

South Pacific Regional Environment Programme

INDICATORS OF SUCCESS

SOUTH PACIFIC

BIODIVERSITY CONSERVATION PROGRAMME



**VOLUME 6—KEEPING TRACK OF CHANGES
IN ABACA, KOROYANITU**

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August 1999

Indicators of Success for the South Pacific Biodiversity Conservation Programme



Volume 6 – Keeping Track of Changes in Koroyanitu Conservation Area

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AUGUST 1999

Cover

top panel, left to right

Cliffs and secondary forest in Koroyanitu National Heritage Park

Preparing local foods in Vatthe Conservation Area

Seafoods captured in Vaoto Bay, Uafato Conservation Area

bottom panel

Kava drying in Uafato Village

THE KOROYANITU REPORT

KEEPING TRACK OF CHANGES IN ABACA, KOROYANITU CONSERVATION AREA

PREFACE

This brief report was prepared specifically for the people of Abaca village in the Koroyanitu Conservation Area, in Fiji. It accompanies a consultancy report prepared for the South Pacific Biodiversity Conservation Programme (SPBCP) of the South Pacific Regional Environmental Programme (SPREP). Although written in English it is the hope of the consulting team that this report will be translated into Fijian.

INTRODUCTION

Abaca is one of 6 villages inland from Lautoka, Fiji, that have together agreed to set aside part of their land as a conservation area. The special features that make their area very important are the presence of one of the few last stands of submontane *dakua makadre* (kauri) forest and an extensive nesting area for the now rare native *ga-ni-viti* (Peregrine falcon). In addition, this area has at least 11 plant species that have been found only here and nowhere else in the world. The Fiji government nominated this area to be one of 17 Conservation Areas (CA) under the SPBCP. The 17 CAs are scattered in 12 different island countries of the Pacific.

The idea of setting aside a conservation area that the SPBCP has is not the same as the idea that most countries of the world have followed up to a few years ago. Before, when a piece of land was set aside for conservation, people were usually restricted or forbidden from entering and using the area. The idea of the SPBCP is to let the people who own the area continue to use it, but in a way that enables the natural populations of plants and animals that live in the area to continue to survive. This is what some people call sustainable use of resources. Not only will this generation but also the next and the ones after them will continue to enjoy the use of the same population of plants and animals that survive now. This does not mean that people cannot cut plants down or hunt wild animals or catch fish and shellfish. What it means is that people do continue to do these things to survive, but do them in a way that

allows the plants and animals to grow new ones that enable the next generations to survive.

This means that the way the resources are being used or managed is extremely important. Management includes the rules that are made by the community about who should use which resources, when the resources should be harvested, how much, when and where. Not only must the rules be fair to everyone, they must also be followed and be policed.

All the CAs under the SPBCP are supposed to be managed by the communities of landholders themselves, facilitated by a local officer (CASO) funded by the SPBCP. The activities of the CASO are guided by a national body, which in Fiji is the Native Land Trust Board. The CASO has a heavy responsibility of helping the communities learn the skills and knowledge for managing resource conservation. Managing a conservation area that is continually being used in a way that does not gradually destroy it is very difficult. This is why the SPBCP and the CASOs are there to help advise the community with management issues.

One of the most important tools for management is to regularly keep track or monitor what is happening, so that if anything begins to go wrong, it is addressed before it is too late. The SPBCP recognised that it will need to help the communities that manage the 17 CAs under its programme to monitor what is happening in their own areas. It is for this reason that the SPBCP appointed a 3-person team to come up with some suggestions on how this might be done. The team visited 3 CAs - Uafato in Samoa, Koroyanitu in Fiji and Vathe in Vanuatu. The team has produced a report for the SPBCP. In addition, the team felt the need to report also to the individual communities to explain the findings to them. That is why this report was prepared for the people of Abaca.

STEPS IN CONSERVATION MANAGEMENT

In order to manage a conservation area well, a community has to make clear decisions in several steps that together form a management system. These are as follows:

1. **SETTING A GOAL** - The community has to be clear about its long term purpose or goal. In Abaca the team understands that the goal of the community is to ensure through wise use, the survival of a large enough area of native forest and its wild life so that it is sustained for future generations. This would agree with the SPBCP goal of " the conservation of biodiversity by means of the sustainable use of biological resources by the people of the South Pacific."

