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

Volume 6: A Review of Lessons Learned and Best Practice in Integrated Coastal Watershed Conservation and Management Initiatives in the Pacific Islands Region

by Jenny Whyte

Technical Report 2002/06

Participating Countries in the International Waters Programme

Cook Islands, Federated States of Micronesia, Fiji, Kiribati, Marshall Islands, Nauru, Niue, Palau, Papua New Guinea, Samoa, Solomon Islands, Tonga, Tuvalu and Vanuatu.

Table of Contents

Foreword ..... **iv**
Introduction ..... **v**
About the Author ..... **x**
Author's Acknowledgements ..... **x**
List of Abbreviations ..... **xi**
Executive Summary **1**
1. Preamble **3**
1.1 Scope and Purpose 3
1.2 Participatory resource management 4
1.3 Watersheds 5
2. General Observations **6**
2.1 Collaboration 6
2.2 Full participation by local stakeholders 7
2.3 Consortiums and partnerships 9
2.4 Managing conflict 11
2.5 Integrated approaches 12
2.6 Adaptive management 12
3. Identification of participatory resource management needs and design **13**
3.1 Identifying resource management problems or issues 14
3.2 Participation in identifying resource management needs 15
3.3 Participation in the planning or design of a natural resource management activity 16
3.4 Participation in decision-making 18
3.5 The commitment of national or international stakeholders 19
3.6 Strategies for community entry by national or international agencies 20
4. Best practice resource management systems and mechanisms **23**
4.1 Successful management tools
4.1.1 Clear purpose *23*
4.1.2 Leadership *23*
4.1.3 Resource stewardship *24*
4.2 Application of a resource management system 25
4.3 Monitoring 27
4.4 Measures of resource conservation outcomes 28
5. Social and economic activities within resource management projects **30**
5.1 Awareness, education and extension strategies 31
5.2 Social and economic development 33
5.3 Use of enterprise and income-generating activities 34
5.4 Enabling conditions for change 35
5.5 Social and economic outcomes 36
5.6 Measures of social and economic outcomes 38
6. Cross cutting themes **39**
6.1 Building and maintaining effective relationships between international, regional and national stakeholders 40
6.2 Engagement of donor partners 41
6.3 Engagement of the private sector 42
6.4 Capacity building strategies 43
7. Key lessons for the IWP **45**
7.1 Embrace tensions and conflict 46
7.2 Build capacity 47
7.3 Adopt flexible and responsive management styles 47
7.4 Learn from experience and help others to learn 48
7.5 Build model intra- and inter-organisational relationships 48
7.6 Make realistic commitments 48

8. Conclusions 49

Annexes

Annex I: References 50

Annex II: Contact list, including those who commented on the draft report 66

Annex III: Useful Web Sites 68

Annex IV: Glossary 70

Annex V: Sample project outlines 75

Annex VI: Key recommendations for integrated resource management 78

Annex VII: Some participatory watershed management activities in Pacific Island Countries 81

List of Figures

Fig 1: Approaches to resource management 4

Fig 2: Characterisation of participation 5

Fig 3: Who is a stakeholder in a resource management decision? 8

Fig 4: The Bismark Ramu Community entry strategy 22

Fig 5: Structural challenges for watershed management (adapted from Lee, 1999) 46

List of Tables

Table 1: A summary of the principal components of the IWP including the broad Programme objectives and activity areas designed to address priority environmental concerns of participating countries vii

FOREWORD

The South Pacific Regional Environment Programme (SPREP) has been involved in many large regional initiatives since it was established in 1982. Among the more notable are the National Environmental Management Strategies, State of Environment Reports, regional preparations for the United Nations Conference on Environment and Development in Rio de Janeiro in 1992; the South Pacific Biodiversity Conservation Programme which also started in 1992 and concluded in 2001, preparations leading up to the World Summit on Sustainable Development scheduled for Johannesburg, South Africa in 2002 and this programme, the Strategic Action Programme for the International Waters of the Pacific Small Island Developing States (IWP).

The IWP is novel in many respects. It is the first large programme in which several Pacific regional organisations, united under the umbrella of the Council of Regional Organisations in the Pacific (CROP), are formally collaborating. While SPREP is the executing agency, responsibilities for the execution of the oceanic component of the Programme rest with the Secretariat of the Pacific Community (SPC), based in New Caledonia, and the South Pacific Forum Fisheries Agency (FFA), which is based in Solomon Islands. These two organisations are providing the science and the management advice respectively to assist the 14 countries participating in the Programme develop comprehensive conservation and management arrangements for the region's major renewable resource, tuna.

The Project Coordination Unit (PCU) of IWP is based at the SPREP Secretariat in Samoa. It is responsible for the implementation of the coastal component of the Programme. The objective of this component is to design and implement a project in each of the 14 participating countries that seeks to address priority environmental concerns in respect of coastal fisheries, marine protected areas, waste management or the preservation and conservation of freshwater resources. The focus of the projects, termed pilot projects in the Project Document, is to promote increased community involvement and responsibility for local resource management and conservation initiatives.

The Programme is an ambitious one. Involving 14 countries stretching over 30 million square kilometers of the western central Pacific, and working principally in isolated rural communities, there are bound to be many challenges encountered as the Programme is implemented over the next four years. Nevertheless, if in that short time frame we can learn more about processes that will motivate and support local communities to take a more proactive role in the sustainable utilisation and conservation of their renewable resources, we will have made a significant contribution to the future well-being of the Pacific region and the ecosystems it supports.

This report is one of six reports produced at the start of the Programme and, as such represents the first major output for the Programme. This series of reports seek to synthesize all the available information for each of the priority areas of interest to the IWP - coastal fisheries, marine protected areas, waste and freshwater as they relate to tropical island ecosystems, particularly in the western and central Pacific. The reviews of these four technical areas are supplemented with complementary reviews, in separate volumes, of economic issues to be considered in planning and implementing community-based sustainable resource management and conservation initiatives in island ecosystems, and of lessons learned from previous national and regional projects and activities related to the future areas of work for the IWP. Not only do these documents provide a useful reference for practitioners working on the priority environmental concerns of the region in relation to each of these four areas of interest but they also provide a comprehensive snapshot of our understanding of these critical issues in the region in early 2002.

As a result, these reports will provide a useful reference for understanding the baseline situation that existed in the region at the start of the IWP. They provide a valuable reference against which the situation in 2005 may be assessed. This will be a measure of whether progress was made in addressing these pressing issues during the Programme or if we continue to threaten the future of our fragile environment through poor management of the natural systems and resources with which we are blessed.

SPREP looks forward to working with participating countries on the successful execution of this Programme.

Tamari'i Tutangata
Director
SPREP

INTRODUCTION

Background

The member countries and territories[1] of the South Pacific Regional Environment Programme (SPREP), at their 8th Annual Meeting in October 1995, endorsed a project to prepare the Strategic Action Programme (SAP), under the International Waters focal area of the Global Environment Facility (GEF).

The GEF was created in 1994 to fulfill a unique niche – that of providing financing for programmes and projects to achieve global environment benefits in four focal areas: biodiversity, climate change, international waters, and ozone layer depletion - and in land degradation as it relates to these focal areas.

According to the GEF definition, international waters include oceans, large marine ecosystems, enclosed or semi-enclosed seas and estuaries as well as rivers, lakes, groundwater systems, and wetlands with trans-boundary drainage basins or common borders involving two or more countries. The ecosystems and habitats associated with these waters are essential parts of the system. Because the global hydrological cycle links watersheds, the atmosphere, estuaries, and coastal and marine waters through transboundary movement of water, pollutants and living resources, international waters extend far inland and far out to sea.

The Pacific region's premier political body, the Pacific Islands Forum, at its Annual Session in September 1996, requested SPREP to coordinate development of the project. Formulation of the SAP, funded by GEF through project development funds (PDF Block-B), began in April 1997. The SAP was to combine the following activity areas:

- Integrated conservation and sustainable management of coastal resources, including freshwater resources;
- Integrated conservation and sustainable management of oceanic resources;
- Prevention of pollution through the integrated management of land- or marine-based wastes; and
- Monitoring and analysis of shore and near-shore environments to determine vulnerability to environmental degradation.

