Foundation of the Peoples of the South Pacific International

Supplementary Livelihood Options for Pacific Island Communities: A Review of Experiences

nzaid

Supplementary Livelihood Options for Pacific Island Communities: A Review of Experiences

Prepared by TANYA O'GARRA
for
The Foundation of the Peoples of the South Pacific International (FSPI)

May 2007

FSPI and community livelihoods

The Foundation of the People's of the South Pacific International is a network of Pacific island non-governmental organisations and overseas affiliates working in partnership across the South Pacific. The partners work "together to build communities in the Pacific" by working with Pacific communities through people-centred programmes to foster self-reliance in a changing world. The main function of the FSPI Secretariat is to coordinate the planning and design of regional development projects, based on the needs identified by the members and their constituencies.

The present study represents the third in a series of evaluations commissioned to better equip FSPI, its affiliates and other national and regional stakeholders to support communities in their quest for sustainable livelihoods. For further information please contact Etika Rupeni (etika.rupeni@fspi.org.fj) or consult the FSPI website.

This report was made possible with funds from NZAid

Cover image: Fisherman haul their catch ashore in Abemama Island, Kiribati, 2001. Courtesy Chris Johnson. Design © by Freesoul Media, Suva. freesoulmedia@gmail.com

Supplementary Livelihood Options for Pacific Island Communities: A Review of Experiences

Prepared by Tanya O'Garra

SUMMARY

THIS report presents results from the Supplementary Livelihoods Options for Pacific Island Communities (SLOPIC) study, carried out by the Foundation of the Peoples of the South Pacific International (FSPI) using New Zealand Aid (NZAid) core funds.

The main aim of this study was to review supplementary livelihood (SL) projects that have taken place across the South Pacific over the past 5 to 10 years, with a view to extracting 'lessons learned' and identifying the determinants of success.

The single most significant finding that emerged from the review process was the lack of documentation of SL efforts. Despite the large number of SL projects that have taken place in the South Pacific over the past 20 to 30 years, there has been almost no monitoring of these projects. As a result, there is no systematically documented information on determinants of success or failure. In the absence of such information, donors and governments are likely to engage in projects and programmes that fail time and again.

Consequently, the present study also involved a modest documentation exercise, involving consultation with thirty-four key individuals (e.g. project officers, directors of organisations, coordinators etc.) from organisations and institutions that had been involved in SL projects around the SP. In addition, a further 10 experts sent reports and other documents to assist in the documentation exercise. A total of 43 projects were documented.

SL projects documented in this way, were described and structured according the 'sustainable livelihoods' framework, used to assist in poverty alleviation projects across the world by UNDP, Oxfam, ODI and the UK Department for International Development (DfID). The SL approach to analysing livelihood strategies amongst the rural poor, is set out in the form of a framework, in which livelihoods are said to emerge from an interaction between the assets (natural, physical, financial, human and social capital) that are available to communities or households, the social relations, institutions and organizations that mediate access to these assets, and external trends and shocks that affect the assets and their availability.

Overall, findings suggest that SL projects in the South Pacific are faced with similar issues to SL projects in other parts of the world, although social and cultural factors appear to emerge more frequently in the SP as key influences on project success.

Results broadly suggest that successful projects (i.e. those which are ongoing after project completion, generating cash without reliance on subsidies, and sustainable) are more likely to have involved baseline studies and continuous monitoring throughout. Regular extension and support were often quoted by experts as drivers for success, as well as good access to markets, and government support. Projects considered 'nonsuccessful' are mostly characterised by inadequate initial feasibility assessments, and insufficient extension and support to overcome existing social conflicts and help improve decision-making.

A simple statistical analysis suggested that project success is significantly related to three factors:

1. Whether the SL project involved an initial baseline study;
2. The extent of leadership support for the livelihood option, and;
3. The social cohesiveness of the target group.

On the basis of the projects reviewed for this study, and on the basis of interviewee opinions regarding the determinants of successful projects, the following key 'lessons learned' can be highlighted with regards to projects in the SP:

- There is a need to assess whether there are existing social conflicts amongst the SL target group, and whether there is a real desire for conflict-resolution
- There is a need to assess extent of leadership support (including village chiefs, heads of local organisations, church leaders), and strength of leadership
- There is a need to assess whether existing decision-making institutions are robust, and whether support is needed to develop stronger decision-making processes

Findings suggest that an adequate consideration of these factors during the initial feasibility assessment of a SL project, will help in the appropriate design and management of a SL project.

Overall, this study has highlighted a number of important issues to consider in the development and operation of SL projects in the SP. However, it is suggested that the findings presented here represent only 'the tip of the iceberg'.

It is recommended that the documentation exercise become a continuous process over time, and that details of specific SL projects be made publicly available. In this way, governments, donors and implementing bodies may use this knowledge-base to help assess the viability of potential projects, by building on past experiences and lessons learned.

1. INTRODUCTION

A perennially recurring theme in FSPI's work around the South Pacific is the demand for income generation options. Although a number of NGOs and projects include this in their workplans, this area is the "donors graveyard" of the Pacific in that for decades donors and governments have promoted all sorts of models for income generation that have almost without exception enriched a few consultants and experts but barely benefited communities at all. With this in mind FSPI has carried out a preliminary, practical and unbiased evaluation of experiences in community-appropriate income generation options in coastal areas of the region in order to prepare the necessary background information and tools for evaluation of options to be used by the communities themselves. The project started in July 2006, drawing on NZAID core funds, and ran until March 2007.

This report is the product of this evaluation of experiences. It is structured as follows: Section 2 presents the "sustainable livelihoods' framework, which is used to systematically break down and analyse all reviewed projects; Section 3 clarifies terms and definitions used in this report; Section 4 reviews the 'lessons learned' literature relating to livelihood projects from around the world, and Section 5 reviews and analyses livelihood-generation projects that have taken place in the South Pacific. Section 5 also identifies key determinants of 'success' and summarises the lessons learned from the projects. Finally, Section 6 concludes with an overview of findings, and a checklist of key factors for communities to consider when evaluating potential livelihood options.

2. ANALYTICAL FRAMEWORK

This paper presents the results of a review of livelihood diversification projects that have been carried out in the South Pacific. Information on these projects was obtained from reports, articles and through extensive consultation and interviews with implementing and supporting agencies.

These experiences are analysed using a "sustainable livelihoods" approach (Scoones, 1998). Within this framework, 'livelihoods' are defined as "the assets (natural, physical, human, financial and social capital), the activities, and the access to these (mediated by institutions and social relations) that together determine the living gained by the individual or household" (p10, Ellis, 2000). A 'sustainable' livelihood is one that does not compromise future livelihoods. The sustainable livelihoods approach evolved throughout the 1980s from a wide array of participatory approaches to poverty alleviation, and was formally consolidated with the Chambers and Conway (1992) publication. Since then, it has been used to assist in poverty alleviation by UNDP, Oxfam, ODI and the UK Department for International Development (DfID).

The sustainable livelihoods approach to analysing poverty alleviation strategies is set out in the form of a framework, in which livelihoods are said to emerge from an interaction between a number of key factors. These factors are presented in Figure 1.

Figure 1: Sustainable Livelihoods Framework for analysis of rural livelihoods

A	B	C	D	E	F
Livelihood platform	**Access modified by**	**In context of**	**Resulting in**	**Composed of**	**With effects on**
Assets	***Social relations***	***Trends***	***Livelihood strategies***	***NR based activities***	***Livelihood security***
Natural capital	Gender	Population		Fishing	Income level
Physical capital	Class	Migration		Cultivation (food)	Income stability
Human capital	Age	Technological change		Cultivation (non-food)	Seasonability
Financial capital	Ethnicity	Relative prices		Livestock	Degrees of risk
Social capital		Macro policy		Nonfarm NR	
	Institutions	National econ trends			***Env. sustainability***
	Rules and customs	World econ trends		***Non-NR based***	Soils and land quality
	Land and sea tenure			Rural trade	Water
	Markets in practice	***Shocks***		Other services	Fish stocks
		Storms		Rural manufacture	Forests
	Organisations	Recruitment failures		Remittances	Biodiversity
	Associations	Diseases		Other transfers	
	NGOs	Civil war			
	Local admin				
	State agencies				

(Source: Allison and Ellis, 2005)

3. DEFINITIONS

"Supplementary livelihoods"

This project will not focus on alternative livelihoods, but rather on supplementary livelihoods. Past experience has shown that rural households generally engage in diverse occupations (Allison and Ellis, 2005; Niehof, 2004; Barrett *et al*, 2001). There are various proposed reasons for this, the main one being that diversification is a form of self-insurance: if one livelihood fails (e.g. fish stock collapse) then the household can still obtain income (whether cash or in-kind) from other activities (Barrett et al, 2001). Thus, throughout this document we will refer to "supplementary livelihood" projects (from hereon, SL), which we believe reflects more closely the nature of livelihood-generating activities in rural communities.

"Successful" SL projects

This review aims to identify common determinants of success, and hence provide some indication of how to ensure that a SL project actually does 'what is says on the cover'. Discussions with experts on the nature or definition of success revealed that there was a general agreement that the main indicator of success is the continuation of a livelihood activity long after the external implementing and funding organisations have left. Western definitions of enterprise or livelihood success are largely

restricted to two factors: profitability and ability to expand into wider market. However, in Pacific Island countries, it is likely that non-pecuniary benefits, such as status and ability to employ others, are considered just as important. If an activity is continued, then we will assume that the benefits are greater than the costs. Note: if an individual or community is actually making a financial loss through the enterprise, then it can be expected that the activity will be discontinued (especially because of lack of access to credit).

Hence, in this report we consider a successful livelihood option one that 1) continues to be used by community after external organisations have left, and also 2) a livelihood that is environmentally sustainable.

4. REVIEW OF "LESSONS LEARNED" LITERATURE

Before we start reviewing and evaluating experiences in the South Pacific, it is necessary to identify existing livelihood diversification review studies, and take note of the "lessons learned" from this literature. This way we can avoid re-inventing the wheel, and instead, build on the existing knowledge base. There are a number of such reports and papers, ten of which are reviewed here. Table 1 lists these studies, and summarises the "lessons learned" from each. Of all studies, four deal with the South Pacific (Gillett *et al*, 2006; Lal and Keen, 2002; Whyte, 2002; Salafsky, 1999). The remaining six studies cover various geographical areas, including South East Asia (Eckman, 2005; ACIAR, 2004; 1999; Sievanen, 2004) and other Asian countries (Eckman, 2005; Perera *et al*, 2005; ACIAR, 2000; 1999), as well as Africa (Eckman, 2005; DfID, 2002).[1]

Most of these reviews focus on SL as a means to conservation (Gillett *et al*, 2006; Sievanen *et al*, 2004; DfID, 2002; Lal and Keen, 2002; Whyte, 2002; Salafsky, 1999). Only Eckman (2005), and to a lesser extent, Perera *et al* (2005), address SL as a means to poverty alleviation. The ACIAR reports only deal with livelihood diversification as a benefit resulting from ACIAR's research activities.

As can be observed in Table 1 there are a very large number of factors influencing the success of SL projects. This suggests that there simply is no "model" of success, but rather each project must be tailored according to location, scale of project, extent of funding, type of livelihood project etc. However, there are a number of determining factors that are mentioned quite frequently. For example, five out of the nine reports consider that projects are more likely to succeed if 1) project implementation is participatory, 2) participants are provided with business skills and 3) there is an existing market for the service or product being developed.

Similarly, there is general consensus that unique products or services are preferable to those which have many competitors; that links with private businesses are preferable to communities undertaking business activities themselves; that projects involving unique products with few competitors are preferable to products/services with many competitors; and that continuous monitoring of the project, as well as acknowledgement of the time investment needed for the project, are essential. Success of projects is also dependent on supportive governments and enabling regulations. Other factors that are frequently mentioned include: provision of technical training, access to credit and loans, adequate infrastructure and transport links, and ensuring realistic expectations of time taken to realise benefits.

It must be noted that the majority of determinants of success identified in these reviews fall under the "project process" category i.e. how the project is run and managed. This could indicate that there is a lot of scope for improvement in this area, starting with increased participation of local communities in decision-making. However, given the lack of consensus on the various "process" factors, this probably indicates that process differs across locations. Thus, whilst Eckman (2005) found that it was important to work with groups, Salafsky *et al* (1999) found it essential to ensure that participants really wanted to participate in the project. Process requirements for success will invariably depend on the existing social and cultural practices within the target community, the ethos and attitudes of the external project team and the relationship that is established between the two. There is a general agreement, however, that participatory approaches are essential.

Whether these lessons are applicable to the South Pacific context will be assessed in the following section.

[1] It had been noted by a reviewer of an earlier draft that livelihood project experiences in Africa were not relevant to the South Pacific. However, due to the dearth of SL review studies, we have opted to keep these case studies in this report. Furthermore, findings from projects carried out in Africa are very similar to findings reported in other parts of the world.