2. SETTING OBJECTIVES - The community then identifies the specific objectives for achieving the long term goal.

For Abaca villagers these were:

- To develop a community-based structure for project planning and management;
- To formulate a management plan;
- To plan for and implement eco-tourism activities in the CA;
- To identify and implement sustainable options for improved agriculture.

3. PLANNING ACTIVITIES - Once the objectives are clear and all sectors of the community like the chiefs, the elders, the women, the youth are agreed, the activities that are needed to be done need to be identified and agreed to. Wide participation of the community is necessary here because the whole community will need to be involved in supporting the necessary activities.

In Abaca, the main activities were to be:

- The setting up of a management committee to manage the CA;
- The preparation and implementation of a management plan;
- The setting up of a cooperative to run the eco-tourism business;
- The identification and implementation of improved agricultural practices.

4. IDENTIFYING OUTPUTS AND OUTCOMES - The community has to be clear just what kind of immediate and direct result it expects from all the activities it plans. These results are what are sometimes called outputs. In addition, the results of activities are also long term and indirect. These are usually known as outcomes.

In Abaca the main expected outputs were:

- A working and effective management committee;
- An active and well run cooperative body;
- A practical plan for managing the CA that is being implemented;
- A practical plan for improving agricultural practices that is also being implemented.

The main outcomes are expected to include:

- Conservation of the native forest in the Core Conservation Area;
- Recovery of the native forest that has been destroyed in the Core Conservation Area;
- Recovery of the secondary forest and scrubland from areas cleared by repeated fires and cultivation at the margins of the Core Conservation Area;

- Maintenance of the wild life population at current levels both in the forest and the waterways;
- Maintenance of the quality of the water in the waterways;
- Maintenance of the important cultural features of the Abaca landscape;
- Improvement in the quality of life of the Abaca people because of the improvement in environment quality;
- Improvement in economic life of Abaca people due to increased income from tourism and associated activities, as well as improved agricultural methods.

5. IMPLEMENTING AND MONITORING - When the activities are agreed to and their expected results are clear, it is necessary to set up a system to keep track of changes to find out whether the Conservation Area is achieving what it was set out to do. How will the community know that what it plans to happen is actually happening? How will it know if anything is going wrong? This is done by the process known as monitoring. To monitor what is happening in a Conservation Area, or in an area of concern, the community has to know what is happening with the plant life and wild life, what is happening with those natural resources that people use, and what is happening with the people and the society as a result of the activities associated with the Conservation Area.

In conservation activities it is important to have the monitoring system as part of the implementation of the planned activities for conservation. The two should be closely associated because monitoring feeds back to management and warns it about any likely problems. Decisions can be taken to avert problems before they become too serious.

6. MONITORING ACTIVITY FEEDS INTO MANAGEMENT AND NECESSARY CHANGES ARE MADE IN OBJECTIVES OR ACTIVITIES, OR BOTH.-

Good management is a cycle that keeps moving forward and improving its effectiveness. As the system of keeping track of changes, known as monitoring feeds information back into management, decisions are made to adjust procedures. This may involve changes in objectives which will in turn involve changes in activities and therefore also involve changes in things to be monitored and methods of monitoring. There is continuous learning, and applying what is learned, to improve how resources are managed.

WHAT CHANGES TO KEEP TRACK OF IN ABACA

The consulting team stayed in Abaca village for two days. The main purpose of the team's visit was to try to help SPBCP set up a system of monitoring that the people of Abaca can use to keep track of changes in the conservation area and in their village. The team was very pleased to meet with the chief, with individuals and with groups of men and of women of that village. During these meetings the team gathered the following types of information:

What the village men and women considered important, and useful about the Conservation Area.

This information guided the team in discovering what kinds of things are valued by the people. This in turn would show what the people consider important in deciding whether their efforts for conservation have been successful. So the team had to take these into account in deciding what changes were important to keep track of.

The types of housing, the social services and the kinds of skills that people have in the village.

This information would give an indirect indication of income through looking at the standard of life in the village, and whether the people have the skills to improve it further through use of existing productive skills. It is assumed that as opportunities increase for cash earning, people will use existing skills to increase their income. As income increases the people will improve their housing and social amenities. So keeping track of changes in these will give some indication of changes in income and in standard of living and the way in which these skills are used in managing the resources of the Conservation Area.

The organisations that exist in the village, their functions, history and membership.

This information would indicate whether the village works together well as a community and how well it manages its affairs as a village. Well run organisations that have existed for a long time in the village show that the community has long experience of working well together, and has some management capacity. These are important for the success of management efforts for the biodiversity of the Conservation Area.

