodstock

<D-1-3 in the implementation schedule of the Project >

Green snail

Phase 1 of the Project transplanted the broodstock of green snails to Mangaliliu and Lelepa Island.

¹ The owner of the beach is from Lelepa Island, one of the project sites.

² This indicates that it takes five years to grow *Tridacna squamosa* to a releasable size. It is apparent that releasing seeds only for fishing is not viable from an economic point of view. The seed production plan for *Tridacna squamosa* should be reconsidered, comprehensively taking into account the positive and negative sides, such as protection of the species and tourist development.

Observations by the Project confirmed that the released broodstock group settled into the environment. Moreover, it is highly likely that the broodstock group is already reproducing. Young, small green snails, which appeared to have been reproduced from the broodstock group, were found around Hat Island. On the other hand, it is not possible to understand the current condition of the broodstock group released around Moso Island owing to a long period for which information is not available.

Tridacna gigas

Tridacna gigas, released by Phase 1 of the Project, are growing without any problems. As they are gaining in size, they are starting to be utilized as a tourist attraction. However, community members have no clear ideas about how to effectively utilize *Tridacna gigas*. Community members also need to possess appropriate knowledge on the species to be able to explain it to tourists. The Project will consider producing an easy-to-use brochure to provide information to community members and tourists.

(4) Begin monitoring the released broodstock and seeds

<D-1-4 and D-1-5 in the implementation schedule of the Project >

The Project requested that the Secretariat of the Pacific Community (SPC) collect and synthesize information on the broodstock release around north Efate. The results of collecting and synthesizing the information will provide a base for the VFD and community members to design the monitoring method. The Project has collected as much available information as possible on related activities of Phase 1.

(5) Begin establishing standard methods for community ranching of marine shellfish

<D-1-6 in the implementation schedule of the Project >

The VFD and community members are currently implementing the trial of formulating the broodstock group for green snails and *Trochus*. As for *Trochus*, this method has already been established. Therefore, the necessity for the Project to validate it in Vanuatu is not high³.

Regarding the green snails, no precedent exists elsewhere. The Project may be able to achieve the most positive output.

Concerning *Tridacna maxima*, the Project is currently implementing trials of resource enhancement through an ocean nursery on Moso Island (a community of Sunae and Tasiriki)⁴.

Resource enhancement activities performed by communities were confirmed at all sites except

³ A fish ban on *Trochus* is effective for formulating the broodstock group. The results indicate that government-led (rather than community-led) resource management is most effective.

⁴ *Tridacna maxima* is used for the ocean nursery primarily because the VFD needed to clear the stock in the hatchery. Beginning next year, the ocean nursery will be continued with *Tridacna squamosa*. As the farming of giant clams (*Tridacna spp.*) is almost established, it is important to analyze the condition to make farming economically viable and to introduce giant clam farming as an income-generation activity or motivation for CBCRM.

Mangaliliu. They maintain groups of *Hippopus hippopus* and *Tridacna squamosa* in the reef right in front of the community⁵.

(6) Establish the CBCRM plan including the shell marketing plan

<D-1-7 in the implementation schedule of the Project >

As explained in a previous section of the report, the Project is currently implementing ocean nursery trials of giant clams. *Tridacna maxima*, currently used in the trial, is not biologically suitable for the ocean nursery. Moreover, its commercial value as an ornamental fish is not high because of its plain color. Therefore, the Project will change the species to *Tridacna squamosa*. Seed production of *Tridacna squamosa* with ornamentally good color is not easy. The Project is considering the possibility of developing a business model with *Tridacna squamosa* as an ornamental fish even though there is technical difficulty involved in producing seeds with ornamentally good color.

The results of this trial and of Phase 1 of the Project will provide the base for the business model.

2.1.2 Improve the capacity of the VFD to provide coastal fishing communities with technical assistance for CBCRM

<D-3 in the implementation schedule of the Project >

(1) Hold a training program to support CBCRM

<D-3-2 in the implementation schedule of the Project >

At the urging of the VFD, the Project conducted a workshop on Institutional Development and Organization Strengthening (ID/OS) to analysis how the VFD can strengthen CBCRM.