Table 1: Summary of "lessons learned" literature

	LESSONS LEARNED	REVIEW STUDIES FROM AROUND THE WORLD									
		ACIAR, 1999	Salafsky *et al*, 1999	DfID, 2002	Lal & Keen, 2002	Whyte, 2002	ACIAR, 2002	Sievanen *et al*, 2004	Eckman, 2005	Perera *et al*, 2005	Gillett *et al*, 2006
	INITIAL FEASIBILITY										
1	Need to clarify goals, needs and aspirations of the community with respect to the project				x						
2	Need for baseline assessment of community characteristics (demographics, economics, social capital, cultural etc), their assets and access to assets				x					x	
3	Need for proper project feasibility study to be carried out (technical, economic, institutional, etc)				x	x					
4	Need to consider external factors such as climate and political situation									x	
5	Need to do training needs assessment				x				x		
6	Need to conduct economic valuation/CBA of alternative options					x					
	PROCESS FACTORS										
7	Need for participatory approach and adequate participation of local community in decision-making		x		x	x			x		x
8	Time to broker agreement with community essential								x	x	
9	Need to ensure participants really want to participate		x								
10	Need for targeting of project to ensure equitable distribution of benefits				x	x			x		
11	Roles, responsibilities and ownership of project must be clarified beforehand				x	x			x		
12	Need to lower ex ante expectations of gain						x				x
13	Targeted community/individuals must have ownership of resources relevant to project			x	x						

	LESSONS LEARNED	REVIEW STUDIES FROM AROUND THE WORLD									
		ACIAR, 1999	Salafsky *et al*, 1999	DfID, 2002	Lal & Keen, 2002	Whyte, 2002	ACIAR, 2002	Sievanen *et al*, 2004	Eckman, 2005	Perera *et al*, 2005	Gillett *et al*, 2006
	INITIAL FEASIBILITY										
14	Need to clarify project administration, and ensure equitable benefit-sharing withing community			x	x	x					
15	Time investment in project very high (need realistic expectations of time taken to develop new livelihood)	x		x					x		x
16	Need to work with groups - strengthening of existing groups or facilitating formation of new groups								x		
17	Need for action plans to be drafted through participatory discussions								x		
18	Need adequate knowledge of field team of product or service they are proposing									x	
19	Need to iteratively assess actual costs and returns throughout project										
	PROJECT CHARACTERISTICS										
20	Simple business better than complex one		x			x					
21	Use of participants' existing skills preferable		x							x	
22	"Package" of interventions essential										
23	Training in technical aspects essential			x					x		
24	Business skills essential		x	x		x			x		x
25	Need for marketing skills or partner that has marketing skills		x								x
26	Ability to diversify if livelihood options fail essential							x			
27	Need for continuous monitoring and evaluation throughout project				x	x	x			x	
28	Better to sell non-perishables if transport not adequate		x								
29	Adequate funding essential to ensure smooth running of project				x						

	LESSONS LEARNED	REVIEW STUDIES FROM AROUND THE WORLD									
		ACIAR, 1999	Salafsky *et al*, 1999	DfID, 2002	Lal & Keen, 2002	Whyte, 2002	ACIAR, 2002	Sievanen *et al*, 2004	Eckman, 2005	Perera *et al*, 2005	Gillett *et al*, 2006
	MARKET AND CREDIT FACTORS										
30	Use appropriate business model (eg private business, cooperative, or a community business?)					x					
31	Better access to credit and loans essential								x	x	
32	Existing market for products essential		x	x		x		x	x		
33	Better to produce unique products with few competitors		x	x			x	x			
34	Adequate infrastructure essential		x	x			x				
35	Adequate transport links essential		x								
	PRIVATE ENTERPRISE & GOVERNMENT SUPPORT										
36	Private businesses willing to form partnerships with local communities preferable to community undertaking business		x	x		x					x
37	Need for capable and trusted intermediaries between private enterprises and communities			x							x
38	Need for supportive legislation and regulations			x			x		x		
	AFTER PROJECT FUNDING										
39	Need for final project evaluation				x						
40	Experiences from projects should be documented and "lessons learned" used for new projects				x					x	
41	Need for exchange visits so that successful projects can be example to potentiatlly new project sites								x		
42	Need for continued extension support after end of project	x									
43	Need for assured supplies of maintenance materials after project end	x									

5. REVIEW OF EXPERIENCES IN THE SOUTH PACIFIC

The single most significant finding that has emerged from the review process is the lack of documentation on SL efforts in the South Pacific. Despite the large number of SL projects that have taken place in the region over the past 20 to 30 years there has been almost no monitoring of these projects. As a result, there is no systematically documented information on determinants of success or failure. The key issue of lack of documentation and learning from past experiences has been highlighted in many reports and papers e.g. Gillett *et al*, 2006; Luxton, 2002; WWF, 2001.

Consequently, the review became a documentation exercise involving interviews with experts involved in income-generation projects in the South Pacific. This understandably reduced the number of projects that could be covered in this review. The approach to documentation of these SL experiences is described in the following section.

5.1 Methodology

Data Collection

SL projects in the South Pacific were identified through internet searches, literature reviews and consultation with FSPI staff, as well as consultations with other organisations (e.g. SPREP, UNDP, WWF). Over 80 projects were identified in this way. Documentation of these projects involved reviewing existing reports, papers and articles in the first instance. However, as noted, there was a significant dearth of such documented evidence. Following this initial scoping study, key individuals from organisations and institutions that had been involved in the various SL projects (e.g. project officers, directors of organisations, coordinators etc) were identified, and contacted first by email, and then followed up by telephone. All initial contacts were followed up two weeks later if no reply was received, and another week after that if no reply received again.

Overall, a total of 77 people were contacted by the principal researcher and one research assistant. Of these, 34 completed an interview, either by telephone, using Skype, or in person. This represents a 44% response rate. An additional 10 individuals sent documents to assist in the data collection exercise (though they did not complete interviews). See Annex 1 for a list of experts who completed interviews and who sent documents.

Interviews

The interview aimed to extract information on the assets (natural, physical, human, financial and social), access constraints (e.g. ownership of land, mediating institutions etc), and the external trends and shocks of relevance to the SL project. As noted, these factors are central to the sustainable livelihoods approach, which is being used in this study to analyse past experiences in alternative income generation, as well as to assist in the ex ante identification of different cash-generating livelihood options for South Pacific communities.

Interviews followed a 'funnel approach', whereby interviewees were initially asked broad questions about the projects they had been involved in, such as date of implementation and completion, location of project and collaborating institutions. Following sections explored in greater depth the issues of asset availability, access requirements and external trends and shocks. In addition, the interviews aimed to identify cultural characteristics that may have enabled or constrained the success of the SL project.

Finally, interviewees were asked to indicate whether they considered the SL experience to be successful, the reasons for success/lack of success, and suggestions as to how the project outcome might have differed.

The structure of the interview schedule can be found in Annex 2.

5.2 Overview of documented projects

A total of 43 projects were documented and reviewed. Table 2 lists each reviewed project by project title, collaborating institutions, duration and aim of project, and briefly summarises where the project information was obtained from (i.e. interview and/or documents). The spreadsheet with full project breakdowns is available upon request from FSPI. It is hoped that these breakdowns will form the basis of a web-based database of South Pacific SL project experiences.

Table 2: Case Studies of Livelihood Diversification Projects

	Project name	Collaborating organisations	Source of information	Duration of project	Aim(s) of project
FISHERIES & MARINE RESOURCES					
1	Farmed Aquarium Products in the Solomon Islands	World Fish Center (impl); WWF-SIs (extension); Marine Aquarium Coucnil; Department of Fisheries and Marine Resources (DFMR) (coll); NZAid (fund)	Laurie Wein (Conservation Officer, WWF-Solomon Islands)	2005-2010 (ACTIVE)	To develop an onamental aquarium trade in Gizo Island, to help make more efficient use of resources (ie conservation)
2	Rural Fishing Enterprises Project (RFEP) Phase III in Solomon Islands	EU (under RFEP) (impl and fund); Fisheries Dept of the Ministry of Natural Resources, Govt of the Solomon Islands (coll)	Rory Stewart (Programme Manager, RFEP Ph III) Jan '07; Lindley, R (2003)	2000-2004	Poverty alleviation in rural areas, through rehabilitation of six Rural Fisheries Centres, and diversification of fisher activities
3	Seaweed farming in Rarumana Community, Parara Island in Solomon Islands (part of RFEP III)	EU (under RFEP) (impl and fund); Aquaculture Division of the Fisheries Department of the Ministry of Natural Resources, Govt of the Solomon Islands; SPC (coll)	Rory Stewart (Programme Manager, RFEP Ph III); McHugh (2006); Wale (2003)	2001-2004	Diversification for artisanal fishers into seaweed farming as means to poverty alleviation, food security and income generation
4	Commercialisation of Seaweed Production in the Solomon Islands (CoSPSI) Project (in Rarumana, Waghena, North Malaita and Shortlands)	EU (under RFEP) (impl and fund); Aquaculture Division of the Ministry of Natural Resources, Govt of the Solomon Islands (coll)	McHugh (2006)	2005-2008 (ACTIVE)	To follow-on from success of RFEP Ph III seaweed growth trials (see Review #3), by expanding seaweed production in SIs, and hence, provide alternative livelihoods to coastal communities
5	Seaweed farming in southern Lau group (Namuka-i-Lau) in Fiji	CDF (Govt of Fiji) (fund and impl); FAO South Pacific Aquaculture Development Project (fund and coll)	Namudu and Pickering (2006); McHugh, D.J. (2006)	1997-1999	Development of seaweed farming for poverty alleviation
6	Verata giant clam management project (Fiji)	USP (impl); FLMMA	Alifereti Tawake (FLMMA)	1997-ONGOING	Conservation and increased clam stock through MPA
7	Navakavu MPA project (Fiji)	USP (impl); FLMMA; WWF-Fiji	Several	2002-ONGOING	Conservation of marine resources, and increased fishery production
8	Valili Pearls, Savusavu, Fiji Islands	Privately owned by Jone Maivalili who implemented and funded the operation	Jone Maivalili (owner); operation manager, farm manager and labourer	2001-ONGOING	Conservation through provision of alternative livelihood options (deep-bottom snapper fishery)
9	Black Pearl Pilot Project, Fiji	Dept of Fisheries of the Govt of Fiji (impl); Govt of Fiji (funding)	Albert Cerelala (Project Officer; Feb-Sept 2003, Fisheries Department, Lami)	1998-ONGOING	To build capacity amongst the local community and to identify another method of generating income. Also resource management
10	Black-lip Pearl Oyster Farming in Pohnpei, the Federated States of Micronesia	Regional aquaculture extension network/Nukuoro Government (impl); Australian Grant, Sea Grant Program, US Dept of Agriculture, Packard Foundation (fund)	Dr Maria Haws (Director of the Pearl Research and Training Program, Pacific Aquaculture and Coastal Resources Centre, University of Hawai'i Hilo); Fong *et al* (2005)	1993-ONGOING	To start pearl farming for income jobs and to establish a model for FSM in terms of resource management
11	Giant Clam Farming in Arno Atoll, Republic of the Marshall Islands	MIMRA (impl); CMI, Marshall Islands Visitors Authority, Coastal Community Advisory Council and the Marshall Islands Environmental Protection Agency (coll); MIMRA, OFCF-Japan, TNC (fund)	Florence Edwards (Chief Fisheries Officer, MIMRA)	2002-ONGOING	Resource management primarily and generation of alternative income

	Project name	Collaborating organisations	Source of information	Duration of project	Aim(s) of project
...FISHERIES & MARINE RESOURCES					
12	Namdrik Atoll Pearl Farm and Lagoo Management Plan for Community Revitalisation and Conservation of Pearl Oysters	NADA, CMI - Marine Science Dept; CMI; PARCR; University of Hawai'i-Hilo, Marine Environmental Laboratory of Pohnpei (impl); Tyrone Tapu, Tapu Perles; Apataki, French Polyneseia , MIMRA (coll); SGP-Small Grants Program (major donor)	Don Hess (Supervisor to the CMI Aquaculture Extension Agent)	2007-2010 (ACTIVE)	Management of lagoon primarily, and alternative livelihood generation
13	Cultured Live Rock Project, Tagaqe, Fiji	Hideaway Resort, Environmental Committee of the Tikina of Korolevu-i-Wai (coll); Georgia Tech University, USA (fund)	Kelly Brown (Marine Biologist, Walt Smith International); Make Movono (Marine Biologist, IAS, USP); Lal and Cerelala (2005)	2004-ONGOING	Development of alternative source of income for the community, due to MPA restrictions on fish catches
14	Sponge Farming in Pohnpei	MERIP (impl); CSP, University of Hawai'i-Hilo, PACRC, Pohnpei State Department of Marine Development (coll); USDA, UNDP/GEF Small Grants Programme (fund)	Simon Ellis (Director, MERIP)	2004-ACTIVE	To generate an alternative income source for the rural MPA communities of Pohnpei Island
15	Hard and Soft Coral Farming in Pohnpei	MERIP (impl); CSP, University of Hawai'i-Hilo, PACRC, Pohnpei State Dept of Marine Development (coll); USDA IFAFC and OASDFR programs; the Packard Foundation, local organisations (fund)	Simon Ellis (Director, MERIP)	2005-ACTIVE	To generate an alternative income source for the rural MPA communities of Pohnpei Island
AGRICULTURE & LIVESTOCK					
16	Restoring sustainable livelihoods on Kabara Island project (Fiji)	WWF-Fiji (impl); Govt of Fiji (fund); Green Grants (funding); Japanese Govt (fund)	Kesaia Tabunakawai (Director, WWF-Fiji); Francis Areki (Project Officer, WWF-Fiji)	2005-ACTIVE	Conservation of *vesi* tree (endangered species; CITES convention) through increased efficiency of use and replanting
17	Organic coffee production in the Eastern Highlands Province of the Okapa Region (Papua New Guinea)	Coffee Connections (impl)	Craig McConaghy (Director, Coffee Connections); FAO Organic Coffee report (www.fao.org)	1994-ONGOING BUSINESS	To generate higher prices for coffee for local producers, and to set up business relationship with organic coffee producers in PNG
18	Ngali nut project in Makira (Solomon Islands)	SIDT (impl); International and Maruia Society (fund)	Silverio Wale (FSPI-Solomon Islands)	1993-1998	Conservation of Makira Island and protection from logging. Ngali nut enterprise development aimed to support conservation objective
19	Mixed Gardening Project, Kiribati	FSP-K (impl and fund)	Toka Abiete (FSP-Kiribati)	1980-ONGOING	Poverty alleviation
20	Pig farming for young men in Waiqanake (Fiji)	Methodist Youth; Ministry of Youth and Sport, Govt of Fiji	Josefa (Head of Methodist Youth in Waiqanake	2004-ACTIVE	To provide livelihood options for youth
21	Mataqali Sheep Farm in Macuata, Vanua Levu, Fiji	CF (fund and support); Ministry of Regional Development, District Office, Macuata (intermediaries)	Leonie Smiley (FSPI, ex-Canada Fund Coordinator); reports (see "Associated documents")	1999-2005	To provide livelihood options for the *mataqali* (clan) Vanua Levu