The basis for developing a Programme focus in these areas is found in the joint regional position prepared by Pacific island countries for the 1992 United Nations Conference on Environment and Development (UNCED), the simultaneous preparation of National Environmental Management Strategies (NEMS) by Pacific island countries between 1990 and 1996, as well as the Action Plan for Managing the Environment of the South Pacific Region (1997-2000).[2]

A Regional Task Force (RTF) was established to oversee preparation of the SAP. It was composed of one representative from the Governments of Fiji, Marshall Islands, Samoa, Tonga, and Vanuatu, with additional members from the Pacific Islands Forum; SPC, SPREP, the three GEF Implementing Agencies (the United Nations Development Programme (UNDP), the United Nations Environment Programme (UNEP), and The World Bank (TWB)), two international non-governmental organisations (the World Conservation Union (IUCN) and The Nature Conservancy (TNC)), and one private sector representative (Fiji Dive Operators Association, recommended by the Tourism Council of the South Pacific (TCSP)). The Asian Development Bank (ADB) and the Economic and Social Commission for Asia and the Pacific (ESCAP) also participated.

Work undertaken during the SAP formulation process resulted in the identification of three priority transboundary concerns related to International Waters:

- degradation of their quality;
- degradation of their associated critical habitats; and
- unsustainable use of their living and non-living resources.

The SAP was reviewed and subsequently endorsed by the Heads of Government of the Pacific Islands Forum at its Session in Rarotonga in 1997. Refinement over a period of almost two years resulted in GEF Council approval of the SAP in August 1999. Execution by SPREP commenced in early 2000.

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[1] American Samoa, Australia, Cook Islands, Federated States of Micronesia, Fiji, France, French Polynesia, Guam, Kiribati, Marshall Islands, Nauru, New Caledonia, New Zealand, Niue, Northern Mariana Islands, Palau, Papua New Guinea, Samoa, Solomon Islands, Tokelau, Tonga, Tuvalu, United States of America, Vanuatu and Wallis and Futuna.

[2] Revised in late 2000 as the Action Plan for Managing the Environment of the Pacific Islands Region (2001-2004) adopted by the 11th SPREP Meeting, Guam, USA, 9-12 October 2000.

The International Waters Programme (IWP), or Strategic Action Programme (SAP) in GEF parlance, is designed to assist Pacific island countries[3] improve regional capacity for management of transboundary water resources and create improved management structures to address environmental degradation and ensure the long-term sustainability of ocean fisheries in the Western and Central Pacific ecosystem. The IWP also intends to promote improved integration of environmental concerns into local, national and regional policy, and improved water quality and the conservation of key coastal and ocean ecological areas.

The GEF and UNDP view the "pilot" or "demonstration" nature of the 14 projects to be implemented under the national components of the IWP as providing the basis for future funding opportunities from GEF facilities for participating countries. The IWP, as a Strategic Action Programme, is considered an initial step leading to the development of Medium-Sized (up to US$1 million) or Full Projects (in excess of US$1 million) for technical assistance, capacity building or investment. Such projects may be regional or national in scale. As a result, the later stages of the IWP are likely to devote considerable effort to analyzing the results of the IWP to assist countries with the formulation of follow-up activities supported through the GEF and alternative sources of financing assistance.

Key Elements and Assumptions

The Project Document is formulated on the basis that the International Waters in the Pacific region are subject to threats that give rise to transboundary concerns. During the formulation of the IWP, threats were examined from the perspective of critical species and their habitats and living and non-living marine resources. Identified threats include:

- pollution of marine and freshwater (including groundwater) from land-based activities;
- the long term sustainable use of marine and freshwater resources;
- physical, ecological and hydrological modification of critical habitats; and
- unsustainable exploitation of living and non-living resources, particularly, although not exclusively, the unsustainable and/or inefficient exploitation of coastal and ocean fishery resources.

The IWP formulation process examined each threat in a legal, institutional, socio-economic and environmental context. The ultimate root cause underlying imminent threats was identified as deficiencies in management. Factors contributing to the management root cause were grouped into two linked subsets: a) governance, and b) understanding.

The governance subset was characterised by the need for mechanisms to integrate environmental concerns, development planning, and decision-making. The understanding subset was characterised by the need to achieve island-wide ecosystem awareness through improved education and participation. Island-wide awareness and participation will facilitate the development and implementation of measures to protect International Waters.

The IWP analysis revealed a set of information gaps required by decision-makers to responsibly address ultimate root causes and respond to imminent threats. Particularly important is the lack of strategic information presented in an appropriate manner to decision-makers, resource users, managers and communities to evaluate costs and benefits of, and to decide among, alternative activities. Improving information input and exchange at the regional, national, and community levels is an objective of the Programme.

The IWP provides for targeted actions to address the root causes of degradation of International Waters. The actions are to be carried out in two complementary, linked consultative contexts: Integrated Coastal and Watershed Management (ICWM) and Oceanic Fisheries Management (OFM). Through the ICWM and OFM approaches, the IWP suggests a path for the transition of Pacific islands from sectoral to integrated management of International Waters as a whole, the evolution of which is essential for their protection over the long term.

The IWP will place priority on liaising with donors who are active in the region to plan and coordinate regional and national development assistance for International Waters to address imminent threats and their root causes more effectively. The IWP is designed to provide a framework for overall national and regional planning and assistance for the management of International Waters and provide a catalyst for leveraging the participation of other donors in the project.

[3] The 14 countries participating in the IWP are: Cook Islands, Federated States of Micronesia, Fiji, Kiribati, Marshall Islands, Nauru, Niue, Palau, Papua New Guinea, Samoa, Solomon Islands, Tonga, Tuvalu and Vanuatu.

The Project Document acknowledges that all sustainable development issues related to International Waters cannot be addressed at once. Therefore, four high priority areas have been identified for immediate intervention:

- improved waste management;
- better water quality;
- sustainable fisheries; and
- effective marine protected areas.

Targeted action within these activity areas is proposed in five categories:

- management;
- capacity building;
- awareness/education;
- research/information for decision-making; and
- investment.

Institutional strengthening is included under management and capacity building.

The principal components of the IWP, as described in the PD, are summarised in Table 1.

Table 1. A summary of the principal components of the IWP including the broad Programme objectives and activity areas designed to address priority environmental concerns of participating countries.

Goal	To achieve global benefit by developing and implementing measures to conserve, sustainably manage and restore coastal and oceanic resources in the Pacific Region [Integrated sustainable development and management of International Waters]
Priority Concerns	Degradation of water quality • Degradation of associated critical habitats • Unsustainable use of resources
Imminent Threats	Pollution from land-based activities • Modification of critical habitats • Unsustainable exploitation of resources
Ultimate Root	Management deficiencies • Governance • Understanding
Solutions	• Integrated Coastal and Watershed Management, and • Oceanic Fisheries Management. (ICWM), (OFM)
ICWM Activity Areas	• Improved waste management • Better water quality • Sustainable fisheries • Effective marine protected areas
OFM Activity Areas	• Sustainable ocean fisheries • Improved national and regional management capability • Stock and by-catch monitoring and research • Enhanced national and regional management links
Targeted actions	• Management/institutional strengthening • Capacity-building/institutional strengthening • Awareness/education • Research/information for decision-making • Investment

UNDP is the GEF Implementing Agency and SPREP is the Executing Agency, on behalf of other CROP agencies associated with the Programme, the SPC and FFA.

This Review

This review is one of six reviews that were compiled during the early stages of IWP implementation for two reasons. The first is to provide a source of current information for practioners – principally those practioners associated with the implementation of the pilot projects in each of the participating countries as it relates to the areas of primary interest to the IWP (waste, freshwater, marine protected areas and coastal fisheries). To provide as much practical benefit as possible, these reviews are supplemented with additional synopses of information concerning economic issues and lessons learnt in the design and implementation of community-based sustainable resource management and conservation initiatives.

The second reason for these reviews is to provide a snapshot of what is known about each of the four areas of primary interest to the IWP in 2001 and early 2002. This is done to provide a baseline overview of available information in the areas of primary interest at the commencement of the Programme. As a result, any review of these areas of interest towards the end of the Programme, in 2005, will have a useful reference for assessing change in relation to the management and conservation of these resources in the Pacific region.

The first of the six reviews was prepared by Mike Huber and Kerry McGregor who comprehensively reviewed activities and current thinking in relation to marine protected areas (MPAs) and their application to the management and conservation of coastal resources. While the focus of the review is the Pacific islands region, their presentation is supplemented with examples from other ocean regions. The review examines resource conservation and related habitat issues, management approaches, governance, and past and current priorities in respect of marine protected areas at the national level within the 14 countries participating in the Programme and regional initiatives relating to marine protected areas.