First, participants analyzed their stakeholders. Second, they analyzed external factors affecting the VFD's activities to improve CBCRM. Third, they analyzed internal factors affecting the VFD's activities to improve CBCRM. Fourth, they selected strengths, weaknesses, opportunities, and threats that were of higher importance than others. Finally, they formulated a draft strategy for the VFD to support CBCRM through the cross analysis of Strength, Weakness, Opportunity, and Threat (SWOT).

The method used in the workshop is applicable for the analysis and strategy development of any organization. The Project expects the VFD to utilize the method to strengthen community organizations such as resource management committees. Appendix 3 shows the outputs of the workshop (stakeholder analysis, external factor analysis, internal factor analysis, and strategy table).

The formulated strategy shows the current capacity of the VFD. The Projects re-arranged the formulated strategy into an objective analysis in order to clarify the relationship of each strategy and extract the core strategy as shown in the figure below.

⁵ This grouping by community members made it possible to formulate the broodstock group released by Phase 1 of the Project. The Project expects that supporting the extension of broodstock grouping among the community will have positive effects on increasing resources. For example, if the ocean nursery is successfully introduced among dive and spear fishers, it will ease the fishing pressure on the reef fishes.

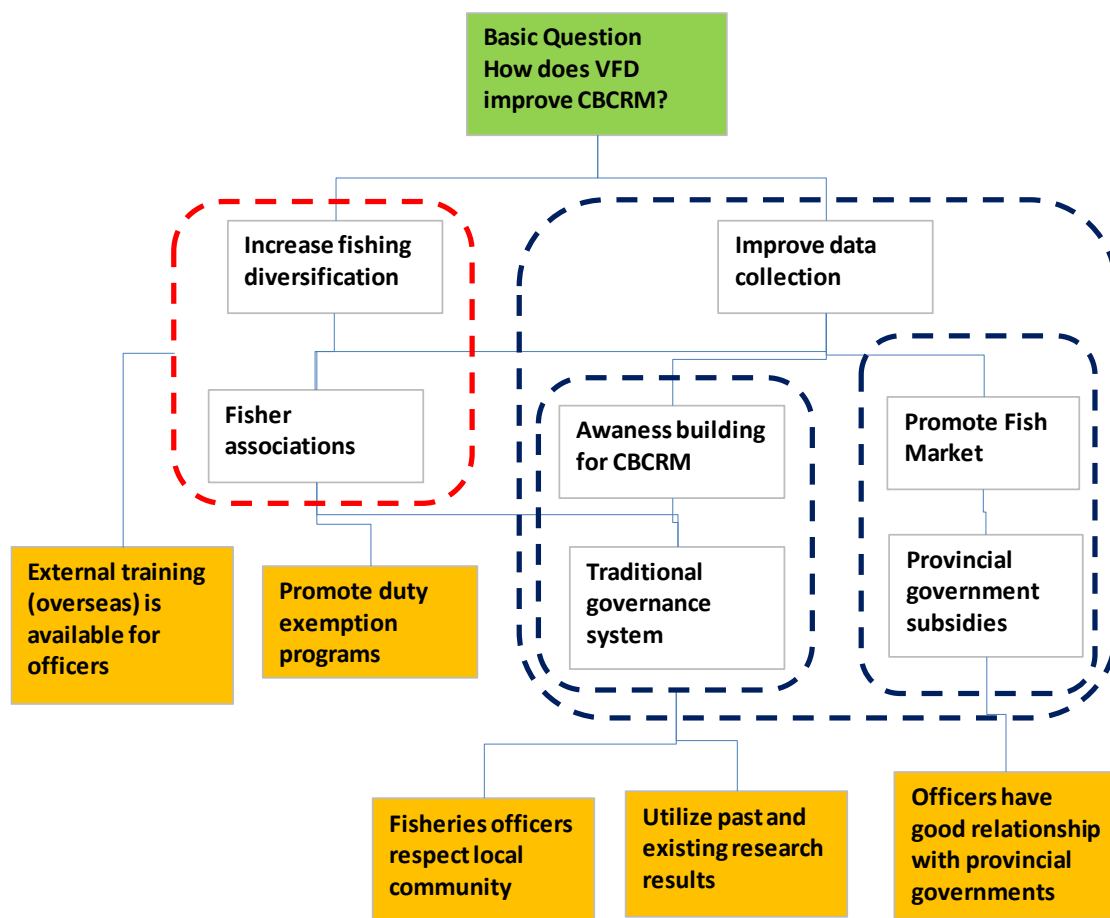


Figure 1: CBCRM supporting strategy of the VFD

*Colored boxes indicate the strengths and opportunities of the VFD

The main strategies are fishing diversification and improvement of the data collection system.