	Project name	Collaborating organisations	Source of information	Duration of project	Aim(s) of project
...AGRICULTURE & LIVESTOCK					
22	Grow-Low Sakau (kava) Campaign	CSP (impl); Pohnpei State Division of Forestry, Pohnpei Dept of Agriculture, USDA - Natural Resources Conservation Services (USDA-NRCS); College of Micronesia-Land Grand and local communities (coll); The Toyota Foundation (funding)	Wendolin Roseo Marquez (Terrestrial Programme Manager, CSP)	2005	To conserve biodiversity and maintain the integrity of the watershed forest reserve by increasing lowland sakau production
23	SIDT Sup Sup Garden Project, Solomon Islands	SIDT (imp and fund); Ministry of Health, Provincial Office (coll)	Silverio Wale (FSPI-Solomon Islands, Conservation Officer from 1992-1994	late 1980s-1994	To help the community rely more on home-grown food, to encourage them to maintain a balanced diet and to generate additional income
HANDICRAFTS					
24	Baraulu/Bulelavata Women's Sewing Project in Roviana Lagoon (Solomon Islands)	WWF-SIs (impl); Prof Aswani's group Univ Santa Barbara (coll); MacArthur and Packard Foundations (fund)	Aswani and Weiant (2003), Aswani and Weiant (2004), Weiant and Aswani (2006)	2002-2004	To reduce dependency on shellfish collection and sale by women, by providing alternative source of income genderation
25	Sewing and tie-dye project in Fana'afuti (Tuvalu)	TANGO (impl via local women's groups); PSL Small Grant Scheme (fund)	Annie Homasi (Exec Dir, TANGO)	2004-2005	Income generation
26	Skills training for women in all islands (Tuvalu)	TANGO (impl via TNWC); Tuvalu Govt Business Centre (training); Canadian Small Grants (fund)	Annie Homasi (Exec Dir, TANGO)	2003-2004	Capacity-building for local women and income generation
27	*Kuta* grass project in Macuata Province on Vanua Levu (Fiji)	WWF-Fiji (impl); USP Dept of Geography; Ministry of Agriculture - National Landuse Section and Extension Services, Ministry of Fijian Affairs; Macuata Provincial Office (coll); CIDA (fund), Forum Secretariat - Marketing Support Fund for Commodity Development	Kesaia Tabunakawai (Director WWF-Fiji)	1999-2003	To re-introduce *kuta* grass ponds and provide alternative livelihoods for women (*kuta* grass mat weaving)
28	Natangura Nut Carving income generation conservation project (Vanuatu)	FSP-Vanuatu (impl); British High Commission (fund); ICI (Business arm for FSP-Vanuatu) (coll)	Ms Relvie Poilapa, Project Manager (last three years of the project)	1990-2004	NOT YET REVIEWED
29	Women's Participation in the Ornamental Shell Trade on Funafuti and Nukufetau, Tuvalu	Ministry of Home Affairs, TNCW and the National Handicraft Centre (impl and supp)	Alan Resture (author of Resture and Resture (2003))	1970s-ONGOING	NOT YET REVIEWED

	Project name	Collaborating organisations	Source of information	Duration of project	Aim(s) of project
TOURISM & RECREATION					
30	Tetepare Conservation and Livelihood Project (Solomon Islands)	WWF-SIs (impl in partnership with Tetepare Descendants' Association)	Laurie Wein (ex-Project Manager, WWF-SIs)	2002-ACTIVE	PA Development coupled with eco-tourism
31	Marovo Community Resource and Conservation Development Project (Solomon Islands)	WWF-SIs (impl and fund)	Laurie Wein (ex-Project Manager, WWF-SIs)	1995-200	Ecotourism, as complement to PA development
32	Nature trail at Ngardok Nature Reserve (Palau)	PCS (impl and fund)	Elizabeth Matthews (Project coordinator, PCS)	1995-2000	Alternative income generation as fishing areas are restricted due to establishment of MPAs
33	Developing inshore sportfishing in Palau	PCS (impl as of 1994); Dept of Marine Resources of Palau, TNC (impl before 1994); Palau Visitors Authority; SPC, FFA, Guam Division of Aquatic and Wildlife Resources, Japan Tourism Bureau (coll), US Govt (Saltonstall-Kennedy Grant Program (fund))	Elizabeth Matthews (Project coordinator, PCS); Additional detailed information from Thomas Graham (ex-PCS, directly involved with project)	1995-2000	Alternative income generation as fishing areas are restricted due to establishment of MPAs
34	Mystery Island Tourism Project (Vanuatu)	Local community within vicinity of Mystery Island, National Tourism Development Office (impl); South Sea Shipping (Agent for P&O Cruises); EU (fund); Island Safaris (Marketing arm owned by Air Vanuatu and the Chamber of Commerce); Vanuatu Bungalow Association (support)	Mr Robert Avio (National Tourism Development Office)	Late 1908s-ONGOING	To conserve the environment and to raise revenue for the community of Aneityum Island
35	Clam Circle, Ha'apai (Tonga)	Implemented and funded by family; Ministry of Fisheries (coll and fund)	Finau Molisi (Farm manager)	2000-ONGOING	Conservation of giant clams, and generation of livelihood
36	Beach Houses for Tourism in Ha'apai (Tonga)	Privately owned by Mrs Kaloni 'Aholelei's family in Felemea Village, 'Uiha Island	Trevor Gregory (Café owner on Lifuka Island and a close friend of the owners of the beach houses	1995-ONGOING	To generate income for a family
OTHER VARIOUS					
37	FRIEND Income Generation Program	FRIEND implements all projects. Punjas assisted with distribution of food products in the first two years. British High Commission, AusAID, NZAid and Vodafone (some funding)	Lori Banks (Peace Corps, FRIEND) and Sashi Kiran (Director, FRIEND)	2003-ONGOING	Poverty alleviation. To identify viable livelihoods using the resources available to participants and skills they already possess
38	Floriculture – cut flowers project	South Sea Orchids Ltd – private company owned by Mrs Aileen Burness (implementing)	Veronica Lucas (South Sea Orchids, Lautoka Office)	1996-ONGOING	To alleviate poverty and provide an income generating option for women in two villages
39	Mucunabitu Iron Works Cooperative in Nasinu, Fiji	Private business, structured as cooperative implemented and funded by Mucunabitu family; some funds: Fiji Development Bank	Qalo (1997)	1983-ONGOING BUSINESS	To generate income for an extended family (private business)

	Project name	Collaborating organisations	Source of information	Duration of project	Aim(s) of project
...OTHER VARIOUS					
40	Walking Out of Poverty, Fiji	ILO (impl and fund); Ministry of Women, Social Welfare and Housing (impl); Ministry of Local Government, Ministry of Education, Ministry of Agriculture, Dept of Lands and Minerals, Ministry of Labour (impl); Fiji National Council of Disabled Persons, Suva City Council and Trade Union (coll)	A.M. Zakaria (Director, ILO) and Tazneen Ali (Programme Officer, ILO)	2003-ACTIVE	Poverty alleviation – To provide people with employable skills whereby they can bring positive changes to their lives and families
41	E-Chutney Project in Navua township	Navua Rural Women's Tele-Centre Group (impl); Dept of Information Technology and Communication, Ministry of Agriculture and Department of Women (coll); Ministry of Women & Culture (partial donor – first batch then women continued from then on)	Nanise (Department of Women, Navua)	December 2004-August 2005 (EARLY TERMINATION)	To empower rural women to improve their livelihoods and contribute to the welfare of their family using their skills in cooking, sewing, weaving, patchwork, screenprinting, handicrafts and locally available crops
42	Masculinity, Mental Health and Violence Program, Kiribati	FSPI (impl); NZAid (fund)	Marea Itaia (Project Officer, FSP-Kiribati)	2003-2006 (ACTIVE)	To develop youth knowledge and skills that relate to their social issues such as unemployment, alcohol abuse, and reducing future poverty alleviation
43	Eco enterprise (Bosavi and Lake Kutubu)	WWF-PNG (impl); Oilsearch Limited (OSL) and CIDA (fund); Insect Farming and Training Agency (IFTA) (Buys and markets butterflies); Community Development Initiatives (CDI) Foundation (taking lead in butterfly farming (coll))	Mr Dennis Badi (Conservation Education Officer, WWF-PNG, Kikori River Programme)	ONGOING	Alternative income generation to industrial logging

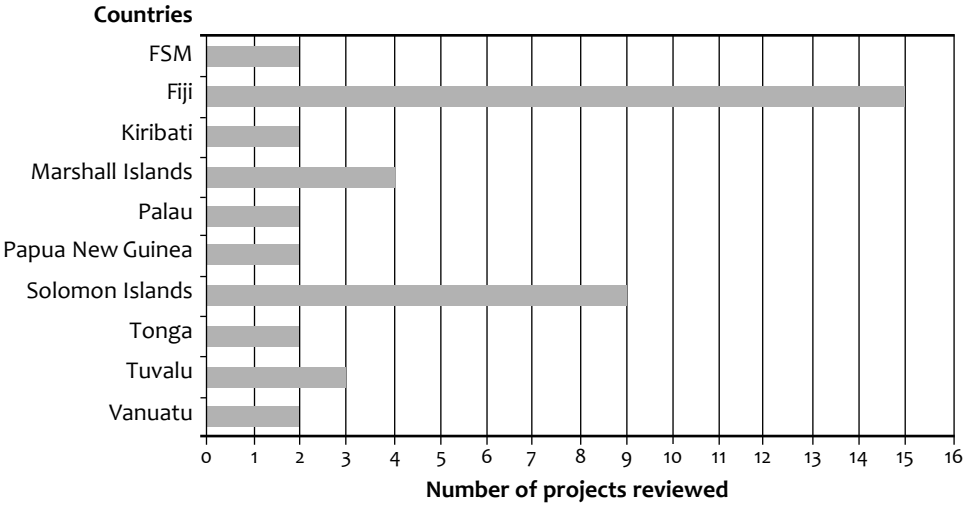
NOTES: impl = implementing; coll = collaborating; fund = funding

Figure 2 shows the distribution of projects by country they were implemented in. As can be observed, most projects covered in this study are Fiji-based (n=15), followed by Solomon Island-based projects (n=9). Countries that are conspicuously absent from this review include: the Cook Islands, Samoa and French Polynesia. In the case of the Cook Islands and Samoa, numerous attempts were made to contact relevant organisations for information, with no success. In addition, the review failed to identify projects in Guam, Nauru, Niue or the Commonwealth of the Northern Marianas (CNMI). Future efforts to expand on the present review would benefit from incorporating these countries into the analysis.

reviewed projects closely reflects the actual distribution of projects by livelihood type in the South Pacific. SL projects falling under 'other' include: food preparation (e.g. jams and chutneys), iron works, butterfly and insect farming, and projects with various components such as handicrafts and food production (e.g. project #37)

Fisheries and marine resource-related SL projects include pearl farming (4 projects), aquarium trade fish and coral harvest (4), seaweed farming (3), artisanal fisheries, (3), and sponge farming (1). Although most of these projects were targeted at men and women, they were mostly taken up by men, for reasons outlined in Section 5.4. Handicraft projects on the other hand were

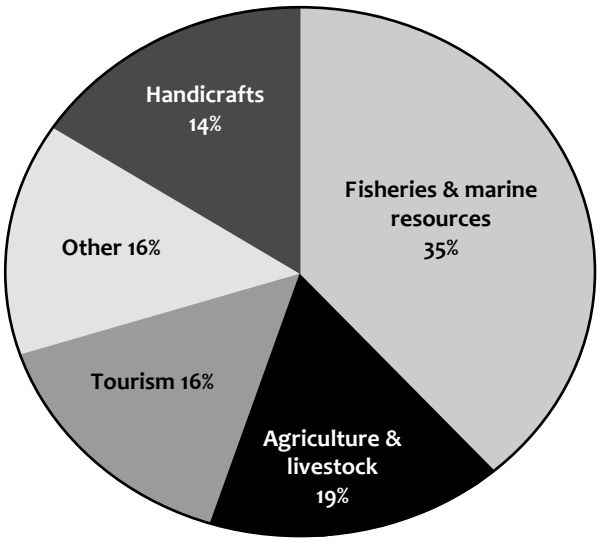
Figure 2: Distribution of countries in which reviewed projects are based



Classification of SL project by livelihood type

SL projects reviewed for this study have been broadly classified according livelihood type (see Figure 3 for distribution). As shown, projects relating to 'fisheries and marine resources' have been reviewed most extensively (35%), followed by agriculture and livestock projects (19%). It is suggested that the distribution of

Figure 3: Distribution of projects by type of livelihood



mostly targeted at women and/or youths, and include carving, sewing and weaving activities.

Agriculture projects involve farming of crops such as kava, coffee, orchids, and various fruit and vegetables, as well as planting of specific species for conservation purposes (e.g. *vesi* tree project #16).[2] The review includes two livestock projects: pig farming (#20) and sheep farming (#21). Finally, tourism projects are mostly developed in association with protected area development (e.g. the Tetepare Conservation and Livelihood project, #30), although two of the projects are family-initiated private businesses (projects #35 and 36).