The second volume in the series addresses issues relating to the conservation and management of freshwater resources in the Pacific islands region. It was prepared by Tony Falkland who provides a review of published and other information relating to freshwater quality, supply, management and conservation. The review places emphasis on community-based issues associated with the conservation and sustainable management of freshwater resources, reflecting the planned focus of subsequent pilot projects that may be instigated under the International Waters Programme.

The third volume in the series provides an examination of issues relating to waste reduction, pollution prevention and improved sanitation in the Pacific islands region, and elsewhere, as it relates to the objectives of the International Waters Programme in terms of promoting management for improved waste reduction initiatives in communities. It was prepared by Leonie Crennan and Greg Berry who summarise activities in the region that have attempted to address low cost/no cost alternatives to reduce loadings of solid and liquid wastes, particularly in coastal and watershed communities where quality of drinking water resources is at risk. Information includes a review of priority waste concerns in Pacific island communities, management and governance issues, and options for increased community responsibility for managing waste problems.

The fourth volume, prepared by Paul Dalzell and Don Schug, presents a review of current information relating to sustainable coastal fisheries in the Pacific islands region and elsewhere as it relates to the objectives of the Programme in terms of promoting capacity building for improved coastal resource management responsibility in communities. Information presented includes a review of coastal fisheries in the Pacific region, discussion of resource management and governance issues, customary marine tenure (CMT), the role of MPAs and past and current priorities in respect of the sustainable management of coastal fisheries at local, provincial, national and regional scales. Their review includes consideration of gender issues and women's activities in the coastal zone including the role of women in subsistence and artisanal fisheries in the 14 countries participating in the Programme. They also discuss cases that illustrate particular issues in community-based management of subsistence and artisanal fisheries; including government support for community actions.

In the fifth volume Padma Lal and Meg Keen present a review of economic issues that should be considered in the design, implementation, monitoring and evaluation of community-based resource management and environment conservation projects in island ecosystems. They describe economic issues that require detailed consultation with community members during the design, implementation and monitoring of projects such as those to be supported under the Programme. This includes the identification of institutional issues, socio-economic implications for communities (benefit/cost analysis and cost effective analysis), and suggested strategies for promoting broad community participation and support in conservation and sustainable resource use initiatives (incentives and transaction costs).

In this, the sixth and final volume in this series, Jenny Whyte and her colleagues at the Foundation of the Peoples of the South Pacific International and affiliated organizations provide a review of information relating to lessons learned and best practices for resource and habitat conservation and sustainable management initiatives in the Pacific islands region. The review focuses on community-based (participatory) issues associated with the conservation and sustainable management of resources and habitats in island ecosystems with emphasis on the four focal areas for the International Waters Programme (sustainable coastal fisheries, marine protected areas, community-based waste reduction and

preservation of freshwater resources). Issues are considered in context of the entire project cycle - from project planning and design; selection of sites; method of community entry; community baseline assessments; participation of communities; the role and participation of governments and, if they are involved, external agencies, NGOs and development assistance agencies; education and awareness activities, completion and exit considerations such as alternative income generation, and monitoring and evaluation. The review considers social, cultural, economic, environmental, administrative, managerial, legal and political dimensions of such projects.

As a supplement, each author was asked to consider examples of what a pilot project might look like. As a result, at the conclusion of each review, three examples of community-based initiatives that may serve as a model or a template for a pilot project are presented.

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Andrew Wright and Natasha Stacey
Project Coordination Unit
International Waters Programme
Apia
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ABOUT THE AUTHOR

The information for the report on lessons learned for community-based and participatory watershed management was compiled by staff and associates of the Foundation of the Peoples of the South Pacific International. FSPI is a network of independent non-government organisations active in community development in eight countries in the Pacific. We are driven by our mission to "work with Pacific communities through people-centred programmes to foster self-reliance in a changing world".

Jenny Whyte coordinated work by the FSPI team and compiled the report. Jenny Whyte is an environment planner with particular interest in participatory planning and community based conservation. Jenny has been based in Vanuatu for almost 10 years working with the Regional Secretariat of the Foundation of the Peoples of the South Pacific and the NBSAP project of the Vanuatu Government Environment Unit.

Working with Jenny to provide information from the experience of their countries were Abel Tapisuwe of FSPI Regional Secretariat; Albert Williams of FSP Vanuatu; Delphine Greindl; Erimeta Barako of FSP Kiribati; Floyd Boy Robinson and Gerald Billings of FSP Fiji; Katherine Yuave of the Foundation for Peoples and Community Development (PNG) and Loreen Ngwele (FSPI). Together this team provides links with on the ground participatory community development work that spans fisheries, coastal management, pollution management, biodiversity conservation, integrated conservation and development projects and environment health.

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The information in this report was compiled by staff of organisations associated with the Foundation of the Peoples of the South Pacific International (FSPI). FSPI is a network of non-government organisations (NGOs) active for community development in eight Pacific Island Developing States (PIDS).

Jenny Whyte (FSPI) coordinated the work of team members; Jenny Whyte and Delphine Greindl undertook literature reviews; while Abel Tapisuwe (FSPI), Erimeta Barako (FSP Kiribati), Floyd Boy Robinson (FSP Fiji), Gerald Billings (FSP Fiji), and Katherine Yuave (Foundation for People and Community Development PNG (FPCD)) spoke with individuals involved in watershed conservation activities in their respective countries. Albert Williams (FSP Vanuatu) gathered information from participants in the 20th Annual Pacific Islands Environment Conference held in Guam, 11 – 15 June, 2001. Loreen Ngwele (FSPI) provided organisational support and proof read different versions of the report. Akara Kalo helped to compile the reference list. People contacted are listed in Annex II. The team is grateful for their time and interest.

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LIST OF ABBREVIATIONS

ACT	Awareness Community Theatre
AusAID	Australian Agency for International Development
BCN	Biodiversity Conservation Network
BSP	Biodiversity Support Programme
CASO	Conservation Area Support Officer (employed to facilitate in-country initiatives of the SPBCP project)
CBEMP	Capacity Building for Environmental Management in the Pacific (a SPREP Regional Programme)
CNMI	Commonwealth of the Northern Mariana Islands
CSI	UNESCO Programme for Environment and Development in Coastal Regions and in Small Islands
FPCD	Foundation for People and Community Development
FSM	Federated States of Micronesia
FSP	Foundation of the Peoples of the South Pacific
FSPI	Foundation of the Peoples of the South Pacific International, Regional Secretariat
GEF	Global Environment Facility
ICAD	Integrated Conservation and Development
ICDP	Integrated Conservation Development Project
ICM	Integrated Catchment Management
ICoM	Integrated Coastal Management
IDS	Institute of Development Studies (Sussex University UK).
IGA	Income Generating Activity
IIED	International Instititute for Environment Development (UK)
IWP	Strategic Action Programme for the International Waters of the Pacific Small Island Developing States
KAP	Knowledge, attitudes and practice surveys
NANGO	National Alliance of Non-government Organisations (Papua New Guinea)
NGO	Non Government Organisations
ODA	Overseas Development Administration (UK)
OISCA	Organisation for Industrial, Spiritual and Cultural Advancement International.
OLSSI	O le Siosiomaga Society Incorporated (Samoa)
PCS	Palau Conservation Society
PIDS	Pacific Island Developing States
PLA	Participatory Learning and Action
PNG	Papua New Guinea
PRA	Participatory Rural Appraisal
RARE	Rare Centre for Tropical Conservation
RRA	Rapid Rural Appraisal
SELF	Solar Electric Light Foundation
SPACHEE	South Pacific Action Committee for Human Ecology and Environment
SPBCP	South Pacific Biodiversity Conservation Programme (a SPREP Regional Programme)
SPREP	South Pacific Regional Environment Programme
TNC	The Nature Conservancy
UNDP	United Nations Development Programme
UNESCO	United Nations Education, Scientific and Cultural Organization
URI-CRC	University of Rhode Island, Coastal Resources Center
USA	United States of America
US EPA	United States Environmental Protection Agency
OWOW	Office of Water and Watershed Affairs
USP	University of the South Pacific
VDT	Village Development Trust (PNG)
VPAI	Vanuatu Protected Areas Initiative
WMA	Wildlife Management Area
WRI	World Resources Institute
WWF	World Wildlife Fund

For community members … "this is not a conservation project – it's their life."

(Baron, 1998)

EXECUTIVE SUMMARY

This report summarises for the International Waters Programme (IWP) lessons learned, best practices and measures of success for participatory and community-based sustainable resource management and conservation initiatives in watersheds. This work was undertaken concurrently, but independently of, five other reviews relevant to the IWP that addressed marine protected areas, sustainable coastal fisheries, freshwater resources, waste management and natural resource economics.