Fishing diversification strategy seeks to develop fishery by targeting out-of-the-reef resources, which are currently underutilized. For local people, this almost means the development of a completely new fishery. The Project will organize fishers, utilizing the traditional community governance system to effectively diversify the fishery and avoid conflict in the community. The VFD has options to provide tax exemptions for fuel for organized fishers. In addition, the VFD has human resources with the knowledge necessary to organize fishers and diversify fisheries; they obtained this knowledge through overseas training.

The strategy to improve the data collection system seeks to organize fishers, raise awareness, and promote the fish market. Organizing fishers and raising awareness of CBCRM will be conducted through the community's traditional governance system. It is important to utilize VFD's good relationship with the community and provide feedback to the community through such things as stock assessment results accumulated by the VFD. Building closer relationships among community

members, the chief, and the VFD will strengthen the data collection system. The VFD can offer tax exemptions to the fisher organizations that provide the data.

2.2 Output 2

2.2.1 Conduct a participatory baseline survey at target areas with the VFD

<E-1 in the implementation schedule of the Project >

(1) Conduct a participatory socioeconomic survey and coastal fisheries resource evaluation at the target sites

<E-1-1 in the implementation schedule of the Project >

The Project conducted a baseline survey from mid-May to mid-August 2012. The survey consisted of three parts: (1) the socioeconomic structure of target communities by questionnaire, (2) problem/objective analysis workshops for CBCRM and a fishing ground map and fish calendar workshop with the Rapid Rural Appraisal (RRA), and (3) a workshop on the institution analysis for the VFD. The details of the workshop outputs are presented in Appendix 4.

(2) Analyze issues on the basis of the results of the coastal fisheries resource evaluation and socioeconomic survey

<E-1-2 in the implementation schedule of the Project >

The Project extracted the issues on the CBCRM in each site from the comprehensive analysis of the baseline survey results. Please refer to (2)-2 “Formulate draft CBCRM plans at the respective target sites” in 2.2.3. “Organize coastal fishing communities and formulate the CBCRM plan for the respective target sites with the VFD” for details.

(3) Share the results of the baseline survey with the coastal fishing communities

<E-1-3 in the implementation schedule of the Project >

The Project shared the main results of the baseline survey with the communities as it simultaneously explained the framework of the pilot projects to be implemented after the baseline survey. In order to formulate the CBCRM plan, it is important to encourage community members themselves to understand the data and objectively make the plan. With this in mind, the Project will support the CBCRM plans by sharing the data on the baseline results and the progress of the pilot projects with the communities.

2.2.3 Organize coastal fishing communities and formulate the CBCRM plan for the respective target sites with the VFD

<E-2 in the implementation schedule of the Project >

(1) Support and strengthen the organization of coastal fishing communities

<E-2-1 in the implementation schedule of the Project >

The Project conducted participatory workshops three times in each of the target areas to analyze current situations and issues related to CBCRM and discuss countermeasures. Participants prioritized possible countermeasures. Based on the results of these workshops, the Project created the framework of the pilot projects.

These workshops were a preparatory step to strengthen the organization of coastal fishing communities. The Project encouraged participants to analyze their own problems comprehensively and reach a consensus. This experience will serve as the base for the formulation of an effective CBCRM plan.

(2) Formulate draft CBCRM plans at the respective target sites

<E-2-2 in the implementation schedule of the Project >

(2)-1 Extract the issues from the existing CBCRM

First, the Project reviewed the existing CBCRM plans (refer to Appendix 5 “The outline of the CBCRM plans and its review”). Each site, Efate, Malakula, and Aneityum, has a CBCRM plan. To some extent, each CBCRM plan includes not only components of coastal resource management itself, such as limiting fishing activities, but also supports components such as fishing diversification and alternative income generation.