Aims of SL projects

Most of the reviewed SL experiences were implemented by external organisations, either for poverty alleviation as the main aim (n=26; 60%), or to support conservation efforts (n=16; 37%). A few projects (n=4) were initiated and developed by individuals and/or families as private businesses (e.g. Mucunabitu Iron works, #39). In these cases, subsidies and external sources of support (e.g. loans, credit, training) were rarely avail-

[2] The Sustainable Livelihoods (*vesi* tree) project in Kabara has two components: replanting and conservation of the endangered *vesi* trees as well as increased efficiency in the carving of *tanoas* (tradition kava-drinking bowls used in Fiji) from the wood. Given that the main concerns of this project is conservation of the *vesi* tree, it has been put under 'agriculture and livestock'

able, and any financial capital was raised by the individual and/or family themselves. Although these do not constitute SL 'projects' as such, they are considered relevant as livelihood generation enterprises, and it considered that they may provide useful input into the analysis of SL project experiences.

Five of the reviewed experiences were implemented by external bodies as private businesses (e.g. organic coffee in PNG, #17). In these cases conservation and/or poverty alleviation aims would be a secondary benefit to profit. For simplicity, private enterprises, as well as individual/family-initiated experiences will be referred to as 'projects' throughout the rest of this document.

SL project site selection and target group

Just over half of the reviewed projects (n=23; 54%) were initiated by communities, families or individuals, who approached external bodies, such as local NGO's, universities and district officers, for support.

In a number of these 'bottom-up' projects, the initiating groups approached external bodies for advice on resource management, and assistance in identifying potential livelihood options. In these cases, SL options had not yet been identified by interested parties. For example, the Navakavu Locally Managed Marine Area (LMMA) community approached the University of the South Pacific (USP) for advice and guidance on how to better manage their fisheries resources. As a result, USP and the Fiji LMMA network engaged the community in a series of workshops and training sessions, which led to the eventual establishment of a Marine Protected Area (MPA). Other projects that developed in this way include Giant Clam Farming in the Arno Atoll project (#11), the Namdrik Atoll pearl farm (#12), the sustainable livelihoods in Kabara (*vesi* tree) project in Fiji (#16), the Ngali nut project in the Solomon Islands (project #18) and the *kuta* grass project in Fiji (#27).

In a number of other projects, local communities, families or individuals approached external organisations for advice and/or funding for a specific livelihood option. In these cases, decision-making had already taken place amongst the interested individuals before the intervention of an external body. Examples include: Waiqanake pig farming (project #20), *Mataqali* Vanua Levu sheep farming (#21), the Ngardok Reserve nature trail (#32), and the Mystery Island Tourism Project (#34).

Notably, projects initiated and run by individuals and/or families, such as the Valili Pearls in Savusavu (project #8), the Ha'apai Clam Circle (#35) and the beach houses for tourism in Ha'apai #36), were met with limited support from external bodies, and most finance and capital had to be raised by the interested partied themselves. Only the familyrun Mucunabitu Iron Works in Fiji (#39) managed to secure a loan from the Fiji Development Bank (FJ$30,000) to help with start-up costs. This is most likely due to the extensive experience of the project 'leader' in planning and budgeting (see Qalo, 1997 for discussion).

SL projects that were initiated in a 'top-down' manner account for 47% of all reviewed projects. In these projects, organisations or companies identified suitable sites for intervention and then implemented SL options. The 'top-down' identification of potential sites for SL projects or businesses was based on a variety of criteria, ranging from biological suitability (e.g. pristine coral reefs), to socio-economic conditions (e.g. high unemployment levels). Projects involving farming (seaweed, pearls, coral and coffee) were mostly selected on the basis of suitable growing conditions, and adequate transport links. Capacity-building projects (projects #5, 26, 37, 40, 41 and 42) were usually selected on the basis of socio-economic conditions (e.g. income levels, living standards, unemployment rates, gender inequality) as well as isolation from the mainland; these projects mostly targeted women, youths and communities living below the poverty line.

In few cases was the selection of sites for SL projects based on a rigorous assessment of baseline conditions: only half (50%) of the 'top-down' SL projects carried out baseline studies, and of these, less than a handful carried out baseline assessments of socioeconomic factors. The importance of carrying out baseline studies has been noted in Section 4 (Review of "Lessons Learned" Literature).

Participatory decision-making is rarely encountered in top-down projects. It is more usual for these projects to allow self-selection of individuals and/or households to the project, subject to conditions set out by the implementing body. For example, seaweed farming in Namuka-i-Lau in Fiji (project #5) was implemented in a top-down manner: sites were selected centrally by the Dept of Fisheries on the basis of suitable growing conditions, and interested individuals/households could choose to participate subject to certain conditions. This process ensures that only interested parties take part in the project.

Projects initiated by communities are usually considered (by interviewees) to have involved participatory decision-making. However, it is considered that this is not accurate. Decision-making within communities often omits certain subgroups (namely, women and youths) from the process. For example, the establishment of the Navakavu LMMA (project #6) did not fully involve women and youths in the decision-making process. Furthermore, the committee regulating the LMMA is made up entirely of older men. Similarly, women and youths do not have direct involvement in the decisionmaking process for the Black-lip Pearl Oyster Farming project in Pohnpei (project #10). Although this may reflect customs associated with decision-making in these countries, it cannot be considered fully participatory, given that some of the affected parties are not involved in the decision-making process.

In a few projects, implementing or supporting agencies requested the involvement of women and youths in decision-making, as was the case in the Verata Locally Managed Marine Area clam farming project in Fiji (project #6). From the outset of the planning process, advisors from USP had requested that the LMMA management team include equal numbers of adult men, women, and youth (Aalbersberg *et al*, 2005).

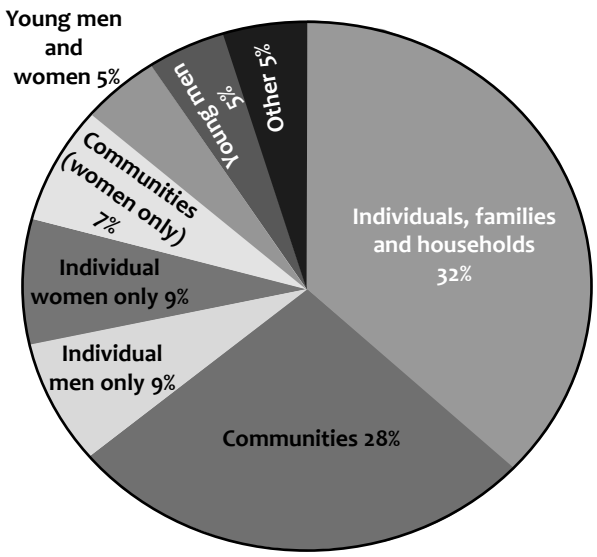
In the case of the *Mataqali* Vanua Levu sheep farming project (#21), funding was sought by the community for a project that was claimed to have been participatory. However, it appears that most of the community was not properly informed about the project, which had

actually been initiated and developed by one family. These examples should illustrate how community-initiated projects do not necessarily entail participatory decisionmaking. Top-down decision-making can also take place at the community level, with certain individuals or families making decisions for the majority.

Projects that involved extensive participatory decision-making processes were mostly implemented by NGOs and grassroots organisations. In these cases, significant effort was put into extension, training and consultation. This was particularly evident in the Farmed aquarium products in Solomon Islands project (project #1) and the Giant Clam Farming in the Arno Atoll project (#11).

Figure 4 shows the distribution of projects by target group. As shown, most of the reviewed projects targeted individuals and households (32%). If we include projects targeting individuals of a particular gender, then this proportion increases to 50%. Under one fifth (16%) of projects specifically targeted women, and 14% targeted men only (including youths).

Figure 4: Distribution of projects by target group



Over a quarter (28%) of all reviewed projects were aimed at whole communities. It is interesting to note that there are a few studies (n=3; 7%) that target women as a community whereas there are no such projects that target men in this way. It is suggested that this reflects the fact that women are not usually involved in community-based decision-making, hence the need for community-based projects for women only. There are only 4 youth-related projects covered in this review.

Monitoring of projects

Over half of the projects (56%) were formally monitored for progress throughout the project lifetime. As may be expected, larger projects (such as projects #1-4) required the production of monitoring reports on a yearly or 6-monthly basis, as well as the production of a final report. Monitoring of progress for smaller projects was usually carried out informally through site visits and consultations. Hardly any written evidence was produced for these projects. Private business enterprises did not produce monitoring reports; the continuation of the enterprise was seen in all cases as evidence that the SL activity was functioning well.

5.3 Assets contributing to SL activity

The basic idea behind the sustainable livelihoods framework used to analyse the outcome of SL activities in the SP, is that rural communities will engage in certain livelihood strategies, subject to the assets (natural, physical, financial, human and social capital) that they have access to, and subject to external trends and shocks (see Section 2 for outline of framework). In this section we will explore how effectively required assets for a livelihood activity are met by existing assets and/or assets provided through external support.

Natural capital

Natural capital refers to all the resources provided by nature (e.g. land, crops, reef and fish) that contribute to the livelihood activity. An overview of the project breakdowns indicates that land and/or fishing ground availability is rarely an issue in the reviewed projects. This is mostly due to existing land (and foreshore) ownership arrangements in the South Pacific, which are often based on communal ownership (Crocombe, 2001). Thus most families and households have land and/or foreshore area at their disposal for livelihood activities. Notably, although land is owned communally, farming activities are not communal but carried out on individual plots of land by each household. In few cases do the projects deal with privately owned land (e.g. the family-run businesses or organic coffee in PNG).

Natural capital inputs that were not usually available to project participants included seedlings for land-based crops, marine organisms to stock fishing grounds and livestock. These inputs were usually provided by external bodies through subsidies, direct donations and in rare cases, loans. In the case of seaweed farming, seaweed was usually obtained by participants from existing growths in the sea.

Physical capital

This includes all the man-made inputs (e.g. machinery, infrastructure) into a livelihood activity. Most of the aquaculture projects required some significant physical capital investments, such as the establishment of hatcheries (e.g. Giant Clam Farming in Arno Atoll, project #1), the construction and/or upgrading of existing holding depots (e.g. RFEP fishing project, #2) or) the provision of boats and outboard motors (e.g. seaweed farming in Namuka-i-Lau, #5). These were all provided by external funding and implementing bodies.

Other physical capital requirements for SL projects included basic materials for setting up farms, tools for handicraft production and small-scale machinery (e.g. sewing machines, or pulping machines). These were mostly donated by external bodies, although in some cases, they were provided with repayment options. Family-run businesses usually obtained physical capital requirements using their own funds.

Human capital

Human capital refers to the knowledge and the time available to participants, to be able to engage in the livelihood activity. Every reviewed project involved a training component relating to the livelihood option. Aquaculture, mariculture and tourism projects all required extensive training, as the livelihood was usually new to participants. Agriculture projects usually built on an existing knowledge base, with specific training about particular crops provided. Participant knowledge regarding livestock projects was very low or nonexistent prior to engagement in the activity (projects #20 & 21). Prior knowledge about the activity was varied for handicraft projects; in most cases participants had some knowledge about handicraft production, and training was provided to enhance existing skills.

Only a third of the projects involved any form of training in book-keeping, business, or financial literacy skills. However, most interviewees agreed that these skills were an important factor in project success.

Financial capital

Financial capital (finance needed to initiate and support livelihood activity) was required for most of the reviewed projects. Almost none of the groups had access to loans or credit. This was particularly an issue for family-run businesses, such as the Clam Circle in Ha'apai (#35), as they also attracted little external support of any kind. These businesses relied on funds generated by the family. This lack of financial support for family-run businesses - either in terms of grants or loans and credit - may represent a major barrier to small businesses in the region. This is clearly an area that needs addressing, as family-run businesses are often found to have higher than normal success rates.

Social capital

Social capital refers to the extent of social cohesiveness within the target group; this is often proxied by the number of organisations within the community. In this study we also examine the strength of leadership in the community (where relevant), and the equitability of resource sharing amongst members of the community (also where relevant), as additional indicators of the strength of social capital.

Project breakdowns indicate that most communities involved in SL projects had preexisting organisations, such as women's groups, youth groups and church groups. In some cases, projects were targeted specifically at existing community groups, such as the women's groups (e,g. projects #24-26) or youth groups (e.g. projects #20 and 42). In other cases, committees were formed during or after the implementation of the new livelihood activity, to deal with decision-making relating to the new livelihood. Examples include the Navakavu LMMA committee, HOAC (Highlands Organic Agriculture Cooperative Ltd) and the Ngardok Reserve Board (projects #7, 17 and 32 respectively). In these case studies, the SL activity was found to increase social cohesiveness and improve communal decision-making.

A number of interviewees explained that there was a preference for projects targeted at families or households, as these groupings tended to be more cohesive than community groups. This is tentatively confirmed by the findings associated with the family-run businesses, where the families were reported to be very tightly knit and decision-making processes equitable.

Rivalries between families over resources and status appear to be the main source of low social cohesiveness. Two of the reviewed projects (#18 and #27) experienced genderrelated rivalries. Notably, rivalries between men and women were only observed for projects that targeted women, where men were found to resent the income-earning opportunities offered to women in their communities. In both projects, rivalries were dealt with through discussion facilitated by the implementing body. Gender-related rivalries were not observed for projects targeted only at men.

Leadership is considered a crucial input into any livelihood project, and may make the difference between a successful and unsuccessful project. Figure 5 presents findings regarding the perceived strength of leadership in communities where there have been SL projects. These findings are based on 30 projects only.[3] As results show, half of the projects were strongly or very strongly supported by community leaders. This includes the family-run businesses (n=3), in which community leaders showed strong support for the family's entrepreneurship. As indicated by Wale (2003) with regards to seaweed farming in the Solomon Islands, church leaders may show high levels of support for new cash-generating activities, such as seaweed farming, as they allow farmers to meet their traditional obligations and commitments (e.g. donations to communal events, the church and reciprocity obligations) within the community. This in turn strengthens the community.