The report focuses on stakeholder participation within three broad contexts: the process of establishing and managing participatory resource management activities (problem/need identification, design, decision-making, management and achieving outputs or goals); realisation of resource management objectives, and the realisation of social and economic objectives. It notes processes and tools readily available to resource managers, and identifies both gaps in the present knowledge and cases that could be considered exemplary.

Much of the knowledge about factors that contribute to successful watershed management is experiential and anecdotal. Only a small body of work in participatory community-based conservation has been rigorously analysed and published, mostly through large learning portfolios such as the Biodiversity Support Programme (BSP) and the Biodiversity Conservation Network (BCN). These have provided important sources for information in this report.

This review identifies six key process tools that are recommended for effective participatory resource management at the geographic and ecological scale of a watershed or catchment. These are:

- Collaboration between multiple stakeholders;
- Full participation of local stakeholders;
- Holistic integrated approaches;
- Adaptive and evolving plans and management systems;
- Conflict resolution and mediation; and
- Information gathering, monitoring and repeated analysis.

There are strong inter-linkages in the application of the six tools described above, and often it is impractical to view them in isolation.

Commitment to applying these key tools is no guarantee of success and some process tools may not be fully attainable in complex watershed management situations. Some practitioners have found subsidiary tools particularly helpful in enhancing the likelihood of success in their situations. Tools that were referred to repeatedly include:

- stakeholder analysis to build understanding of the evolving interests and concerns of different stakeholders;
- awareness raising and education, directed toward garnering support and increasing the capacity of stakeholders at all levels;
- creating enabling conditions both for collaboration between diverse stakeholders and for the realisation of conservation goals;
- directing resources to maintaining and strengthening relationships between stakeholders and partners;
- strong and charismatic leadership at a community, organisation and programme level; and
- management committees that involve those with direct interests in resource management.

However, there is no single optimum method through which to apply these tools and there is no single solution. What constitutes good practice varies according to a starting point, goals, changing conditions at the site and conditions in the broader social, political and economic context in which work proceeds.

Some general lessons in respect of good practice include:

- Collaborative management is not possible in the absence of community organisation (including community institutions, management groups and leadership) and models of cooperative behaviour by White et al. (1994, p.116);
- Small scale projects are more easily managed and monitored and more likely to be successful. Complex projects provide many opportunities for failure, not least due to the high demands on local institutions. It is sensible to start with small groups and small problems and advance to larger problems once confidence, knowledge and capacity has increased (Chambers, 1993; UNDP-GEF, undated; White, et al., (eds) 1994;

www.epa.gov/owow). Multiple small sites with fewer stakeholders may be more appropriate than a single large initiative with complex relationships (Fry et al., 2000, p. A15);

- Consultation and participation require flexibility and time. How much time will depend on the complexities of a particular situation. Timeframes up to a decade appear a realistic guide for establishment of viable community-based and collaborative watershed management systems (UNDP-GEF, undated; J. Axford, pers. com., 2001; White et al., (eds), 1994);
- Where potential participants do not have equal capacities and experiences, it can be strategic to invest in capacity building and awareness raising to create a 'level playing field' within the design and management processes (Johnson and Walker, 2000; Chambers and Guitj, 1995; Fry et al., 2000; Brown and Wyckoff-Baird, 1992);
- Clear visions and goals that are shared by stakeholders and resource users can foster a common understanding and purpose (B. Raynor, pers. com. 2001; Weber et al., 2000);
- Before entering discussions with local stakeholders national or international stakeholders need to consider the commitment they can make to a resource management activity. This includes consideration of the responsibilities they are able to take on and the time frame they are working within. This information should be openly shared, particularly during preliminary discussions with local stakeholders that lead to common visions and decisions to collaborate. This knowledge is an important guide in assigning roles and responsibilities between stakeholders during planning activities (Margolius, 2000; Margolius et al., 2000; Borrini-Feyerabend, 1997a);
- In general individual or organisational collaborators whose involvement is not guaranteed in the long term should seek to occupy a supporting role with clearly defined subcontracted tasks and inputs such as organisational and individual capacity building, training, provision of technical expertise (legal, policy, business management as well as conservation science and development practice) (Margolius et al., 2000);
- Social and economic development interventions can be very influential as tools to build more sustainable resource use practices. However where the goal is sustainable watershed management, the interventions should not become the ends in themselves, Brown and Wyckoff-Baird (1992);
- Public and local resource user support is usually fundamental if resource management systems are to be effective in the short, medium and long term. Information, education and extension work integrated within the resource management initiative can help to build support Borrini-Feyerabend (ed), (1997).

Perhaps the most important lesson for the IWP is that sustainable conservation and development initiatives at a community level in the Pacific requires a long-term perspective. Important work will be required in creating enabling situations and building capacity within communities and within in-country government and non-government organisations (NGO) that will create a foundation for long term sustainability.

IWP must be realistic about what can be achieved in the timeframe for which it has secured funding. Care should be taken not to create unrealistic impressions and expectations. Initial goals should be modest and achievable. As collaboration builds in-country and community capacity, there is potential to progressively build upon initial achievements.

To maximise the long term impacts of the IWP demonstration projects in the region it is recommended that IWP give particular consideration to:

- management of resource management tensions and conflict;
- building capacity;
- demonstrating flexible and responsive management styles;
- taking a learning approach to project implementation; and
- demonstrating model intra- and inter- organisational relationships.

1. Preamble

1.1 Scope and Purpose

The coastal component of the Strategic Action Programme for the International Waters of the Pacific Small Island Developing States (IWP) is focused on integrated coastal watershed management and involves the implementation of 14 pilot projects that address sustainable resources management and conservation issues.

The IWP contracted the Foundation of the Peoples of the South Pacific International Regional Secretariat (FSPI) to assist with the description and analysis of issues (lessons learned, best practices and measures of success) that enhance the prospects of success for *community- based* or *participatory* sustainable resource management and conservation initiatives in *watersheds*. This work was undertaken concurrently with, but independently of, five other reviews relevant to the IWP that addressed marine protected areas, sustainable coastal fisheries, freshwater resources, waste management and natural resource economics.

> **"Best** as a superlative implies the existence of a **single** course of action that is superior to all others. Given the social, cultural and ecological diversity of local contexts … such an inflexible terminology is judged to be inappropriate."
>
> www.unesco.org/csi/pub/info/wise

This report summarises information from experience in participatory sustainable resource management and conservation, with a particular focus on the geographic and ecological scale of a watershed. It reviews:

a. Experience in community-based and participatory resource management, integrated conservation and development initiatives; and

b. Experience in integrated coastal, watershed or catchment management activities.

The review describes pertinent issues for future activities in Pacific Island Developing States (PIDS).

The report describes participatory and integrated conservation practices, and practitioner's lessons and experiences. It identifies important information and knowledge gaps and recommends tools for use in association with each step. This includes social processes and tools for involving different project stakeholders, maintaining effective partnerships and addressing stakeholder needs as well as scientific processes associated with the management of natural resources or biodiversity.

Chapter One provides a general introduction to the work and defines key concepts and terms. Chapter Two summarises important recurrent themes that appear common to the body of resource management experience: collaboration; local stakeholder participation; consortiums and partnerships; conflict resolution; integrated approaches; and, adaptive management. Chapter Three overviews additional lessons for the identification of resource management needs and the design and planning of responses. Chapter Four summarises experience from the application of different natural resource management systems and mechanisms to achieve conservation outcomes. Chapter Five summarises experiences in addressing social and economic components of resource management activities. Chapter Six includes additional experiences from several issues considered important within the IWP context but not relating specifically to the other chapters of the report. Recommendations for the functional areas of the IWP are made in Chapter Seven. For each discussion theme, bullet points highlight relevant challenges, lessons learned, information gaps, exemplary practice and useful tools as appropriate. Not all sections of the report include all sub-headings.

Annex I lists published and unpublished references related to participatory resource management and watershed management. Annex II lists all individuals or organisations who provided information to the consultant team. Annex III lists internet information sources that have been drawn upon in preparation of this report. To avoid ambiguity a glossary of terms is included as Annex IV. Words included in the glossary are highlighted in ***bold italics*** when first used in the text. Annex V presents the *TOP TEN* recommendations of several organisations actively involved in participatory resource management initiatives. Annex VI provides three one-page summary project outlines. These do not aim to be complete in themselves but draw on the results of the review to provide models to participating countries in designing and implementing appropriate pilot projects under the IWP. Appendix VII lists some of the watershed management activities within PIDS that provided information toward this report.