The results of the baseline survey showed that Marine Protected Areas (MPAs) in target communities are relatively respected except for some of the communities in Efate. On the other hand, most of the activities in the CBCRM plan have not been realized other than respecting MPAs. It also showed that sustainability of MPAs requires CBCRM activities to be more persistent. The Project identified the following issues in the existing CBCRM plans.

- The existing CBCRM plans have rules and enforcement measures for CBCRM. However, they do not mention concrete activities, institutions, and organizations to support CBCRM⁶.
- More concretely, CBCRM plans mention fishing diversification and alternative income generation through tourism development; however, they do not mention how these will be accomplished or who is in charge of what activities.

(2)-2 Planning the draft approaches for coastal resource management

The Project clearly identifies the issues in each target site with the table below before planning the draft approaches for coastal resource management.

⁶ For example, the CBCRM plan for Crab Bay (Malakula) mentions the possibility of tourism development for the fund generation to implement coastal resource monitoring; however, there is no mention of how they will implement the plan. Likewise, the CBCRM plan for Lelepa and Mangaliliu includes some ideas for alternative income generation; however, it does not mention how it will be accomplished or who is in charge of what activities.

Table 1: Issues in each target site

| Site | Aneityum | Malakula | Efate |
|--------|---|---|--|
| Issues | <ul style="list-style-type: none"> High demand for the partial opening of MPA among the community members Excessive reliance on spiny lobster resource for income generation because it is the only fisheries product sold to foreign tourists who visit Aneityum by cruise ships | <ul style="list-style-type: none"> Many communities (16) are involved in the resource management in the Crab Bay Considerable differences among member communities of the resource management committee in terms of resource use and socio-economic conditions, which undermine the effectiveness of resource management Weak monitoring and surveillance capacity of the resource management committee because of the shortage of funds | <ul style="list-style-type: none"> Low rate of compliance with existing management measures and frequent disputes among resource users Conflict between resource users from different communities over the overlapping fishing ground Lack of readiness and awareness to work together among stakeholders |

Upon consultation with the community and the VFD, the Project set objectives to be achieved according to the issues at each site. The Project then formulated the strategy based on the framework for designing CBCRM approaches, as shown in the figure below.

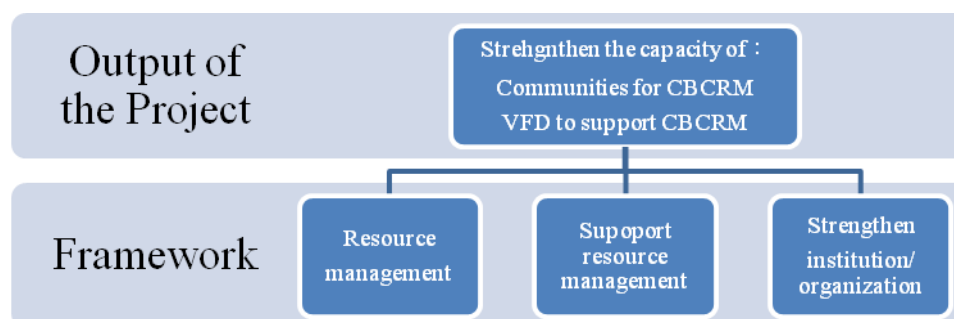


Figure 2: Framework for the designing of CBCRM approaches

The PDM of the Project defines the outputs: (1) capacity of the VFD to support CBCRM is strengthened, and (2) communities in the target areas acquire the necessary skills and knowledge of CBCRM approaches and tools. In order to achieve these outputs, the basic framework is set as follows.

1. Resource management: Measures directly related to resource management
2. Support for resource management: Measures that indirectly support resource management
3. Institution/organization strengthening: Measures to strengthen the institution and organization to

efficiently and effectively manage 1 and 2.

Measures directly related to resource management consist of fishing activity management and resource enhancement. Fishing activity management includes control of the fishing grounds, species, size, legalization of MPA, raising awareness, and so on. Resource enhancement includes marine shellfish propagation.

Measures that indirectly support resource management consist of fishing diversification, creation of an alternative income source, and value addition to the existing fisheries products.

Institution/organization strengthening is a critical base for resource management measures and measures to support them. Target institution/organization includes having a resource management committee in the community, fishers' organization, and the VFD.

Based on the above, the Project made the following framework for the pilot project consistent with the characteristics of each target area.