Figure 5: Strength of leadership support for new livelihood activity

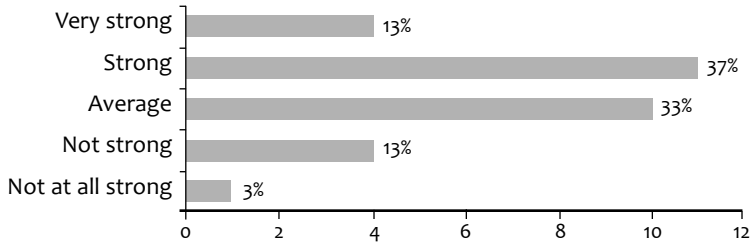
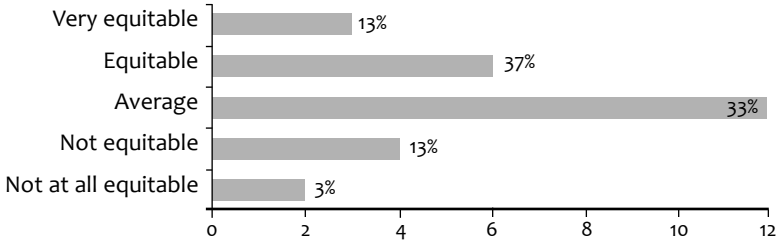


Figure 6: Equitability of resource sharing amongst community



Equitability of resource sharing amongst the community might also be an indicator of social capital in a community. Figure 6 presents findings regarding the perceived equitability of resource sharing in communities where there have been SL projects (based on 27 projects only). As findings show, most communities were rated 'average' with regards to the equitability of resource sharing amongst their members.

Cultural characteristics influencing SL success

In addition to the standard five assets included in the sustainable livelihoods framework, it is considered essential to add a sixth asset of particular relevance to the South Pacific: cultural assets. In the SP, cultural traditions and norms, such as reciprocity and community obligations, form an integral part of everyday life for most people. These traditions may be considered constraints and obstacles to effective livelihood diversification; however, they may have the potential to enhance SL opportunities and to positively support small-scale enterprise development if adopted into project development appropriately.

Cultural characteristics that emerged from interviews and the literature (partic. Qalo, 1997) as particularly relevant to SL success include:

- Obligations, such as kerekere (sharing of one's goods)
- Importance of kinship
- 'Subsistence economy mindset'/'planning ahead' not traditional practice
- Communalism and dislike of individual responsibility or decision-making
- Cultural acceptability of livelihood product or service
- Hierarchy and the importance of strong leadership
- Conspicuous consumption

It is noteworthy that cultural characteristics were not properly taken into account in the development and management of most of the reviewed projects, and interviewees were largely unable to provide detailed information on how the cultural traits influenced the progress and outcome of the SL project.

5.4 Access and mediating processes

The ability to generate livelihoods not only depends on the assets available to the interested parties. There must be adequate access to the means of livelihood generation; access can be constrained by age, gender, ethnicity, as well as by rules, customs, and land/sea tenure. Furthermore, access can be mediated by external institutions, such as the government, private enterprises, local administrative centres and NGOs. For this reason, the present review explored these issues with relation to each documented SL project.

Access to markets

It is essential – as noted in Section 4 (Review of "Lessons Learned") – that new livelihood activities produce goods or services for which there is an existing market. This ensures that the gains from production are quickly established, and participants are encouraged to continue with the activity. Of course this can have the adverse effect of attracting new entrants to the field (e.g. seaweed farming in Philippines and Indonesia – reviewed in Sievanen, 2004), which drives production up, and prices down. Furthermore, marketing of products for which there is no existing market is usually well beyond the capabilities of local communities or rural households (Gillett *et al*, 2006).

In this review, almost every project developed products with existing markets. Only three projects developed services for which there were no significant and easily accessible markets; all three projects were tourism-related (projects #32-33).

As might be expected, the access to markets was largely constrained by available transport links. Most projects located on outer islands will undoubtedly suffer from dependence on inter-island shipping, which

can be highly unreliable, as well as plane transport, which is more reliable but more expensive. In particular, seaweed farming projects are often located on outer islands, and shipping regularity and costs have been found to pose major constraints to these projects. Government support, in the form of guaranteed shipping on a regular basis, is usually required for these livelihoods to be ongoing.

In just over half (51%) of the reviewed projects, access to markets is mediated either by the implementing organisation (e.g. Worldfish Centre mediates between the international tropical aquarium industry and producers in the Solomon Islands, project #1), the government (e.g. Mystery Island in Vanuatu, #34) or by a private export company (e.g. Coffee Connections, #17). The latter is usually found for products with large international markets, such as seaweed products, aquarium trade, organic coffee and pearls. In most cases, middlemen are seen as necessary conduits to external markets. Only in a few cases, such as the Livelihoods in Kabara (*vesi* tree) project (#16) which produces tanoas (kava bowls) for sale, is dependence on a middleman seen as a negative, due to low prices paid.

Ownership and access to land

Generally, land and sea ownership come under customary tenure arrangements. Thus, land and fishing grounds are often owned communally, and decision-making with regards to usage of the land/sea resides with the chiefs and decision-making committees. Nonindigenous ethnic groups, such as the Gilbertese in the Solomon Islands, or Indo-Fijians in Fiji, do not tend to be landowners. Access rights to land and fishing grounds for these groups are usually secured through purchase of temporary licenses.

Only in Kiribati and PNG projects are project participants private landowners. In these cases, there are no communal decision-making arrangements, and all decisions regarding use of one's land are made by the owner and family.

Access restrictions based on social status

Most interviewees considered access restrictions on the basis of age, gender, ethnicity and other social factors to be non-existent; however, it is considered that this is not an accurate representation of the projects reviewed here. In particular, as noted earlier, youths and women are often excluded from decision-making activities associated with livelihoods, and are sometimes also excluded from direct participation in the SL activities – even though the projects aim to be inclusive. For example, although there were no access restrictions for women in the seaweed farming project in Namuka-i-Lau (Fiji), they were not taken seriously or supported if interested in farming. Furthermore, no women ever received assistance from government for farming (Namudu and Pickering, 2006).

Access constraints on the basis of gender and age are found in most of the reviewed projects. This may explain why there are projects targeted specifically at women, and at youths, as projects targeted at whole communities or families tend to exclude these subgroups from decision-making and direct involvement.

Other social status constraints include: religious affiliation (i.e. the Mixed Gardening project in Kiribati, project #19) and ethnicity (i.e. Farmed Aquarium Products in the Solomon Islands, #1). In both cases, difficulties were presented by the decision-making groups to certain individuals and/or households on the basis of their religion or ethnicity.

Government support

Support from government was manifest for three quarters of the reviewed projects (77%), in the form of grants, loans, training and subsidies for materials. Government departments were also responsible for setting up a number of the projects (e.g. #5 & #40). In two projects there was no government support, yet excessive government interference.

5.5 External shocks and trends

External shocks (e.g. storms, coups, diseases etc) and trends (e.g. population growth, market prices, macro policy etc) will inevitably affect livelihood activities of any type. These external influences are generally not under the control of the groups involved in new SL activities. Thus, the best approach to dealing with them is to be prepared. Key external shocks and trends identified in this review study are briefly discussed below.

Climatic shocks

An overview of the reviewed projects indicates that climatic shocks, such as cyclones and flooding, which occur in the SP region on a regular basis, tend to have the greatest impact on marine-based activities. In particular, seaweed farming and pearl farming projects have experienced losses following extreme climatic events. Climatic events that would negatively impact agricultural projects include drought, hard rainfall and erosion. However, none of the reviewed projects reported having experienced any such climatic events. Tourism projects would be affected by climatic events, especially if they entailed marine-based activities, as cyclones and tropical storms can have devastating impacts on coral reefs and marine organisms. However, as with agricultural SL projects reviewed here, none of the tourism projects reported having experienced any extreme climatic events. Handicraft projects, as expected, are largely unaffected by climatic events, except in the case where transport is hindered by flooding or storms.

Political shocks

Many countries in the SP have experienced political upheavals in the last few decades. These shocks generally affect both national and international markets for products and services (particularly tourism), and sometimes lead to the destruction of physical capital (e.g. buildings and machines) associated with livelihood activities. For example, during the 2000 coup in the Solomon Islands, one of the 7 rural fisheries centres which had been built as part of the RFEP project in Solomon Islands (project #2), was destroyed. In this same project, civil disturbances led to reduced communications and transport, the collapse of the overseas market and general instability. Similarly, the recent

coup in Fiji (December 2006) has been found to affect several livelihood activities, such as pearl farming (e.g. project #8) and floriculture business (#38). Perhaps surprisingly, none of the interviewees reported any negative impacts of civil unrest on tourism projects in Tonga, following civil unrest in November 2006.

Resource trends

Under one third (n=12; 29%) of the reviewed projects were initiated in response to observed resource declines. A number of these projects involved establishing protected areas to help the declining resource recover (projects #6, 7, 13 and 24). In these cases, the main aim was to increase productivity of the declining resource in the long-run.

Generally, these projects involve a SL component, in order to compensate families for the initial decrease in productivity associated with the closure of certain fishing grounds. For example, the Verata clam famring project (#7) involved a number of additional livelihood activities (e.g. bio-prospecting, tourist fees) to support management and coordination of the LMMA, especially during the early stages.

Other projects involved diversification into new livelihoods, in response to decreased productivity associated with protected areas that had been established earlier. This was the case for the Sponge Farming project (project #14) and Hard and Soft Coral Farming project in Pohnpei (#15), which both aimed to generate an alternative income source for rural MPA communities.

Notably, agricultural projects that were initiated in response to resource declines did not tend to involve protected area development; these include the Kabara Island project (#16), the Ngali nut project (#18) and the Mixed Gardening project (#19).

Resource impacts associated with SL projects were identified in few projects, such as the RFEP project in Solomon Islands (project #2), in which there was an observed decrease in the stocks of deep-water snapper; and the Ornamental Shell Handicraft project in Tuvalu (#26), where there has been an observed decrease in cowrie shells on Funafuti.

Population trends

Overall, populations in most of the project sites appear to be fairly stable. Population growth in Makira, Solomon Islands is having an adverse effect on Ngali trees, as more areas are being cleared for housing and other infrastructure (see project #18). Similarly, population growth in Tarawa in Kiribati is leading to decreasing land availability, which affects local communities' ability to grow crops for subsistence and sale (project #19). In Funafuti, Tuvalu, population is on the decrease as more people move to NZ; this actually enhances the shell trade as there are more links with NZ (project #29).

Finally, and very importantly, the population living in hut and squatter settlements throughout Fiji is on the rise, leading to increasing poverty rates in the area. SL projects such as the Walking out of Poverty project (#40) will become more and more necessary as populations in these poor areas continue to rise.

Market prices

Market prices will affect livelihood diversification, such that as prices go up, the number of suppliers will inevitably increase too. This has been observed with regards to seaweed farming projects in the Philippines (Sievanen et al, 2005), where increasing market prices attracted many new farmers; as a result, the market was literally flooded with seaweed and prices dropped.

Results in this study indicate that market prices for locally sold goods (e.g. fruit, vegetables, fish, kuta mats, tanoas) are generally very stable; international pearl prices appear to be on the increase; the market price for seaweed is fairly stable; and as expected, market prices for beche-de-mer, which is scarce and in high demand, are high and on the increase.

5.6 "Successful" SL projects

In this study, two thirds (84%; n=26) of completed projects or businesses were considered to have been 'successful' by the interviewees and/or reports that documented them and only 5 projects were considered to have failed.[4] All 'active' projects (i.e. projects that are still running) were considered "successful so far". These findings stand in contrast to repeated assertions by experts in the field that most SL projects in the region fail (Gillett *et al*, 2006). The findings presented in this report most likely reflect a bias in the projects that interviewees are inclined to discuss and/or write about. It was noted, during the interview process, that response rates for projects considered as 'failed' were extremely low; only about 10% of people who were contacted regarding failed projects actually completed an interview. This clearly limits our ability to learn from past experiences, and extrapolate 'lessons learned' from past projects.

Using the definition of 'success' proposed in Section 3 (i.e. a successful project is ongoing, generating cash without reliance on subsidies and sustainable), we confirm that most of the projects considered successful by interviewees are successful under this definition, with the exception of the shell-based ornamental and handicraft projects in Tuvalu (projects #26 and 29), which appear to be experiencing sustainability issues. Cowrie shells, which are used in these livelihood projects, to create jewellery and other handicrafts are fast disappearing from Funafuti (Annie Homasi, pers. comm., October 2006; Resture and Resture, 2003). In addition, the Grow-Low Sakau (kava) project in Pohnpei (#22) is not considered successful, using our definition, as it appears to need financial support to be able to continue. This project has been classed as 'neither successful nor non-successful' given insufficient details.

[4] Two project interviewees were unable to comment on whether projects were a success or not

Table 3: Summary key characteristics of successful and unsuccessful SL projects

	Successful	Not successful
Summary statistics		
Number of projects	23	7
% of projects	76.7	23.3
General project characteristics		
% projects carried out baseline studies	50.0	0.00
% participatory process	69.6	57.1
% 'top-down' site selection	43.5	28.6
% monitoring	75.9	28.6
Human and social capital		
% participants with prior knowledge of activity	45.5	57.1
% projects low social cohesiveness	8.7	50.0
% projects strong leadership	71.2	25.0
% projects equitable sharing of resources	60.0	25.0
% projects providing financial literacy and/or business skills	28.6	42.9
Access and mediating processes		
% livelihoods with existing markets	90.9	85.7
% access to markets mediated by middleman	33.3	57.1
% government support	76.2	83.3
External trends and shocks		
% projects set up as a result of resource decline	21.7	14.3
% projects experiencing climatic shocks	35.0	14.3
% projects experiencing political shocks	55.0	50.0

NOTES: *Successful projects: completed, ongoing, sustainable. Not successful: completed, not ongoing, not sustainable. Other projects not included in table: ACTIVE projects*

As figures show, successful projects were more likely to have carried out baseline studies and to have monitored progress throughout the project lifetime. Interestingly, a higher proportion of successful projects were implemented in a 'top-down' manner (i.e. by external bodies) compared to non-successful projects. Successful projects were more likely to involve leaders with strong supportive roles, and to be carried out in places with greater social cohesiveness and equitable communal resource sharing (where relevant).