Text boxes have been used throughout the report. Shaded text boxes include supporting documentation such as quotations. White text boxes include descriptive examples from resource management activities.

Within the literature there are several conservation programmes that provide well documented and analysed experience from the field. Several of these have been important sources of information for this report. They include;

- The Biodiversity Support Programme (BSP), a consortium of the World Wide Fund for Nature (WWF), the World Resources Institute and the Nature Conservancy funded by US-AID.

- The Biodiversity Conservation Network (BSN) is a US-AID funded programme of the BSP that has specifically tested enterprise as a tool for conservation. The BCN included well documented conservation activities in Fiji, Solomon Islands, and Papua New Guinea (PNG).
- The United Nations Educational, Scientific and Cultural Organisation (UNESCO) Programme for Environment and Development in Coastal Regions and in Small Islands.
- The South Pacific Biodiversity Conservation Programme (SPBCP) managed by SPREP and funded by the United Nations Development Programme/Global Environment Facility (UNDP/GEF) and Australian Agency for International Development (AusAID). SPBCP supported 17 community-based conservation areas in 12 Pacific Island Countries (PIC) during the period 1993 to 2001.
- The World Resource Institute (WRI) global programme on freshwater resources and watershed conservation.

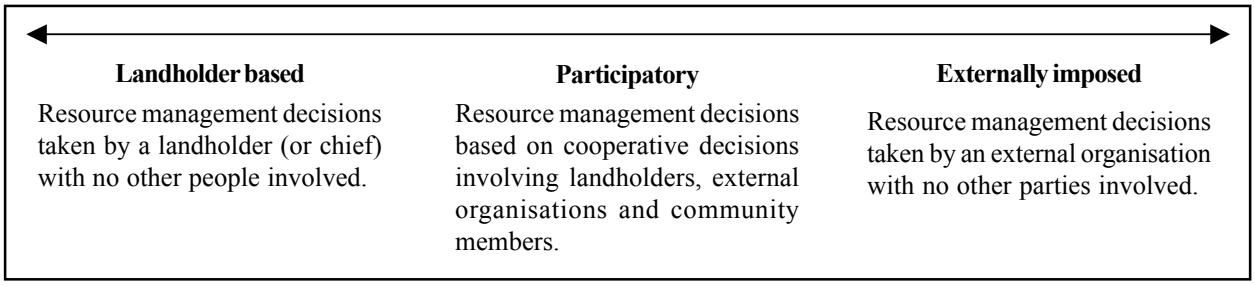
Learning portfolios that document participatory conservation experience have also been formed by the MacArthur Foundation, World Neighbours and World Wide Fund for Nature (WWF). Experience from these organisations, while not so extensively published, has also been reviewed.

1.2 Participatory resource management

Resource management systems refer to the "set of rules, labour, finance and technologies that determines the location, extent and condition of human use of resources and consequently the rate of resource depletion and renewal," (Renard, 1991, p.4). Resource management systems are ***sustainable*** when they can be continued indefinitely without reducing their capacity to meet the needs of future generations. The goal of *conservation* is sustainable resource management.

Resource management systems are participatory when they are established and implemented through the cooperative efforts of multiple stakeholders. It can be helpful to visualise a continuum between resource management systems implemented unilaterally by landholders, at one extreme, and resource management decisions imposed unilaterally by an external organisation at the other (Figure 1).

Fig 1 Approaches to resource management



Most resource management activities in the Pacific involve a degree of consultation and cooperation between landholders and others in their community or with agencies external to the community. A seemingly unilateral landholder or chiefly decision requires at a minimum, awareness among resource users and a passive decision to respect the decision. Similarly, an externally imposed decision will require a minimum of passive involvement. More commonly there is active consultation or participation at a family, clan or community level or among key sectoral stakeholders. They are, to varying degrees, participatory.

Participation is hence a broad generic term that can be applied descriptively to quite diverse situations. To be useful the term requires clarification. Participation is commonly characterised progressively from no participation through to full involvement (e.g. Arnstein, 1969). This report uses the characterisation of participation given in Fig 2 (from Whyte et al., 1998). This delineates participation according to the responsibility and role given to stakeholders. Commonly, participation is highly variable throughout the life of a natural resource management activity. It varies throughout the planning cycle, for individual management activities and for different stakeholder groups. When one stakeholder group is actively or fully involved another may be passive. There are many reasons for this. Participation of a stakeholder at a given time will be influenced by diverse factors including the institutional setting, management practices, relevance of individual activities and unrelated events that capture the attention or commitment of stakeholders.

> Although we "worked with" communities since the beginning [1990], its only been since 1995 that we've really "worked with" communities, meaning that rather than just making them aware and asking for their help, we've gradually stepped back and learned to facilitate communities/ leaders to develop a vision, identify key issues, and develop and implement strategies to address those issues. This has been a long learning process ….though we're not there yet.
>
> B. Raynor, TNC, pers. comm., 2001

It is inherent to the discussion within this report that no matter where in the continuum a conservation initiative starts, its position is likely to change and the nature of participation of stakeholders will vary with time and purpose.

Fig 2 Characterisation of participation

FULLY INVOLVED	Stakeholders share an active and responsible role in planning, decision-making and implementation. They define actions, receive benefits and respond to problems.
ACTIVE	The range of stakeholders is informed, contribute ideas, voice support or opposition, or help with activities. The capacity to make final decisions and allocate benefits is retained by a small subset of stakeholders.
CONSULTED	The range of stakeholders are informed, able to contribute ideas and voice support and opposition but are not involved in key decisions and activities.
FUNCTIONAL	Most stakeholders who participate do so to meet predetermined implementation objectives, for example, form committees, provide labour or other local resources, or receive training.
INFORMED	Stakeholders are aware of issues and decisions, but do not contribute ideas or take part in decision making.
PASSIVE	Stakeholders are informed of a decision after it has been made. They have opportunity to passively show respect or ignore the decision.
NO INVOLVEMENT	No involvement, stakeholders with no knowledge of a decision.

1.3 Watersheds

Diverse activities fall within the theme of sustainable resource management in ***watersheds*** including: maintenance of water supply services, biodiversity conservation, pollution and waste management, maintenance of scenic or cultural sites; land-use planning; maintenance of productive systems for agriculture; forestry; and fisheries. No attempt has been made to compare these widely differing objectives.

Watersheds link aquatic, terrestrial and marine ecosystems in complex ways. For example:

a) Much aquatic biodiversity in PIDS is (*amphidromous)* (e.g. gobies, eels);

b) Land and water-use activities within a watershed impact on estuaries and coastal marine areas that receive surface and ground water flows;

c) Changes in the human use of particular resources may significantly affect human use of other resources. For example, a shift towards income generation from fishing reduced the area of land cultivated by one Fiji community (Whyte et al., 1999).

Supplying water (to ecosystems including but not only for humans) is perhaps the most basic service that watersheds provide. In many areas pressure on water resources constrains social and economic development.

http://www.wri.org/watersheds/

Given the ecological importance of watersheds and the extent of human and environmental dependence on watershed services, watershed degradation has potentially enormous environmental and socio-economic costs. Yet efforts to develop and use the economic services provided by watersheds have not been well integrated with efforts to sustainably manage biological resources within watersheds. Freshwater as a resource has often been managed through policies, institutions and practices that are disconnected from, at times even in direct conflict with, those designed to conserve natural resources (www.wri.org/; Trisal, 2000). This disconnection between economic development policies and sustainable management policies stems in part from the failure to consider watersheds as integral units, and in part from traditional sectoral specific resource management (ibid). Watersheds, and perhaps the biodiversity systems they define, have also failed to attract the conservation attention given to other ecosystems or biodiversity elements: such as tropical rainforests and coral reefs. This may change with the growing realisation that watersheds are a uniting

element within integrated ecosystem approaches, and that 20 per cent of global freshwater biodiversity has become threatened in the past few decades (www.wri.org/wr2000/freshwater_biodiversity.html).

2. General Observations

Many of the lessons for effective participatory resource management and integrated conservation and development activities (ICAD) are remarkably common regardless of environment, organisation or culture (Annex V). This chapter presents key recurring process tools, that appear to underpin effective participatory resource management initiatives at the geographic and ecological scale of a watershed or catchment.

2.1 Collaboration

While there are exceptions, a watershed management initiative will normally involve:

- Multiple ecosystems;
- Multiple land and water resource uses;
- Multiple landowners or people with resource stewardship authority;
- Many resource users;
- Several hamlets, villages, towns or 'communities'; and
- Several government or administrative agencies that exercise responsibility over different activities or jurisdictions within the watershed.