The physical features and main kinds of plant and wild life in the conservation area.

This information helped the team to decide how the changes that occur in the native forest and in the rivers may be tracked.

IMPORTANT CHANGES IN ABACA AND THEIR INDICATORS

The decision about what to monitor in Abaca was largely made by the villagers themselves with help from the team. How these may be monitored was then the task of the team. In deciding this the team had to identify changes that can be easily seen and /or measured. These are called indicators. We report here those features of the conservation area and of life in Abaca village which need to be monitored, along with suggested indicators for monitoring them.

1. *IN THE CONSERVATION AREA.* The men and women of Abaca consider as very important and of top priority only two features -

- natural heritage and ecology of their area;
- the services the Conservation Area offers for tourism.

The team notes that if the people of Abaca consider these things very important then these are the features of their conservation area that they wish to conserve. Therefore if they are to keep track of how successful their management is, they need to monitor the extent to which their natural heritage and ecology, and the services the area offers to tourists, remain undamaged with use. Therefore the team looked for ways in which such changes can be measured. This it has done by suggesting some indicators that people can look at to measure the changes happening. These indicators are listed in Table 1 which is titled "Biodiversity Indicators".

TABLE 1. BIODIVERSITY INDICATORS

Area of vegetation types and dominant species composition	Area of reeds in grassland
Extent of weed invasion into primary forest	Frequency, severity and extent of fire
Bird populations and species composition	Water quality in the river
Plan of management for natural resources	Population size and distribution of each endemic plant species
Number of breeding pairs of Peregrine falcon surviving in the wild	Population size and distribution of native Fiji frog.

2. *THE RESOURCES ON WHICH PEOPLE DEPEND FOR CASH AND SUBSISTENCE.* The resources that the men and the women groups of Abaca consider very important, or important and of high priority are those that support tourism and handicraft for tourists, root crops (specifically, cassava, kumala, wild yams, dalo, dalo ni tana), bananas, seasonal wild fruits, kava and rourou (dalo leaves). The women placed high priority on bamboo for building material while the men considered timber, reeds for thatches and medicinal herbs important.

The team therefore concluded that these are the resources the people would like to keep in plentiful or sufficient supply for their needs. The status of their supplies would provide a measure of the people's success in conservation management. The indicators that the team suggests that could be used to keep track of what is happening with these resources are listed in Table 2 under the heading "Resources Indicators".

TABLE 2. RESOURCE INDICATORS

Development and implementation of an effective plan of management for tourism	Number of tourists visiting the CA
Area and location of kava gardens	Annual income from kava
Cash crop index	Subsistence crop index
Subsistence wild harvest food index	Use of reticulated water for drinking water without pre-treatment
Water quality measurements for human health	

3. *THE HEALTH OF THE PEOPLE AND OF THE COMMUNITY AS A WHOLE.*

The team looked at people's housing conditions, their water supply, the way they deal with human waste, the total village population, and the health of their children to give some indication of the state of health of the people of Abaca. The following were the conditions at the time of the visit.

Houses

The team found that there were 13 households in Abaca, but a total of 30 houses. Most households cook in a separate house from one used for eating and sleeping.

Toilets

Three households use pit toilets, while 10 use pour flush ones and the community has two septic tank toilets with showers for visitors to the village.

Reticulated water

Every household has at least one water tap. Water supply comes from a spring in the Core Conservation Area.

Electricity

The village is not electrified, but 2 households have their own small generators while the CA office has photovoltaic lighting.

Cooking fuels

Every household cooks with wood. Seven households supplement wood with kerosene, while 5 household use bottle gas to supplement wood as cooking fuel. Only one household depends entirely on wood. The guest lodge uses bottle gas.

Health care

The village has no clinic. Traditional medicine as well as modern medicine are both used. Hospital facilities are available close by in Lautoka and Nadi.

4. HEALTH OF THE COMMUNITY

The team also looked at the health of the community as a unit. This would be indicated by how well people work together to keep the community alive as a unit. For example, if people participate well in an activity they are likely to be happy with that activity and with working along with other members of the community to keep the activity alive. In Abaca, such an activity is the tourism business, for example. All 13 households participate in some way in the tourism business.