Perhaps surprisingly, prior knowledge about the livelihood activity and financial literacy was not more likely in successful projects. However, it must be noted that the various characteristics of SL projects are likely to interact with each other. Thus, although financial literacy training was found in only 29% of successful projects versus 43% of non-successful projects, this does not mean that training in business skills and financial literacy is no use. Table 3 only purports to present key characteristics of successful and non-successful projects. In order to assess the influence of different factors on success, one would need to carry out a regression analysis. At present there is insufficient data for this task, hence only broad and tentative conclusions can be drawn from the data at present.

In order to explore statistically significant relationships between project characteristics and project outcome, cross-correlations were carried out on all the variables against the dummy variable SUCCESS (where 1=successful, 0=not successful project). Results indicate that only 3 of the project characteristics are significantly related to project outcome: whether the project involved a baseline study (Chi2=5.56 (1d.f.), p=0.018), social cohesiveness[5] (Chi2=8.27 (1d.f.), p=0.004) and leadership support (Chi2=3.15 (1d.f.), p=0.076).

It is fairly evident that baseline studies will help assess whether a project is actually feasible. Feasibility studies, such as those presented in Annex 3, may require an initial investment, but may help avoid larger costs in the long-run. For example, the initial project proposal for the *Mataqali* Vanua Levu sheep farming project (#21) was inadequately assessed – as a result, the first phase of the project was unsuccessful, and more funding was required for a second phase (completed in 2004). At this stage it is still unclear whether the livelihood is self-sustaining, and only time will tell.

[5] The measure of 'social cohesiveness' is based on interviewee opinion, where 1=not socially cohesive and 0=socially cohesive.

The other factors that emerged as significantly related to success (leadership and social cohesiveness) are both social capital assets. These factors are often overlooked in project assessment and monitoring. None of the SL feasibility studies reviewed in Annex 3 assess the social feasibility of the projects; they only take into account financial (and occasionally, environmental) feasibility of different livelihood options. It is suggested that future SL feasibility studies of livelihood projects may benefit from considering these and other social capital factors prior to funding and/or implementing new SL projects, by asking the following questions:

- How much leadership support is there for the SL activity?
- How strong is the leadership?
- How equitable is the sharing of resources amongst the target group?
- Are there existing social conflicts that need resolving before implementing new SL options? What will it take to resolve these conflicts?

Answers to these questions may assist in appropriate project design. For example, projects #24 and #31, both failed due to infighting within the communities. On closer inspection, it appears that in both projects, roles, responsibilities and ownership issues were not properly clarified early on. Consequently, those in positions of power (village leaders and elders) assumed ownership of material goods and financial benefits associated with the projects. Furthermore, the leadership was not strong enough in project #31 to control the infighting that developed. In these situations, ex ante identification of existing social tensions might have highlighted the need for more extensive and regular extension, and support for the development of equitable decision-making processes. This is not to say that such support would secure the success of the project, but it could enhance the probability of success.

5.7 Lessons Learned

Interviewees for this study were asked to indicate why they considered that their project was successful/ not successful, and what could have made the outcome differ. Opinions on the factors necessary for a successful project included:

- Available market for product
- Good transport links
- Government support and co-operation
- Regular extension support and follow-up
- Financial management training
- Private company links

Opinions on why projects fail included:

- Poor project design/inadequate baseline studies
- Insufficiently trained staff & insufficient staff
- Limited supply of capital and/or financial resources
- Weak governance within the target group
- Lack of good leadership within the target group
- Lack of dedication and perseverance amongst participants
- Lack of alignment of project with the cultural lifestyle of the community
- Delayed payments to producers
- Civil disturbances

On the whole, these factors can be found amongst the "lessons learned" that were gleaned from the wider SL literature, presented in Table 1. Expert opinion on the importance of cultural and social factors in ensuring success of a SL project is varied. Some consider cultural and social factors to be key determinants of project success. For example, one informant considered that ownership and decision-making regarding SL projects must be handed over to project participants through iterative interactions, and this takes time. In hierarchical social systems, such as that found in Polynesian countries, decision-making is not easily adopted, and implementing organisations are often seen as the main decision-makers. This makes transfer of a project to a community very difficult, as observed for projects #21 and #34, where ownership of the project was not adequately established from the beginning.

Other experts consider that social and cultural factors, although important, will not necessarily hold projects to ransom. For example, Professor Ropate Qalo (USP, pers. comm., January 2007) argues that individuals, households and/or communities that really want to engage in a SL project will appropriately deal with social and/or cultural constraints if necessary. He argues that solutions to cultural constraints must be found within the cultural and social framework of the community, household or family, through the creative search for solutions (Qalo, 1997). Similar opinions were voiced by Jeff Liew (UNDP, pers. comm., September 2006) and Craig McConaghy (Coffee Connections, pers. comm., November 2006), who consider that if the benefits of participating in a new livelihood activity are sufficiently high, then interested groups will find ways to deal with social and cultural constraints.

On the basis of the projects reviewed for this study, and on the basis of interviewee opinions regarding the determinants of successful projects, the following 'lessons learned' can be added to those in Table 1:

- Need to assess whether there are existing social conflicts amongst the SL target group, and whether there is a real desire for conflict-resolution
- Need to assess extent of leadership support (including village chiefs, heads of local organisations, church leaders) and strength of leadership
- Need to assess whether existing decision-making institutions are robust, and whether support is needed to develop stronger decision-making processes

Findings suggest that an adequate consideration of these factors (in addition to those identified in Table 1) during the initial feasibility assessment of a SL project, will help in the appropriate design and management of a SL project.

6. CONCLUSIONS

The SLOPIC study has documented and reviewed 43 supplementary livelihood projects that have taken place in ten countries across the South Pacific, with a view to extracting 'lessons learned' and identifying the determinants of success. These findings will be used by FSPI to inform the development of appropriate tools that will be used by communities to evaluate supplementary livelihoods themselves.

Overall, findings in this study suggest that SL projects in the SP are faced with similar issues to SL projects in other parts of the world, although social and cultural

factors appear to emerge more frequently in the South Pacific as key influences on project success. Results broadly suggest that successful projects (i.e. those which are ongoing after project completion, generating cash without reliance on subsidies, and sustainable) are more likely to have involved baseline studies and continuous monitoring throughout. Regular extension and support were often quoted by interviewees as drivers for success, as well as good access to markets, and government support. Projects considered 'nonsuccessful' are mostly characterised by inadequate initial feasibility assessments, and insufficient extension and support to overcome existing social conflicts and help improve decision-making.

There is also a general agreement amongst interviewees (although not confirmed by our statistics) that projects targeted at families and households are more likely to succeed. It is suggested that this is due to greater cohesion between family/household members, more inclusive decision-making processes, and less incentive and ability to free-ride that might be found in community-based projects. Furthermore, most projects dealing with households and families do not usually target specific households/families, but invite these to self-select to the project. This self-selection process most likely attracts more entrepreneurial households/ families that are truly interested in taking part. Furthermore, by avoiding community-whole approaches, such projects may also avoid the need for conflict resolution - this is left to the individual household/ family to resolve.

Overall, this study has highlighted a number of key factors influencing SL project success. These have been formulated into a checklist of 'factors to consider', which may form the basis for the community (or household/family/individual) self-evaluation tool. This checklist is found in Figure 6. However, it is important to remember that there is no 'formula' for success and that ultimately – as in all areas of life and work – dedication, perseverance and constant re-assessment are the keys to eventual success.

Figure 7: Checklist of factors to consider

CHECKLIST OF FACTORS TO CONSIDER WHEN ASSESSING SL OPTIONS

ASSETS

1. Natural capital (natural resources contributing to SL)
- What natural resources do you need to carry out livelihood?
- What do you have?
- How are you going to get the natural capital that you don't have?

2. Physical capital (man-made resources relevant to SL)
- What physical capital do you need to carry out livelihood? (e.g. roads, electricity, running water, machinery etc)
- What do you have?
- How are you going to get the physical capital that you don't have?

3. Human capital (knowledge, labour and time relevant to SL)
- What knowledge do you need to carry out the livelihood?
- What knowledge do you have? Do you need additional training?
- How many people are needed to carry out the livelihood?
- Are there enough people to carry out the livelihood?
- How much time does each person need to spend each day/week, engaged in the new livelihood?
- Do they have enough time to engage in the new livelihood?
- How are you going to find people with enough time to spend on the livelihood?

4. Book-keeping or budgeting skills
- What book-keeping/budgeting experience or knowledge do you need to carry out livelihood?
- How are you going to get the skills you don't have?

5. Financial capital (credit, savings and subsidies relevant to SL)
- Did target group need money to help get started with alternative livelihood?
- Did they have money?
- Did they have access to credit or loans? Were they provided with subsidies?

6. Social capital (social cohesiveness of target group)
- Are there any existing social tensions between individuals, families, or other groups in the village/area?
- How will these be resolved before setting up the new livelihood?
- Who will be affected by the new livelihood?
- Are all affected groups (including women and youths) already involved in decision-making for the livelihood?
- How will they be included in the decision-making?
- Is the decision-making process equitable?

7. Leadership support for SL activity
- Do the village and church leaders support the project?
- How will you secure their support?
- Does the government support the project?

- How will you secure their support?

8. Cultural characteristics

- Are there any cultural characteristics that might constrain success of project?
- How can these be dealt with?
- Is the SL culturally acceptable?

MARKET FOR PRODUCT/ SERVICE

9. Existing market for SL product? Location of market?

- Is there an existing market for the product/service? How large is this market?
- Where is this market? (local, national, international)
- How far is market from project site?
- Are there many people selling the same product or service?
- In what ways is your product/service different and better than those of your competitors?
- What do you need to get your product or service on the market?
- What do you have?
- How are you going to get your product/service on the market?
- Can you sell your product or service directly, or do you need to sell through a middleman?
- Are transport links to markets adequate?
- What are the main transport links? (roads, shipping, planes?) How often do they run? Are they reliable?
- How much do they cost?

10. Market prices and expected gross revenue from SL

- What are the current market prices for SL products?
- Are market prices stable, or do they fluctuate significantly?
- What is the expected GROSS revenue from engaging in the activity in 1 year, 2 years and 5 years?

11. Costs of SL activity

- Do you have budgeting skills? Need to consider:
- How much will it cost to engage in SL option? (Consider: capital investments, running costs, labour costs)

12. Net revenue from SL

- What is the expected NET revenue (total receipts minus all costs) from this activity in 1 year, 2 years and 5 years?
- How will this revenue be used?

ACCESS & MEDIATING PROCESSES

13. Access restrictions

- Does the SL activity clash with regulations or laws?
- Does use of natural capital have to mediated by other people? (for example: does land used for SL belong to someone else? Do decisions regarding use of land have to be made by someone else?)
- Will this interfere with the project?
- Does use of physical capital have to mediated by other people? (e.g. does machinery used for SL belong to someone else? Do decisions regarding use of machinery have to be made by someone else?)
- Will this interfere with the project?

14. Bureaucratic requirements

- What bureaucratic requirements do you need to complete to engage in the SL activity?
- Is there someone responsible for completing these requirements?
- Do you have government support for completion of paperwork etc?

15. Leadership support for alternative livelihood

- Do traditional leaders support the alternative livelihood implemented by the project?
- Does the village committee support the project?

EXTERNAL SHOCKS & TRENDS

16. Climatic shocks and trends

- Does the SL activity have particular climatic requirements? (e.g. do you need abundant rainfall?)
- Is the climate suited for the SL activity?
- Are there regular climatic shocks, such as cyclones and earthquakes, which may affect the SL?
- How will you prepare for these climatic events?
- How will you deal with the impacts?

17. Resource shocks and trends

- Are there any diseases/pests/other organisms that may negatively affect your product?
- How will you prepare for these?
- How will you deal with the impacts?

18. Political instability?

- Are there any political issues that may negatively affect your project?
- How will you overcome these problems?

7. WHERE TO NEXT?

The aim of the present study was to evaluate SL experiences from across the South Pacific Islands, in order to provide crucial input into the development of a communitybased evaluation tool, which would allow local communities in the region to evaluate potential livelihood options for themselves.

It is suggested that this tool be developed by building on existing community-based tools, such as the Manual on Natural Resource-based Income Generating Activities produced by the South Pacific Regional Environment Programme (SPREP) for the South Pacific Biodiversity Conservation Programme (SPREP, 2001). This manual was developed for community leaders and support officers throughout the Pacific, and is considered a solid foundation on which to build a more up-to-date and rigorous community-based tool.

However, although the findings presented in the present report may contribute significantly to the FSPI community-evaluation tool, it must be noted that the findings are solely based on results from interviews with 'experts' from implementing, collaborating and/or funding bodies, and reports/papers produced by these institutions. In order to properly identify the drivers for project success and failure, it is considered necessary to carry out interviews with a sample of communities, families and/or individuals who have actually been involved in SL projects. In this way, we can triangulate data obtained from experts and associated documents, with information from the target groups. Furthermore, it is expected that interviews 'on the ground' will help identify social and cultural factors influencing project outcome.

It is therefore suggested that key case-studies – ideally ones that have worked in some countries/situations and failed in others – be chosen for more detailed examination, with particular focus on social and cultural opportunities and constraints (see Namudu and Pickering (2006) and Wale (2003) for some guidance on interviews about livelihood experiences in the field).