It is rare for one stakeholder to have authority and capacity to act unilaterally, especially where integrated or holistic solutions are sought. It may be possible in small catchments with one resource owner/manager grouping; or where there is strong government control over resources and capacity to enforce these controls, such as where a water authority has legislated controls over the catchment to a water reservoir. Where the latter has been attempted in the Pacific it has been problematic (e.g. Pohnpei Watershed Forest Reserve and Mangrove Protection Act of 1987).

Consequently *collaboration* between multiple stakeholders is fundamental to integrated resource management systems at the geographic scale of a watershed. Resource management systems that are based on stakeholder collaboration have often been termed *collaborative resource management systems*.

> Collaborative management requires networking: forging links to community leaders, local law enforcement, private businesses and national agencies.
>
> Salm et al., 2000, p.65

> The Pohnpei Watershed Forest Reserve was set up by legislation in 1987. The Act designated 5,100 ha as a protected area to be managed and enforced by Government. Community awareness and buy-in was almost non-existent and the proposed regulations did not recognise traditional resource use and authority.
>
> The initiative was rejected by local communities. Government survey teams were turned back by angry villagers.
>
> B. Raynor, TNC, pers. com., 2001

Collaboration requires that at a minimum, stakeholders who are resource users must be informed and supportive, as their behaviour will impact on management effectiveness. Functional participation (such as representation on management committees) and consultation (village or individual meetings or interviews) have been conventional tools to secure the involvement of these stakeholders.

Full participation of every stakeholder in a collaborative resource management system at the watershed scale is unlikely. Commonly stakeholders will be involved through their agents or representatives, or a subset of stakeholders will assume a management or coordination role. The extent to which this subset of stakeholders is representative of resource users and other stakeholders and how they assume authority has varied.

Lessons learned

⇒ The first step towards effective collaboration is a philosophy and practice that fosters an open enabling environment for full participation by those stakeholders who choose it (Okiira, 2000).

⇒ The level of participation appropriate for a given stakeholder group within a collaborative resource management system will depend upon the interest and willingness of stakeholders to participate, the legal and institutional framework, land and resource tenure, the level of community awareness and organization, and the extent to which resources are economically and socially important to the various stakeholders (White et al., (eds), 1994).

⇒ Community-based collaborative management is more likely to succeed where there is a cohesive community, demonstrating capacity to achieve shared goals and with a shared commitment to a vision (Whyte et al., 1998).

⇒ To reduce the social, environmental and administrative complexity implementing work at a sub-catchment level may be appropriate.

2.2 Full participation by local stakeholders

It has been widely stated that full participation of local stakeholders is important for conservation success (Brown and Wyckoff-Baird, 1992; Salafsky et al., 1999; WWF 1997; Sutherland, 2000; SPREP 2000b; Paka, 1998). As defined in section 1.2, full participation implies that local stakeholders share an active and responsible role in planning, decision making and implementation, also that they define actions, receive benefits and respond to problems.

However, local stakeholders are not a homogeneous group. Local stakeholders include landowners, people who have or have had resource access rights and benefits (not all of whom may be locally resident), and those who will be affected by resource management decisions (such as where changed resource use patterns in one location may transfer activities to an adjoining area). There are many subgroups with different or even opposing needs, wants and capacities, and whose interests change over time (Margolius and Salafsky, 1998; Brown and Wyckoff-Baird, 1992). Even perceptions as to who should be considered a local stakeholder can vary widely (Fig 3). Within resource management work at a watershed scale it is also apparent that local stakeholder participation must at times be maximised in the context of *all* stakeholders' interests**.**

Processes and tools to balance the interests of local stakeholder sub-groups and collective interests are often necessary (Brown and Wyckoff-Baird, 1992). *Stakeholder* and *socio-economic analysis* have been used to inform stakeholders, management teams or staff about the diversity and dynamics of local stakeholder groups (Overseas Development Administration, 1995). These studies are not a one-off activity at the design stage. Monitoring programmes should include analyses of stakeholder interests and dynamics to inform management and allow implementation strategies to be adapted as appropriate. To be effective time and financial budgets must be adequate to provide for stakeholder and socio-economic analysis (Brown & Wyckoff-Baird, 1992; WWF, 1997; Salafsky et al., 1999).

Where water supply to more distant stakeholders is an important function of watershed management, balancing local with more distant interests can be a particular challenge. Representation of stakeholders on management committees have been a common tool to achieve this balance. Tools for conflict mediation and resolution (section 2.4) can be useful in achieving this balance.

> Local ownership of a project is a direct consequence of the commitment to community participation from the project outset ….that community voices will be heard. That their knowledge will become the foundation upon which all project activities will be structured.
>
> Aalbersberg, 1999, p.24-5

Best practices for sustaining participation:

- Be participatory in all aspects of our work… (and) build a culture of participation.
- Identify and involve beneficiaries at all times.
- Recognise that communities are not homogeneous and not static.
- Put a premium on the use of local resources, both material and human.
- Ensure there is enough time/space for reflection, learning and replanning.
- Create room for changes and share and make space for different views while trying to resolve issues.
- Develop skills to manage the complexities of participation.
- Remember that participation is a continuous process, but it may not be appropriate in all circumstances.
- Different situations demand different approaches to participation.
- Participation should not be imposed: it should be 'optional' and democratic.

Okiira, 2000, p.26.

Challenges

⇒ To build support among stakeholders for participatory approaches, especially where traditional resource management systems are strongly hierarchical and where the staff of agencies involved have limited experience of public involvement.

⇒ Many conservation activities have primarily involved stakeholders at the functional or consulted levels of participation, where full participation is seen to be optimum (Sutherland, 2000, p.253). It remains a challenge for many to achieve full participation of local stakeholders.

⇒ To share full management responsibilities, including financial control and reporting with local stakeholders, or their agents and representatives. This is particularly challenging for work within defined project structures that includes externally set timeframes and reporting requirements. Project holders may need to retain authority to vet work plans and budgets where they are financially accountable for programme funds.

⇒ To demonstrate participation through your work and in the culture of your organisation, not merely to promote it to your target beneficiaries (Okiira, 2000).

Fig 3 Who is a stakeholder in a resource management decision?

Work in Vanuatu by Whyte *et al*. (1998), has demonstrated that perceptions of who is a stakeholder varies. Most extreme difference is apparent between external agencies and local village communities. This perception influences the focus of information provided and received, who different parties seek to involve and in what ways.

	External agencies' list of stakeholders	Local villagers' list of stakeholders
Local level	Chiefs Landholders and their families Families with resource user rights Neighbouring villagers Church elders Women's groups Youth Settlers with no formal rights Locally-based extension officers/ community development workers Local business people Local political leaders	The landholders' Chief The head of the landholder family (where not also the chief) Senior men in the landholder family Women with ownership rights (some communities only) Other groups or individuals as invited by the landholder family or their Chief
Provincial level	Provincial Government Island Council of Chiefs Island Council of Women Island Council of Youth Provincial Government Officers	Only where and if invited by the landholder family or their Chief
National level	Relevant government departments National NGOs Vanuatu National Council of Women	Only where and if invited by the landholder family or their Chief
International level	Interested environment organisations Interested regional /intergovernment agencies Interested international organisations	Only where and if invited by the landholder family or their Chief

Lessons learned

> Participatory approaches can optimise the contribution of science by helping scientists to better understand the context of decision-making and to facilitate the integration and adoption of the scientific outputs in natural resource management practice.
>
> Johnson and Walker, 2000, p.83

⇒ Participation does not guarantee conservation success, it is a means toward this end (Margolius and Salafsky, 1998, p.98).

⇒ Full participation of all stakeholders in every component of a long-term integrated conservation activity may be ideal, but is not a realistic goal, (Brown and Wyckoff-Baird, 1992). The participation of many stakeholders will vary over time, and in complex systems with large numbers of stakeholders some form of representation is usually necessary. However, it is widely recommended that of the range of stakeholders, effort is made to secure full participation of local stakeholders. This may be through their agents, institutions or representatives.

⇒ Do not assume that a participatory approach is familiar or acceptable. Many communities are accustomed to being passive beneficiaries, or are accustomed to hierarchical decision-making processes. The approaches to participation and community mobilisation adopted at any site must be acceptable to government, NGO and community stakeholders (Orr, 2000).

⇒ Monitor participation and stakeholder dynamics and identify and respond to potential problems as they arise (Cordes, 1999; WWF 1997).