Aneityum

Objective of the pilot project

Fishing pressure on lobster resources is reduced through diversification of fishing activities and the means of income generation.

Strategy

1. Create community extensionists through a trial of "authorized officers⁷."
2. Create alternative income sources in the tourism industry through the provision of fishery products other than lobsters to tourists on cruise ships, promotion of handicraft sales, and so forth.
3. Diversify fishing through the development of pelagic fisheries.
4. Strengthen resource management by upgrading the catch size limit for lobster.
5. Strengthen the community's resource management committee.

Malakula

Objective of the pilot project

Target resources of the resource management committee are expanded (from land crab to other reef resources) using the enhanced financial mechanisms and management capabilities of the committee.

Strategy

⁷ The VFD can appoint community members as authorized officers where the VFD staff is not assigned, such as Aneityum. However, this rule has not been completely utilized so far.

1. Enhance intercommunity cooperation through coordinated fishing and marketing activities.
2. Add value to fishery products through improved marketing efforts.
3. Diversify fishing through the development of pelagic fishery.
4. Enhance stock through the propagation of marine shellfish.
5. Strengthen the community's resource management committee.

Efate

Objective of the pilot project

The level of compliance with management measures is improved through the enhanced functions of the management units.

Strategy

1. Provide alternative sources of income through the linkage with tourism.
2. Promote intercommunity cooperation through alternative income generation.
3. Diversify fishing through the development of pelagic fishery.
4. Strengthen resource management through a stronger enforcement of MPA.
5. Strengthen the resource management committees in the community.

2.2.5 Set indicators on PDM

<F in the implementation schedule of the Project >

The Project held discussions on the draft indicators proposed by JICA with the VFD and Dr. Veitayaki, director of the School of Marine Studies at the University of the South Pacific (USP), and decided to adopt the draft indicators and considered modifying them if the necessity arises during implementation of the Project (refer to ANNEX IV of Appendix 6 for details of the indicators).

3. Others

3.1 Second Joint Coordinating Committee (JCC)

<M in the implementation schedule of the Project >

The second JCC was held on September 13, 2012, in Port Vila. Government officers from related ministries, VFD counterparts, representatives from the Project sites, the senior advisor from the JICA headquarters, and an officer of the JICA Fiji office participated in the second JCC. Also, staff of the local NGO, regional international organizations such as USP, and the Secretariat of the Pacific Community (SPC) participated in the second JCC as observers (refer to Appendix 6 for the schedule, minutes, and participants list of the second JCC). The VFD staff and the chief advisor of the Project explained the results of the baseline survey and the conceptual framework of the pilot project. The JICA officer from Fiji explained the draft CBCRM evaluation form. The results of the discussion were summarized in the Minutes of the Meeting (M/M). Representatives from JICA, Ministry of

Agriculture, Quarantine, Forestry and Fisheries, the Project, and the VFD signed the M/M. An outline of the results of the second JCC follows.

- Results of the baseline survey

It was confirmed in the second JCC meeting that the results of the baseline survey are useful to understand the current situation of the target sites of the Project and to design the framework of the pilot projects. Moreover, it was recommended that the results of the baseline survey should be published under the name of the VFD staff and the Project and made available for the Pacific Island region to serve as an important source of information in understanding the coastal communities in the region, after adding literature reviews and a more detailed resource survey.

- Conceptual framework of the pilot projects

The conceptual framework of the pilot projects, including the main issues concerning CBCRM, opportunities, difficulties, objective of the pilot project, and strategic elements of project interventions, was approved by the second JCC⁸.

The Project will determine concrete activities and the implementation schedule of the pilot projects based on this framework upon consultation with the VFD and target communities.

- Indicators of the Project

CBCRM should be evaluated not only by the end result but also by the process. With this in mind, the Second JCC approved the draft CBCRM evaluation form with various criteria depending on the development stage of CBCRM⁹. The project will collect the baseline data based on this form. The same form will be used to monitor and evaluate the pilot projects¹⁰.

-Publicity of the project

The second JCC pointed out that there has not been enough publicity for the Project so far. The Project is expected to produce a brochure by the end of 2012.

-Partnership with regional and local organizations

In the statement of regional and local organizations that attended the meeting, coastal resource management-related activities conducted by respective organizations are introduced. The second JCC confirmed that sharing information and establishing a collaborative partnership with these organizations are important in terms of providing more benefits to the coastal communities.