It is also recommended that the documentation exercise become a continuous process over time, and that details of specific SL projects in the South Pacific be made publicly available on the internet. In this way, governments, donors, implementing bodies and communities themselves, may use this knowledge-base to help assess the viability of potential projects, by building on past experiences and lessons learned.

REFERENCES

ACIAR (1999) 'Research capacity and general community impact of five ACIARsponsored projects', ed (Roger Mauldon), Australian Centre for International Agricultural Research. Accessed on www.aciar.gov.au

ACIAR (2004) 'Adoption of ACIAR project outputs: studies of projects completed in 1999-2000', eds (McWaters, V. and Templeton, D.) Australian Centre for International Agricultural Research. Accessed on www.aciar.gov.au

Allison, E.H. and Ellis, F. (2005) 'The livelihoods approach and management of smallscale fisheries', *Marine Policy*, 25, 377-388

Aswani, S. and Weiant, P. (2003) 'Shellfish monitoring and women's participatory management in Roviana, Solomon Islands' SPC Women in Fisheries Information Bulletin #12 – May 2003

Barrett, C.B., Reardon, T. and Web, P. (2001) 'Nonfarm income diversification and household livelihood strategies in rural Africa: concepts, dynamics, and policy implications', *Food Policy*, 26, 315-331

Crocombe, R. (2001) *The South Pacific*, University of the South Pacific: Suva, Fiji

DfID (2002) *Wildlife and Poverty*, Prepared by the Livestock and Wildlife Advisory Group in DFID's Rural Livelihoods Department

Eckman, K. (2005) 'Lessons learned by the WIN project on livelihoods diversification and enterprise development: an overview of WIN SLED-related activities in Cambodia, Nepal and Zambia', Working Paper 19, FAO (Food and Agriculture Organisation)

Ellis, F. (2000) *Rural Livelihoods and Diversity in Developing Countries*, Oxford University Press: Oxford, UK

Gillett, B., Nash, W., Govan, H., Preston, G., Adams, T. and Lam, M. (2006) 'Livelihood diversification as a marine resource management tool in the Pacific Islands: Lessons Learned', (unpublished)

Lal, P. and Keen, M. (2002) *Volume 5: Economic Considerations in Community-based Project Planning and Implementation*, Issues for Community-based Sustainable Resource Management and Conservation: Considerations for the Strategic Action Programme for the International Waters of the Pacific Small Island Developing States', Technical Report 2002/05, International Waters Programme (IWP, South Pacific Regional Environment Programme (SPREP)

Luxton, D.M. and Luxton, P.M. (1999) 'Development of commercial Kappaphycus production in the Line Islands, Central Pacific', *Hydrobiologia*, 398/399: 477-486

Namudu, M.T. and Pickering, T.D. (2006) 'Rapid survey technique using socio-economic indicators to assess the suitability of Pacific Island rural communities for Kappaphycus seaweed farming development', *Journal of Applied Phycology*, 18, 241249

Niehof, A. (2004) 'The significance of diversification for rural livelihood systems', *Food Policy*, 29, 321-338

Perera, N., Wilhelmsson, D. and Tamelander, J. (2005) 'Alternative Livelihoods as a Tool for Sustainable Coral Reef Management in Sri Lanka', CORDIO/IUCN

Pomeroy, R.S., Parks, J.E. Balboa, C.M. (2006) 'Farming the reef: is aquaculture a solution for reducing fishing pressure on coral reefs?' *Marine Policy*, 30, 11-130

Qalo, R. (1997) Small Business: a Study of a Fijian Family, The Mucunabitu Iron Works Contractor Cooperative Society Limited, Star Printery: Suva, Fiji

Resture, A and Resture, S. (2003) 'Seashells on the Seashore: Women's Participation in the Shell Trade on Funafuti and Nukufetau, Tuvalu' in *Pacific Voice*.

Salafsky, N., Cordes, B., Parks, J. and Hochman, C. (1999) *Evaluating Linkages between Business, the Environment and Local Communities: Final Analytical Results from the Biodiversity Conservation Network*, Biodiversity Support Program, Washington DC, USA

Scoones, I. (1998) 'Sustainable rural livelihoods: a framework for analysis', IDS working Paper 72, Institute for Development Studies, University of Sussex, UK

Sievanen, L., Crawford, B., Pollnac, R. and Lowe, C. (2005) 'Weeding through assumptions of livelihood aproachesin ICM: Seaweed farming in the Philippines and Indonesia', *Ocean and Coastal Management*, 48, 297-313

SPREP (2001) *Manual on Natural Resource-based Income Generating Activities*,1st Draft, produced by the South Pacific Regional Environment Programme (SPREP) for the South Pacific Biodiversity Conservation Programme (SPBCP), 2001.

Wale, R. (2003) 'Social and Economic Impact Assessment of the Seaweed Development Project in Rarumana Community, Parara Island, Western Province', Solomon Islands Rural Seaweed Development, Final Report, Educe Consulting Network, November 2003

Whyte, J. (2002) *Volume 6: A Review of Lessons Learned and Best Practice in Integrated Coastal Watershed Conservation and Management Initiatives in the Pacific Islands Region*, Issues for Community-based Sustainable Resource Management and Conservation: Considerations for the Strategic Action Programme for the International Waters of the Pacific Small Island Developing States', Technical Report 2002/06, International Waters Programme (IWP, South Pacific Regional Environment Programme (SPREP)

ANNEXES

ANNEX 1: EXPERTS WHO PARTICIPATED IN STUDY

No	Name	Position	Company/Organisation
Individuals who were interviewed			
1	Maria Haws	Director of the Pearl Research and Training Program	Pacific Aquaculture and Coastal Resources Centre at the University of Hawai'i Hilo
2	Simon Ellis	Director	Marine Environmental Research Institute of Pohnpei (MERIP)
3	Wendolin Roseo Marquez	Conservation Officer	Conservation Society of Pohnpei
4	Alan Resture	Fellow	University of the South Pacific (USP)
5	Albert Cerelala	Coordinator, Coastal Governance (ADB) Project	FSPI
6	A.M. Zakaria	Director	International Labour Organisation (ILO)
7	Taznim Ali	Project Officer	International Labour Organisation (ILO)
8	Jone Maivalili		Department of Fisheries, Savusavu
9	Kelly Brown	Marine Biologist	Walt Smith International
10	Kesaia Tabunakawai	Country Programme Manager for Fiji	WWF-Fiji
11	Francis Areki	Project Officer	WWF-Fiji
12	Leonie Smilie	Project Coordinator	FSPI (ex-Canada Fund Coodinator)
13	Nanise (surname unknown)		Department of Women, Navua, Fiji
14	Ropate Qalo	Senior Lecturer	School of Sociology, USP
15	Sashi Kiran	Director	Foundation for Rural Integrated Enterprises and Development (FRIEND)
16	Lori Banks	Peace Corps Volunteer	Foundation for Rural Integrated Enterprises and Development (FRIEND)
17	Verona Lucas	ex-Director PCDF	Partners in Community Development Fiji (PCDF)
18	Marea Itaia	Project Officer	FSP-Kiribati
19	Toka Abiete		FSP-Kiribati
20	Don Hess	Supervisor, Aquaculture Extension Agent	College of the Marshall Islands
21	Liz Matthews	Project Officer	Palau Conservation Society
22	Thomas Graham	ex-Project Officer	Palau Conservation Society
23	Craig McConaghy	Director	Coffee Connections
24	Dennis Badi	Conservation Education Officer	WWF-PNG
25	Laurie Wein	ex-Project Officer	WWF-Solomon Islands
26	Rory Stewart	Programme Manager	EU Fisheries Project (Ministry of Fisheries, Solomon Islands)
27	Silverio Wale	Project Officer	Solomon Islands Development Trust (SIDT)
28	Finau Molisi	Manager	Clam Circle, Ha'apai
29	Trevor Gregory	Café owner on Lifuka Island	Privately owned café
30	Annie Homasi	Executive Director	Tuvalu Association of NGOs (TANGO)
31	Robert Avio	Manager	National Tourism Development Office
32	Jeff Liew	Pacific Regional Sustainable Livelihoods Specialist	United Nations Development Programme (UNDP) Regional Office for the South Pacific
33	Garry Preston	Executive Director	Gillett, Preston and Associates

No	Name	Position	Company/Organisation
Individuals who were not interviewed but sent documents			
34	Alfred Vaka	Officer	Tonga Community Development Trust
35	Shankar Aswani	Associate Professor	University of Hawai'i
36	Cathy Hair	Senior Fisheries Biologist	Department of Primary Industries and Fisheries, Queesland, Australia
37	Jeff Kinch	Independent consultant	
38	Kate Brown	Coodinator for Nature Conservation	South Pacific Environment Regional Programme (SPREP)
39	Katrina Jarosz	Canada Fund Administrator	Canada Fund
40	Semese Alefaio	Coastal Coordinator	TANGO
41	Sitiveni Rokoro	Project Officer	Ministry of Youth, Suva
42	Tim Pickering	Lecturer	University of the South Pacific
43	Paula Holland	Project Coordinator	South Pacific Applied Geoscience Commission (SOPAC)
Individuals who assisted in other ways (eg forwarding emails to relevant people, suggesting people to speak to, etc)			
44	Helen Perks		World Conservation Society
45	Joji Vakawaletabua	Technical Officer	Department of Fisheries, Savusavu, Fiji
46	Louise Heaps	Project Coordinator	WWF-Fiji
47	Marika Bulicokocoko	Business Planner	Department of Cooperatives
48	Meita Beiabure	Director	FSPK
49	Monti		School of Marine Studies, USP
50	Sompert Rena	Fisheries Officer	Fisheries Department Vanuatu
51	Tevi Maltali	Programme Manager	Foundation for the South Pacific (FSP) - Vanuatu

ANNEX 2: INTERVIEW SCHEDULE

Project No.

GENERAL INFORMATION

1. Project name & location

- What is the name of the project?
- In which country/countries was project implemented? (if different countries, need to fill out separate breakdowns for each one)

2. Collaborating organisations (include: implementing organisation, all donors, government departments etc)

3. Source of information

(Interviewer: state whether you got the information in this breakdown from an interview, from reports or other documents, or both)

4. Contacts, and details of communication

(Interviewer: if you obtained any information from an organisation or individual, state here details of communication such as date and approach (e.g. face-to-face interview, telephone interview etc))

5. Associated documentation

(Interviewer: ask respondent if they can send you any associated documents either by email or post; list all documents associated with project, and indicate whether: we have them, we are expecting to receive them etc)

6. Alternative livelihood, location implemented, date implemented, length of intervention

- What alternative livelihood was introduced?
- Where was it introduced? (to interviewer: need to obtain specific info on location, such as village names and islands villages are found on)
- When was the project implemented?
- When did the project finish?
- Is there an intention to continue the project?

7. Status of project

(Interviewer: state whether project is active or complete)

8. Aim(s) of project

- What was the broad aim of the project: resource management or poverty alleviation?
- What were specific aims/objectives? (Interviewer: first ask if they have documentation that lists the objectives. If they do, ask them to send, and fill out yourself, once received)

9. Top-down or bottom-up?

- Who initiated project? Did the community approach implementing organisation, or the other way around?
- Was the project implemented using participatory methods?

10. How were sites selected?

(Interviewer: ask for criteria used in selection, and who selected sites)

11. Details of baseline studies

- Was a baseline study carried out before the project was implemented? (Interviewer: if YES, then ask for respondent to send it.)
- Did it include a socio-economic component?

12. Was the project monitored for progress?

(Interviewer: if YES, then ask respondent whether they have mid-term (or other monitoring) reports, and can they send? If they don't have mid-term reports, ask them how the project was monitored and what was found? If project was NOT monitored for progress, ask why not?)

Is there a final project evaluation? (only relevant to completed projects)

(Interviewer: if YES, then ask respondent whether they have the final evaluation report, and can they send? If they don't have final project report, ask them how the project was evaluated and what was found? If project was NOT evaluated at it's completion, ask why not?)

13. Continuation of AL after project end

COMPLETED PROJECTS ONLY:

- Has the alternative livelihood continued amongst the target group, after the project finished?
- Why has it continued/not been continued?

DETAILS OF PROJECT

14. Description of product or service

(Interviewer: briefly describe the product or service being introduced as part of the alternative livelihood project)

15. Project site description

Interviewer: ask respondent if they have documentation that describes the project site(s) in detail. If YES, ask them to send. If NO, ask them for information on the following:
Location of project sites (relative to main towns, markets and the sea)

- Population in villages where project implemented
- Average income in villages
- Main income-generating activities (apart from alternative livelihood introduced by project)

16. Relevant historical information

- Have other alternative livelihood projects been implemented in these areas before?
- Has there been any prior experience with this particular product/service?

17. Who were the target group?

- Was the project aimed at the community as a whole, individual households, extended families or individuals?
- Was the project targeted at any particular group, such as women or youths?

18. Other livelihood activities of groups taking up SL options

- What are the usual occupations of the people that the project was targeting? (e.g. fishing? looking after home? growing crops? etc) (Interviewer: list ALL occupations)

19. Religious affiliation(s) of participating individuals/groups/communities?

20. External support provided

(Interviewer: get as much information as possible, especially on extent of training provided, and donations made)

- Which organisations provided support to the project?
- What type of support did they provide? (i.e. training? equipment? Infrastructure?)
- How much support? ?
- IF TRAINING: what type of training? Were there workshops? How many? Were there field visits? How often? Were there people living on-site to train target groups? If respondent has documents relating to training visits/ workshops, please ask them to send.
- IF EQUIPMENT OR OTHER CAPITAL: what was provided? Cost? Who was it given to?
- IF FUNDING: how much? Who was it given to?
- IF OTHER: get as much detail as possible.