⇒ Put a premium economic value on the use of local material and human resources (Okiira, 2000; Brown and Wyckoff-Baird, 1992).

⇒ Work through local languages and local institutions to as great an extent as possible.

⇒ Participatory tools such as Participatory Learning Action (PLA) are not an end in themselves, but only a means to promote more equal discussions between stakeholders, and outsiders and local villagers in particular McCallum and Sekhran (1996).

Tools for stakeholder participation

- PLA-type tools[1] that have been adapted to suit the local situation have been widely used to nurture participation. Most countries have individuals with PLA facilitation skills.
- Both the Institute of Development Studies (IDS), Sussex University (UK), and the International Institute for Environment Development (IIED)(UK) have produced sector or development issue specific PLA tools and information packs. Some of this is available over the internet and hard copies can be ordered through the post for no charge. IIED publishes *PLA Notes* quarterly, with notes, experiences and replicable tools developed by practitioners.
- World Neighbours, Oxfam and Clark University (USA) have also published handbooks for international use on the PLA tools for diverse applications.
- Sutherland (2000) *The conservation handbook: research, management and policy.* Pages 244-250 present key questions to guide understanding of the root social, economic, cultural and political causes of threats to a natural resource base.
- Borrini-Feyerabend (ed) (1997) *Beyond fences: seeking social sustainability in conservation.* includes checklists for distinguishing stakeholders, a matrix of indicators of participation and describes a variety of tools for stakeholder analysis and participation.

Outside insiders can be key stakeholders. People from the community who have knowledge and links outside through education, employment or other opportunities, but maintain family and community ties. These people are often the main source of investment capacity and ideas for community ventures – whether church building or enterprise creation. Their views are often valued and sought out by others in the local community.

Inside outsiders are similarly key stakeholders.

Aalbersberg et al., 1999

Salafsky et al., 1999

A. Jenkins, pers. com., 2001

...international organisations as the lead partner in an alliance were significantly [Chi squared test] less likely to achieve both conservation and community development than locally-based organisations, despite their greater financial and technical resources

BCN, 1998, p.24

2.3 Consortiums and partnerships

The complexity of watershed management requires management approaches that enable diverse stakeholders to collaborate effectively (www.epa.gov\owow\). *Alliance* is used to refer to an affiliation of organisations, communities and individuals working toward a common goal. *Consortium* and *partnership* refer to more structured alliances that provide for joint liability and decision-making between two or more members and provide mechanisms for the allocation of responsibilities and accountability. This does not mean every consortium member has an identical role. Rather, responsibility will be shared according to members' strengths and capacities. Where external funding assistance is sought, one member may become the *grant holder*, and assume responsibility (legal or practical) for meeting the requirements of funders, possibly subcontracting other consortium members. Careful management and sensitivity to stakeholder dynamics is important to prevent such administrative arrangements becoming a barrier to participation of other stakeholders or over-riding joint visions and plans.

Consortiums and partnerships can be:

- Key tools to enable multiple stakeholder groups to be fully involved;
- A foundation for collaborative management systems; and
- A component of networking and capacity-building activities.

To be successful they require mutual respect between collaborators and shared commitments and visions Margolius et al. (2000). However, as tools, they can also be manipulated to retain management control and block local capacity, Margolius, (2000).

A common perception is that more members within an alliance or consortium brings greater capacity to a conservation project (Margolius, 2000). BCN's evaluation of over 20 alliances encompassing 39 sites and 43 organisations suggested (BCN, 1999; Salafsky et al., 1999):

[1] This report uses Participatory Learning Action (PLA) as the generic name for a philosophy of development approach that facilitates local stakeholder responsibility for problem definition, action planning and implementation. PRA is one of the more widely used PLA tool, but many similar tools are in use.

- Larger alliances tended to contract and become smaller.
- Smaller alliances of two or three organisations were more effective at achieving conservation results.
- The simplest and clearest alliances, contract agreements, were more successful at achieving conservation goals.
- International conservation organisations were not best suited to be the primary decision-maker in alliances that worked at the local level. Rather in-country development organisations were best suited to being the primary decision-maker.

The more complicated organisational and relationship dynamics that were inherent to larger or looser alliances were a significant factor contributing to these trends (BCN, 1999; Salafsky et al., 1999; Margolius et al, 2000). In addition there appeared to be a trade off between the cost of servicing more complex organisational relationships and the value added by the expertise of additional partners (BCN, 1999; Salafsky et al., 1999; Margolius et al., 2000).

Vanuatu Protected Areas Initiative (VPAI) provided a supportive, motivating and capacity building role to the landholders and chief of Loru Protected Area.

After seven years there are fine cracks. VPAI leaders feel the landholders' commitment to some activities is less than anticipated. New issues change balances in the community.

Like all relationships healthy conservation partnerships need continual work. Partners should not take each other for granted.

Challenge

⇒ To facilitate relationships that strengthen and motivate others.

Lessons learned

⇒ Alliances at all levels will change over time,Salm *et al*, (2000).

⇒ Put continual effort and commitment into maintaining alliances (Brown and Wyckoff-Baird, 1992; Margolius et al., 2000).

⇒ Use simple and clear collaboration agreements that indicate where responsibilities lie. Review and modify these regularly (Salafsky et al., 1999; Renard, 1997).

⇒ Ensure all members of a consortium or partnership have a valid and clear role that they choose to take on (Margolius et al., 2000; Borrini-Feyerabend (ed), 1997).

⇒ When an external alliance member is perceived to be the initiator, or to have a controlling influence in an activity it can be difficult to convince local stakeholders that it is their project Weber et al., (eds), 2000; J. Axford, *pers. comm*., 2001; Borrini-Feyerabend (ed), (1997).

⇒ The objectives and expectations of government, donors, NGOs, and community members may overlap, but do not coincide. This can lead to misunderstanding and differences Weber et al., (eds), (2000, p.140). Local communities focused on short-term, tangible benefits (World Bank, 2000; Whyte et al., 1998). External partners were more interested in process-oriented results, World Bank, (2000).

⇒ Communities perceived broken promises, inadequate consultations and slowness in achieving results as the main flaws in partnerships. External partners complained of the failure of villagers to fulfill their commitments, World Bank, (2000), p. ix).

Vatthe Conservation Area, Vanuatu, experienced recurring conflict between the two landholder communities.

A consultant studied this conflict during the planning stage. Following discussions with the communities, he recommended that the project proceed as a single conservation area yet work separately with the two groups: to the extent of there being two separate committees and separate implementation and management activities.

Over time the Conservation Area helped to build bridges between the two communities. Never-the-less the conflict resurfaced repeatedly, and was a major management issue for the Conservation Area Support Officer.

Files and reports held by the Vanuatu Environment Unit.

⇒ Intra- and inter- organisational problems are major weaknesses of many conservation programmes (Sutherland, 2000; Clark et al., (eds), 1994).

Exemplary Practice

- The alliance between TNC and Palau Conservation Society (PCS). TNC has taken a long-term approach to building the institutional capacity of PCS, providing technical support and backstopping in scientific disciplines and financial management and administration.
- The symbiotic partnership between Kamiali and the Village Development Trust (VDT) in PNG. Several of VDT's staff are from Kamiali, and VDT has been involved in diverse community development activities in the vicinity for over a decade. This *insider-outsider* role has paved the way for VDT to help the community to address its interests in resource conservation.

☝ The facilitating role played by Kemala in Indonesia. Kemala links and networks organisations and individuals in Indonesia to strengthen their biological resource management capacity (see text box previous page). wording depends on location inlayout.

KEMALA has the aim of ".. sustainable expansion in the use of biological resource management and conservation 'best practices' by rural communities in Indonesia". It sets out to achieve this by building local NGO management capacity in the natural resource sector.

It has become a cohesive network of local NGOs that assist each other by sharing skills and cross-training. Kemala does not implement capacity building activities directly, but provides coordination, support services and an enabling environment. This ensures that network plans are locally driven.

Fry et al., 2000, p.A153.

2.4 Managing conflict

Conflict is a common and recurring resource management issue. At their worst intra- and inter- stakeholder tensions, rivalries and conflicts can severely debilitate resource management activities. Where not this extreme they may still be a constant source of minor frustration affecting the morale and commitment of stakeholders. Sentence needs clarification.

Often there are stakeholder conflicts that pre-date resource management. Others may arise as a result of resource management initiatives. Some may stem from unrelated issues, but come to impact upon resource management activities and systems. Many practitioners recommend avoiding an area beset by significant inter- or intra- community conflicts. Others recommend addressing and resolving conflicts prior to focusing on resource management. In other cases, such as Vatthe Conservation Area in Vanuatu (an SPBCP site) a decision was taken to go ahead with conservation initiatives with full understanding of the conflict existing between the two landholder communities.