⁸ Refer to ANNEX III of the M/M (Appendix 6).

⁹ Refer to ANNEX IV of the M/M (Appendix 6).

¹⁰ The CBCRM evaluation form is a draft and is subject to change in the actual application.

Currently, the Project, through the official channel from the VFD to SPC, is requesting a budget to dispatch experts to conduct the stock assessment survey to confirm the reproduction of the green snail broodstock released by Phase 1 of the Project and seed production of the green snail. With IRD, the Project was provided with the results of the marine shellfish stock assessment survey in Efate and Aneityum. The Project provided IRD with the results of the baseline survey. The local NGO, Wan Smol Bag Theatre, provided the Project with videos to raise the awareness of the coastal resource management. The Project team keeps Wan Smol Bag Theatre informed of progress being made on the Project.

4. Schedule from October 2012 to March 2013

In October 2012, the Project will start preparing the pilot projects. First, the Project will make the draft CBCRM plans with the target communities. Second, the Project will start the field test of the CBCRM approaches and monitoring through the implementation of pilot projects. In parallel, the Project will undertake the following activities, as indicated in the implementation schedule (Appendix 1).

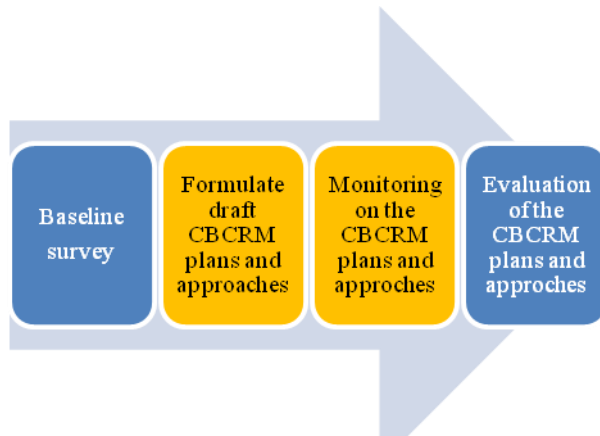


Figure 3: Framework of the pilot projects

Output 1

4.1 Improve the management capacity of the VFD in seed production and ranching of marine shellfish

<D-1 in the implementation schedule of the Project >

(1) Formulate a management plan of the hatchery facility

<D-1-1 in the implementation schedule of the Project >

The management plan of the hatchery facility

The Project created the first version of the plan in July 2012. The Project will review and update the plan in January 2013.

Maintenance of the hatchery facility

Some of the concrete tanks in the hatchery drain water. The shellfish that were kept in these tanks have been removed, and it is now possible to fix the water drainage. The VFD will be in charge of this, and the Project will monitor the progress so that the tanks will be ready for the spawning trial of *Tridacna squamosa* planned in October 2012.

Pump and water inlet facility

The Project, together with the VFD, will continue daily maintenance activities.

(2) Support the production and release of shellfish seeds

<D-1-2 in the implementation schedule of the Project>

Seed production

The spawning trial for *Tridacna squamosa* is planned in October 2012. The wild broodstock of *Tridacna squamosa* will be brought from Malakula to the VFD hatchery by choosing individuals that have ornamentally good color. With the broodstock, the Project and the VFD plan to produce the seeds for the ocean nursery. However, an excessive amount of seeds can be released into the natural environment after three years in the hatchery.

The spawning trial for green snails is planned in November 2012. The broodstock will be a mix of the ones borrowed from Lelepa Island and others in the VFD hatchery (F1, produced in 2007). The seeds will be used for release into the natural environment. Like *Tridacna squamosa*, it will take approximately three years for green snail seeds to grow big enough to be released.

These spawning trials will be performed by the VFD. If the VFD implements the trials as scheduled in the management plan, the Project member in charge of marine shellfish propagation will arrive in January or February 2013 and follow up with seed growth. At the same time, the Project member will evaluate the technical level of the VFD for spawning and seed production and offer advice for improvement. If the spawning trials by the VFD are unsuccessful, the Project member will arrange and implement additional spawning trials.