Looking at the health of a community would also include looking at the means whereby the people earn cash income and how equitable the distribution of that income is in the village. If only a few people earn cash income from an activity that brings in a lot of money and most others are not involved, it is likely to lead to some ill feelings within the community and possible conflict related to the distribution of benefits. In Abaca for example, growing kava brings in quite a lot of cash. Only 2 of the 13 households do not sell kava.

The indicators that the team suggests for keeping track of changes in these aspects of the health of people and the community of Abaca are listed in Table 3 titled " Health Indicators"

TABLE 3. HEALTH INDICATORS

Children's growth statistics	Population size and structure
Participation rate of all groups in activities for village development	Number of village cooperatives operating and with audited accounts
Number of households with traditional skills	Number of people trained for business and resource management posts
Type of house construction and number of appliances	Income to the village from tourism
Proportion of households involved in tourism activities.	

WHO WILL BE RESPONSIBLE?

If everyone involved (SPREP, NLTB, Abaca villagers) agrees that the indicators are worth keeping track of, then some organisation or body has to be responsible for doing the work. There are several steps necessary in the process of monitoring indicators and in feeding the information back to management for necessary action. These are:

MEASURING CHANGES → PUTTING THE INFORMATION TOGETHER → INTERPRETING THE INFORMATION → PRESENTING IT IN UNDERSTANDABLE FORM FOR MANAGEMENT → CARRYING OUT MANAGEMENT DECISION → REDESIGNING THE SYSTEM OF INDICATORS TO KEEP TRACK OF THE CHANGES BROUGHT ABOUT BY THE NEW MANAGEMENT DIRECTION.

The list of indicators suggested by the team in Tables 1, 2 and 3 are chosen so that most of them can be monitored by the people of Abaca themselves. The people will however need to be trained - first in measuring the individual indicators, then in putting the information together and interpreting them for management.

For some of the indicators however, some outside body has to take responsibility for measuring. This has to be negotiated by the SPBCP. The outside bodies that need to be involved will include the NLTB, other government bodies such as the Departments of Forestry, of Agriculture and of Fisheries and regional organisations such as SPREP.

All these bodies will need to work together to help the Abaca community keep track of changes to its conservation area so that it can continue to manage it well. Very briefly the different roles of these bodies are expected to be as follows.

THE ROLE OF ABACA COMMUNITY

The Abaca village people are the most important people in the management of the Conservation Area near their village. Their role in the measurement and use of indicators is:

- To measure those indicators they can and have been trained to monitor;
- To put the information they gather together and to feed it in to the community management committee as well as to the NLTB and SPBCP through the CASO;
- To make management decisions based on the information from the indicators;

- To ensure no large and avoidable damage occurs to the conservation area or to the forest and wildlife within it.

THE ROLE OF NATIONAL BODIES

The national bodies that will be important for measuring indicators for Abaca include the following:

- The NLTB, which will have to ensure that the indicators are being monitored and being used as they should. The NLTB will have to coordinate the collection of information from the national agencies and feed this into the management system;
- The Department for the Environment, which may be asked to keep track of changes in wild life like native birds and frogs;
- The Forestry Department, which may be asked to help with the measuring of indicators of changes in the native forest and in general changes in land use;
- The Agriculture Department, which may be asked to help with monitoring the market price of agricultural products;
- The Public Health Department, which may be asked to assist with monitoring water quality and with keeping track of children's growth statistics.

THE ROLE OF REGIONAL BODIES

The important regional body for the monitoring process is the South Pacific Regional Environment Programme (SPREP) . This is the body that has the South Pacific Biodiversity Conservation Programme (SPBCP) within it. The SPBCP links Abaca with other conservation areas (CAs) in other countries of the Pacific. All these CAs will need regular aerial photographs to record changes that are occurring to them through time. Aerial photographs are very expensive. It will be more cost effective if these are done as a regional exercise. The SPBCP will have to coordinate the collection of information at regional level and make sure that such information is fed into the management system in a timely manner both at national level and at the community level.

CONCLUSION

A set of indicators to keep track of changes in the conservation area at Abaca has been put together by the people of Abaca and the team of three consultants engaged by the SPBCP. These indicators can be the beginning of an ongoing effort to increase the effectiveness of managing the Abaca

conservation area within the larger Koroyanitu Conservation Area. These indicators are only tools. Like all tools they can only be useful if used effectively, and used with skill for the purpose they were designed for. The team thanks the people of Abaca for their hospitality and cooperation in this exercise and wishes them well in the development and the use of these indicators for the conservation of their beautiful natural heritage.