ASSETS (owned by social reference group – usually communities, but sometimes households only)

21. Natural capital (what are available natural resources contributing to alternative livelihood?)

- What natural resources did target group need to carry out alternative livelihood?
- What did they have?

22. Physical capital (roads, power, machines etc relevant to alternative livelihood option)

- Did village/ area where project implemented have roads? Did they need roads for alternative livelihood? If YES: condition of roads?
- Did village/ area have relevant machinery needed for alternative livelihood?
- Did they have electricity? Did they need electricity for alternative livelihood?
- Did they have running water? Was this needed for alternative livelihood?
- Other capital requirements?

24. Human capital (knowledge, labour, time relevant to alternative livelihood option)

- Did target group already have knowledge about the alternative livelihood? If YES: did they need additional training? If NO: was adequate training provided?
- Did target group have enough time to engage in the new livelihood introduced by the project?

25. Were target group provided with financial literacy training?

26. Financial capital (credit, savings, subsidies, support relevant to AL option)

- Did target group need money to help get started with alternative livelihood?
- Did they have money?
- Did they have access to credit or loans? Were they provided with subsidies?

27. Social capital (existing associations/committees involving target group, kinship networks etc)

- How cohesive were the groups targeted by the project?
- Were there any existing rivalries between families, individuals or villages, that affected the project?
- Were there existing community organisations? How many? How strong were they?
- Did the project strengthen community bonds?
- Was a community association set up to deal with the alternative livelihood set up by the project? If YES: please provide details or membership and how decisions are made.
- Were there gender inequalities that affected the project?

28. Cultural characteristics

- Were the target group constrained by cultural characteristics, suck as reciprocity obligations?

- Were there any cultural characteristics that enhanced/constrained success of project?
- Is AL culturally acceptable?

ACCESS & MEDIATING PROCESSES

27. Existing market for SL product? Location of market?

- Is there an existing market for the product/service?
- Where is this market? (local, national, international – get details)
- How far is market from project site?

Transport links?

- Are transport links to markets adequate?
- What are the main transport links? (roads, shipping, planes?) How often do they run? Are they reliable?

28. Access restrictions on target group? (on basis of age, gender, ethnicity, religion)

- Is the target group restricted in its ability to access natural, physical or financial capital, based on age, gender, ethnicity, religion etc? (example: belonging to one ethnic group might mean lack of access to the best fishing areas, which are owned by another ethnic group)
- Is the target group restricted (in terms of gender, age, ethnicity etc) in its ability to make decisions? (for example, women or youths may not have decision-making power over household income, which might limit their ability to buy equipment that will help them engage in ALs)

29. Access restrictions on activity? (e.g. does activity clash with rules, customs or regulations?)

- Does the alternative livelihood activity clash with existing customs or rules?
- Does it clash with regulations or laws?

30. Access restrictions on natural, physical or financial assets? (does use of assets have to be mediated by other peo ple?)

- Does use of natural, physical, human or financial capital have to mediated by other people? (for example: does land used for AL belong to someone else? Does boat needed for AL belong to someone else? etc) If YES: who?
- Is access mediated by NGO, government, private company etc?

31. Ownership and decision-making regarding use of natural capital?

- Who has ownership over land/ fishing grounds/other natural capital, relevant to AL project? (i.e. is it owned by whole community, individual family, extended family, state, other?)
- Who decides what happens with the land/fishing grounds/other natural capital, relevant to AL project?
- IN COMMUNITY-OWNED LAND: Are decisions made by a committee? If YES, who are the members of committee? Only older men? Women and youth representatives? If NO: who makes the decisions?
- IN HOUSEHOLD/ FAMILY OWNED LAND: are decisions made by whole family? How?

32. Bureaucratic barriers to entry in AL activity? (e.g. excessive red tape or bureaucratic requirements)

- What bureaucratic requirements have to be met for local communities or families to become involved in the AL implemented by the project?
- Do you consider these bureaucratic requirements a barrier to entry? (i.e. they take too long, cost too much, too hard to obtain etc)

33. Government support for project? Type and quantity?

34. Leadership support for alternative livelihood

- Do traditional leaders support the alternative livelihood implemented by the project?
- Does the village committee support the project?

Quality of leadership in community

- Interviewer: read this out exactly: "On a scale of 1 to 5, where 1 is 'very poor', and 5 is 'very strong', how would you rate the quality of leadership in this community?"
- Why?

35. How equitable is the sharing of resources in community/within households?

- Interviewer: read this out exactly: "On a scale of 1 to 5, where 1 is 'not at all equitable', and 5 is 'very equi table', how equitable would you say the sharing of resources is in the community?"
- Why?

EXTERNAL SHOCKS

36. Climatic shocks?

- Have there been recent climatic events that have affected livelihoods of target group? Have there been climatic event that have specifically affected the ALs implemented by project?
- Overall, what climatic events would affect the AL?

37. Resource trends?

- Is there a decline in resources relevant to livelihoods of target groups? (e.g. has there been a decline in fish catch, which may explain why target groups are rapidly taking up ALs?

38. Population trends?
- Are there any major population trends that are relevant to the success of the AL project?
- Is the local population growing?
- Is there immigration or emigration?

39. Market prices?
- What are the market prices for AL products? (interviewer: please get as much detailed info on the price of the product/service being introduced through project)
- Are market prices stable, or do they fluctuate significantly?

40. Costs of activity?
- How much does it cost per person/household, to produce one unit of product or service from the AL? (Interviewer: try to get as much info as possible, including amount of time it takes to produce one unit)

41. Political instability?
- Were there any political issues that affected the ALproject?

EXPERT OPINION

42. Is alternative livelihood potentially financially self-sustaining?
(i.e. when all subsidies and support are removed, will the AL be able to continue and make money?)

43. Success or failure?
- In your opinion, would you say the project was successful or not?
- WHY? What constitutes in your opinion a successful project?

44. Why did it succeed/fail?

45. How could it have succeeded/failed?
- SUCCESFUL PROJECTS: how might the project have failed?
- UNSUCCESFUL PROJECTS: how might the project have succeeded?

ANNEX 3: REVIEW OF EX ANTE FINANCIAL FEASIBILITY STUDIES

	Study (Author, date, location, livelihood option	Full reference	Type of study	Livelihood options assessed	Methods for assessment of viability of project	Findings
1	Financial and social feasibility of aquaculture in the IndoPacific (Pomeroy *et al*, 2006)	Pomeroy, R.S. Parks, J.E. Balboa, C.M. (2006) 'Farming the reef: is aquaculture a solution for reducing fishing pressure on coral reefs?' *Marine Policy*, 30, 11-130	Empirical, ex ante	Culture of grouper (food fish), marine ornamental fish species (clownfish & angelfish), and invertebrates (live rock and hard or stony coral)	A financial analysis was undertaken for each selected species. This involved estimating initial capital investments, capital asset addition schedules, fixedcosts, annual operating costs, enterprise budget, and a cash flow statement (5- or 10-year)	Financial feasibility analysis of culture of live food fish (groupers) finds this option financially feasible, although full-cycle production approaches are too capital intensive for small-scale producers. Financial feasibility analysis for the culture of clownfish shows the enterprise can be profitable but the capital investment and operating costs are too high for small-scale fishers to adopt as alternative livelihood. In addition, extensive training and capacity-building required. Financial analysis of small-scale culture of live rock and/or live coral shows that this enterprise could be technologically and economically feasible for small producers in the Indo-Pacific region. However, these products currently have lo market value – hence, they would generate insufficient returns to offset high capital investment and operating costs
2	Financial feasibility of live rock & coral structure vs live rock and coral harvest in Fiji, for international aquarium trade (Lal & Cerelala, 2005)	Lal, P and Cerelala, A (2005) 'Financial and economic analysis of wild harvest and cultureds live coral and live rock in Fiji', A Report prepared for the Foundation of the Peoples of the South Pacific International, Suva, Fiji	Empirical, ex ante	Culture versus collection from wild of live rock and live coral	Financial analysis of "with live rock & coral culture" vs "without live rock and coral culture". Uses combination of primary data (SSIs and OE interviews with relevant households) and secondary data	Live coral: at national level, assuming a 5-year period, a villager estimated to receive NPV of FJ$12,855 from wild harvest, and FJ$5,936 from cultured harvest of live coral. Live rock: using same assumptions as above, a villager is estimated to receive FJ$23,187 from wild harvest, and FJ$10,833 from cultured harvest of live rock
3	Financial feasibility of live rock and coral culture versus live rock and coral harvest in Solomon Islands (Lal & Kinch, 2005)	Lal, P. and Kinch, J. (2005) 'Financial assessment of the marine trade of corals in Solomon Islands', A Report prepared for the Foundation of the Peoples of the South Pacific International, Suva, Fiji	Empirical, ex ante	Culture versus collection from wild of live rock and live coral	As in Lala and Cerelala (2005)	Cultured live coral and rock are not found to be financially feasible. Similar findings to Lal and Cerelala (2005)
4	Live rock and coral harvest in Muaivusu, Fiji (Sauni *et al*, 2005)	Sauni, S., Kronen, M., Vunisea, A., Fay-Sauni, L. and Labrosse, P. (2005) 'Is it worth the cost? The live rock fishery at Muaivusu *Qoliqoli*, Fiji' in Novazcek, I., Mitchell, J. and Veitayaki (eds) *Pacific Voices: Equity and Sustainability in Pacific*	Expirical, ex post	Live rock and live coral harvest from the wild for marine ornamental trade	Uses closed questionnaires (sample size=28 households in Muaivusu village, and results extrapolated for all districts) o assess financial benefit from live coral and live rock harvest compared to financial benefit from reef fisheries	Weekly cash income from coral harvesting calculated at FJ$30-60/wk per harvester, compared to FJ$32/wk for reef fisheries. Assuming 1.4 fishers per HH then cash income per HH from coral harvest is approx FJ$60/wk. However, coral harvesters do not catch fish for household consumption – the weekly value of subsistence fish catch comes to about FJ$58/HH/wk. Hence, true income of reef fisheries fishers is approx FJ$98/HH/wk.

	Study (Author, date, location, livelihood option	Full reference	Type of study	Livelihood options assessed	Methods for assessment of viability of project	Findings
5	Financial feasibility of marine oranamental aquaculture in various Pacific islands (Palau, Federated States of Micronesia, Marshall Islands, Samoa, Tonga, Vanuatu and Fiji) (Eco-Consult Pacific, 2004)	Eco-Consult Pacific (2004) *Regional Assessment of the Commercial Viability for Marine Ornamental Aquaculture with the Pacific Islands*, A Report prepared for the Secretariat of the Pacific Community – Aquaculture Section	Stakeholder consultation (review of regional experiences)	Culture of giant clam, hard coral, soft coral, fish, live rock and shrimp	Consultations with representatives from relevant government agencies, non-government organisations, private sector marine exporters and aquaculturists	Most aquaculture enterprises are government- or privately-owned. Only a few examples of community-owned farms: in Tonga, there are three successful community farms cultivating giant clams. Community-based commercial clam farming was developed in Fiji in the late 1990s (details not given). Whether the facility is still running is not specified. Small-scale live coral culture projects are running in most Pacific Islands for research and for AIG activities, but are not commercially viable (details not given)
6	Financial feasibility of culture of groupers in Philippines and Indonesia (Pomeroy *et al*, 2004)	Pomeroy, R.S., Agbayani R, Duray, M., Toledo, J. Quinitio, G. Sugama K, Slamet B, Tridjoko (2004) 'Financial feasibility analysis for grouper culture systems in the Philippines and Indonesia', *Technical Report FTR1*, Community Conservation Network, Honolulu, Hawai'i	Empirical, ex ante	Culture of groupers (food fish)	Reported in Pomeroy *et al* (2006) – see above	Summarised in Pomeroy *et al* (2006)
7	Economic and financial feasibility of small-scale culture of clownfish in Philippines (Pomeroy and Balboa, 2004)	Pomeroy, R.S., Balboa, C.M. 'The financial feasibility of small-scale marine ornamental fish aquaculture in the Philippines.' *Technical Report FTR2*, Community Conservation Network, Honolulu, Hawai'i, 2004	Empirical, ex ante	Clownfish for marine ornamental trade	Reported in Pomeroy *et al* (2006) – see above	Summarised in Pomeroy *et al* (2006)
8	Financial feasibility of live rock and live coral aquaculture in Indo-Pacific (Parks *et al*, 2003)	Parks, J.E., Pomeroy, R.S., and Balboa, C.M. (2003) 'The economics of live rock and live coral aquaculture', in Cato, J.C. and Brown, C.L. (eds) *Marine Ornamental Species: Collection, Culture and Conservation*	Expirical, ex ante	Live rock and live coral aquaculture for marine ornamental trade	Capital investment, 'creation of enterprise' budget and cash flow projection estimated for two-year period. Two culture production models created (one for medium-scale US enterprises, one for small-scale enterprises in Indo-Pacific islands) and three production scenarios considered: 1) live rock culture; 2) live coral; 3) both. Primary and secondary data used	Projected capital investment costs: between US$265,000 (live coral only) and US$515,000 (mixed) (US medium-scale enterprise model) and US$20,000 to US$30,000 for IPI small-scale enterprise model. Projected enterprise budget: both models operate at a loss. Cash flow analysis: also reports an overall loss for all scenarios for both models, with the exception of the mixed-live rock and coral scenario for the US model and even then, this only becomes financially feasible after five business cycles (10 years)

Foundation of the Peoples of the South Pacific International

Office 2, Level 2,
Victoria Corner Building,
Victoria Parade, Suva,
Fiji Islands

GPO Box 18006,
Suva,
Fiji Islands

www.fspi.org.fj

Telephone: +679 3312 250
Mobile: +679 9927 628
Fax: +679 3312 298
Email: admin@fspi.org.fj