Support for the release of shellfish seeds

The Project plans no more releases of shellfish seeds, as it is impossible to grow the seeds to the release size within the Project period. However, the VFD keeps 36 broodstock of green snails. The Project will consider releasing this broodstock after the spawning trial. The Project will also consider releasing *Trochus* under 2 cm in size kept at the VFD hatchery if they grow to a releasable size.

(3) Confirm the current condition of broodstock groups and the addition of new broodstock

<D-1-3 in the implementation schedule of the Project >

The Project is coordinating the survey to confirm the condition of green snail broodstock on Moso Island to confirm the current condition of the released broodstock of green snails and their reproduction along the coast of north Efate in collaboration with the VFD and SPC.

As for the green snails and *Trochus* released on Uripiv Island, the VFD counterpart will conduct regular monitoring until they settle into the environment, as defined in the guidelines prepared by Phase 1 of the Project.

(4) Begin monitoring the released broodstock and seeds

<D-1-4, D-1-5 in the implementation schedule of the Project >

The Project will consider the monitoring method for green snails in north Efate based on the survey conducted by IRD and SPC. The monitoring method consists of a detailed stock survey by the VFD and simple observations by the local community. Since these two activities are quite different, it is

important to discuss and build a common understanding among the stakeholders. This holds true for the monitoring of *Trochus* and green snails released to Uripiv Island as well.

(5) Begin establishing standard methods for community ranching of marine shellfish

<D-1-6 in the implementation schedule of the Project >

The Project will continue the trial of broodstock group formulation for green snails and *Trochus*. The Project will stop the trial of the community ocean nursery conducted with *Tridacna maxima* in February 2013 to review technical and social issues and update the program.

The Project will also collect information on community activities, such as a nursery for *Tridacna gigas*, private stocking of clam shells, and a community-managed clam garden and assess their effectiveness for CBCRM.

(6) Establish the CBCRM plan including the shell marketing plan

<D-1-7 in the implementation schedule of the Project >

As mentioned earlier, the Project will continue the trial of the community ocean nursery. The *Tridacna maxima* grown by the community will be commercialized to confirm its economic value. The Project will then conduct a midterm evaluation on the ocean nursery program.

4.2 Improve the capacity of the VFD in its implementation and data analysis of baseline surveys

<D-2 in the implementation schedule of the Project >

(2) Formulate and verify database formats for survey results

<D-2-3 in the implementation schedule of the Project >

In response to the comment by the second JCC, the Project will conduct an additional survey to supplement baseline information along with the draft CBCRM evaluation form. (Refer to the Report on the Baseline Survey to be submitted by the Project at the end of November 2012.)

4.3 Improve the capacity of the VFD to provide coastal fishing communities with technical assistance for CBCRM

<D-3 in the implementation schedule of the Project >

(3) Hold a training program for proper approaches to CBCRM

<D-3-1 in the implementation schedule of the Project >

(4) Hold a training program for supporting CBCRM

<D-3-2 in the implementation schedule of the Project >

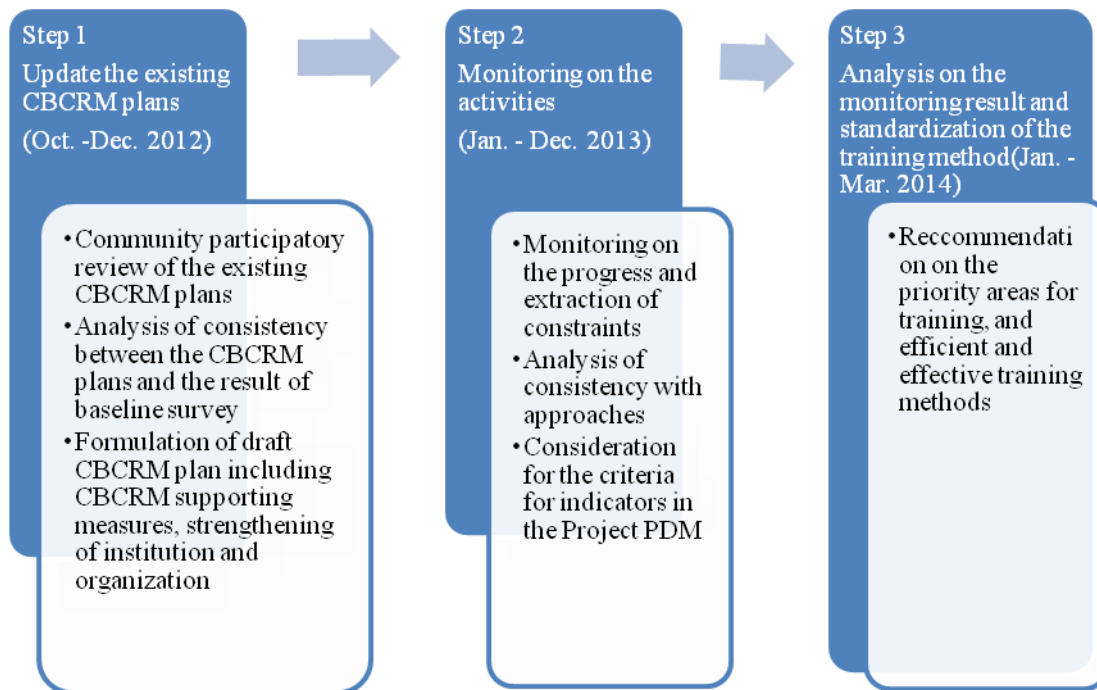


Figure 4: Training for the CBCRM support

The project will conduct On-the-Job-Training (OJT) during the implementation phase of the pilot projects for (1) and (2). The implementation framework consists of three steps, as shown in Figure 4.

Step 1 (Review and update the existing CBCRM plan)

-Training through the review and update of the CBCRM plan

The Project will facilitate the review and update of the existing CBCRM plan by the community, showing the results of the baseline survey. At the same time, the Project will encourage the community to include concrete measures to support measures for CBCRM and to strengthen the institution and organization.

The Project will select appropriate VFD counterparts and provide training on specific areas, such as FAD, shell crafting, and marketing for fishery products so that the VFD can improve its capacity to support the community for CBCRM. The Project seeks to improve the VFD's capacity to formulate a practical CBCRM plan by providing opportunities for the VFD staff to create plans, taking into account various perspectives offered by the community. The Project also sets the specific criteria for the draft CBCRM evaluation form to build a consensus on the progress of the Project.

Step 2 (Monitoring the activities)

-Training through monitoring the pilot projects

The Project, together with the VFD and communities, will monitor the effectiveness and constraints of each CBCRM activity and the synergy effect among different CBCRM activities. For this purpose,

the Project will set the monitoring indicators. Monitoring will continue until the end of the pilot projects. The Project considers the period from October 2012 to March 2013 for the trial of the draft indicators. The indicators will be set, applied, and modified if necessary. The counterparts from the VFD will improve the capacity to evaluate the effectiveness of CBCRM approaches by setting the indicators, monitoring the pilot project with the indicators, and evaluating the indicators in consultation with the community.

Step 3 (Analysis of the monitoring result and standardization of the training method)

-Training through the analysis of the monitoring results and formulation of the guidelines for the training

Based on the monitoring results, the Project will identify the priority to improve the VFD's capacity to support the CBCRM. The VFD will acquire knowledge and extension methodology for the comprehensive CBCRM through the process of identifying the priority and considering effective training and guidelines of the training.

*To be implemented after April 2013

4.4 Organize coastal fishing communities and formulate the CBCRM plan for the respective target sites with the VFD

<E-2 in the implementation schedule of the Project >

(3) Support and strengthen the organization of coastal fishing communities

<E-2-1 in the implementation schedule of the Project >

The Project strengthens the organization of coastal fishing communities so that they can continue resource management on their own initiative with support from the VFD, even after the Project is completed. In particular, the Project will encourage the VFD staff to persuade coastal fishing communities to identify problems in the existing CBCRM plan and consider countermeasures by themselves, even in the absence of Project members. The pilot projects will provide benefits. The Project will present opportunities for community members to select the beneficiaries and decide how to redistribute the benefits within the communities. During implementation of the pilot project, the Project will help the communities monitor compliance with the decision made by the communities. Through this process, the Project will support and strengthen the organization of coastal fishing communities.

(4) Formulate draft CBCRM plans at the respective target sites

<E-2-2 in the implementation schedule of the Project >

The VFD staff and resource management committee members will formulate the draft CBCRM plan with three components. (Refer to step 1 of 4.3 for details.)