Traditional mechanisms for achieving and declaring reconciliation can be useful in natural resource management situations, Lewis, (1997). Reconciliation is an important concept within the traditional justice and governance systems of many Pacific Island Developing States. Some people suggest traditional reconciliation removes the conflict, it is forgotten. Others suggest that, at times, reconciliation processes *'smooth over'* the problem, tensions may remain and re-surface at a later stage.

Gaps

⇒ Comparative studies of different conflict resolution tools in Pacific island communities, including traditional reconciliation approaches.

⇒ Understanding of the way intra-community social dynamics contributes to participatory resource management outcomes.

Lessons learned

⇒ Document and explore intra- and inter- community tensions and conflicts, and inter-stakeholder conflicts as part of stakeholder analyses, Whyte et al., (1998). Monitor them during planning and implementation activities.

⇒ Whereever practical, mediate and resolve existing conflicts prior to conservation planning.

⇒ Consider conflicts, how to manage them and how to avoid their recurrence, when developing resource management plans. Measures to address the root causes of conflicts should be included within work plans.

⇒ If stakeholder conflict cannot be brokered it may be appropriate for the focus of plans to be on conservation processes (i.e. enhancing collaboration, organisational and individual capacity, improving decision-making and conflict resolution skills) rather than conservation targets (Brown and Wyckoff-Baird, 1992).

⇒ Stakeholders actively involved in resource management activities and project staff need to have both the skills and the authority to broker the interests of stakeholder groups, and to manage and resolve conflict. Even where the underlying cause of the conflict is outside the scope of the project or the capabilities of the manager, the manager still needs to have the skills to recognise such situations and consider alternate responses.

Tools.

- Lee (1999) suggests that there are two strategies to guide response to conflicts:

  a. participatory planning to identify actions that can be agreed upon for initial action; and through collaboration and iterative planning develop confidence and understanding to enable other issues to be subsequently agreed upon. Planning is discussed in more detail in section three; and

  b. conflict reconciliation and resolution.

- FSP Fiji and FPCD in PNG, in partnership with the Centre for Rural Development and Training, University of Wolverhampton, UK, have trained trainers and run training programmes in conflict management for natural resource management practitioners. The Centre for Rural Development and Training has built expertise in natural resource management conflict resolution in Africa, Asia and the Pacific.

2.5 Integrated approaches

Integrated approaches have been widely employed for watershed management because of the complexity of working with the diverse social, economic and natural systems manifested at the watershed scale, and because of the multiple resource management goals that are often inherent to a catchment management activity. In the United States of America (USA) and Australia *integrated catchment management (*ICM) has been institutionalised through catchment management authorities and within planning processes. Some of these institutionalised approaches influence and extend into the US-aligned countries in the Pacific including American Samoa, Commonwealth of Northern Mariana Islands and Guam.

In the PIDS, as in other developing countries, social and economic development have been important components of integrated natural resource management activities, with the terms Integrated Conservation and Development (ICAD) or Integrated Conservation Development Project (ICDP) in wide usage. These aim to enhance conservation success by addressing the social and economic needs of stakeholders (Brown and Wyckoff-Baird, 1992).

Lessons learned:

⇒ For many years, integrated approaches that address links between environment and human well-being have been seen as most likely to bring long-term success (MacKinnon et al., 1986; Machlis, 1995);

⇒ The social, cultural and economic environment is critical to the likelihood of an integrated resource management activity's success. A baseline stakeholder assessment that describes local motivations, social structures and investment history, can guide decision makers (McCallum and Sekhran, 1996); and

⇒ In general ICAD or ICDP projects employ social and economic activities to help address the primary resource management or conservation objectives (Brown and Wyckoff-Baird, 1992). Development and human welfare objectives should remain the means of achieving sustainable resource management and not the end product in themselves (*ibid*).

Tools available

- Handbooks for use at a community level for ICM are available from relevant State government departments in Australia (e.g. NSW Department of Land and Water Resources) and from the US EPA Office of Water Oceans and Watersheds. The latter has extensive information available over the internet.
- The 1997 Motopore Conference, and its predecessor the 1995 Meeting of Integrated Conservation and Development Projects, share practitioners' experiences and dilemmas in implementing ICAD initiatives in PNG.
- Brown and Wyckoff-Baird's (1992) handbook, *Designing integrated conservation and development projects* continues to be a useful introduction, with short summaries of key tools.
- Margolius and Salafsky's (1998), *Measures of success: designing, managing and monioring conservation and development projects.* This handbook can be downloaded from the BSP website.

2.6 Adaptive management

Repeated reference has also been made to adaptive management. Adaptive management is not a new concept in corporate or business management theory, but it is new to many resource management practitioners. It is the integration of design, management, and monitoring to systematically test assumptions in order to adapt and learn to achieve resource management goals.

Salafsky et al. (2001), expand this definition as follows:

a) *Testing assumptions* is about systematically trying different actions to achieve a desired outcome. It is not a random trial-and-error process. Firstly it involves thinking about the situation at a site, developing a specific set of assumptions about what is occurring and what actions might be used to effect these events. Secondly these actions are implemented and the results monitored to see how they compare with those predicted by the initial assumptions. The key is to develop an understanding of not only which actions work and which do not, but also why.

b) *Adaptation* is about taking action to improve a project based on the results of your monitoring. If a project's actions did not achieve the expected results, it is because either the assumptions were wrong, the actions were poorly executed, the conditions at the project site changed, monitoring was faulty — or some combination of

these factors.. Adaptation involves changing assumptions and interventions to respond to the new information obtained through monitoring.

c*) Learning* is about systematically documenting the process and the results achieved. It will enable others in the broader conservation community to benefit from the experiences.

The BSP and the BCN programmes have become advocates of adaptive management in conservation. However, the concept has also been expounded by practitioners and elsewhere in the literature. While adaptive management is widely recommended, Lee (1999) cautions that: it is not been proven; it is not the only way to learn; it raises ethical ambiguities about experimenting with others' livelihoods; and it is not necessarily easy to coordinate. While it is attractive to the scientifically sophisticated and well funded, its requirements for patient record-keeping and clear-headed assessment may not be shared by all participants in a collaborative venture (*ibid*) or be within the financial capacity of many activities.

Often the term adaptive management has been used more in the context of commonsense trial and error learning, than in the rigorous scientific sense in which it is defined by the BCN team in the literature. Despite these uncertainties and ambiguities, adaptive management's *process approach* to resource management and the flexibility it promotes to systematically learn from experience, appear to be accepted as strategic tools for resource management success (McNeely (ed), 1995; Johnson and Walker, 2000; Larson et al., 1997; Pretty and Scoones, 1997).

Gaps

- Proof that adaptive management works across diverse situations or when it is not possible to be scientifically rigorous (due to costs, isolation, or lack of capacity). An important element of this would be the applicability of adaptive management to work with traditional user communities that may have difficulty integrating scientific and traditional approaches to knowing.
- Indications to what extent adaptive management can slide into generally adaptive but not so scientifically rigorous trial and error learning and remain a sound management model.
- Pretty and Scoones (1997) argue that there is much work to be done to institutionalise adaptive and participatory planning processes, and that a major challenge lies in widening their use beyond local community-based endeavours.

Lessons learned:

⇒ There appears to be considerable variation in practice between what has often been called adaptive management, (where management responds to emerging situations) through to the scientifically rigorous adaptive management promoted in the literature.

⇒ In order that management is both adaptive and participatory the gathering, recording, analysis and use of information must be cyclical, it must allow active collaboration between disciplines and sectors and it must be local people-centred (Pretty and Scoones, 1997).

Tools available

⇒ Salafsky et al. (2001) *Adaptive management: a tool for conservation practitioners*is recently released and is available online at www.bsponline.org. Explains adaptive management to help practitioners more efficiently define and achieve their conservation goals.

⇒ Salafsky and Margolius, 1999, *Greater than the sum of their parts*. A how to guide-book about using adaptive management across multiple projects in portfolios.

Margolius and Salafsky, 1998. *Measures of Success: Designing, Managing, and Monitoring Conservation and Development Projects.* A handbook for conservation practitioners on applying the concepts of adaptive management to conservation and development projects.

3. Identification of participatory resource management needs and design

This chapter discusses lessons learned and best practices for key stages in planning a participatory resource management activity, identification of a problem or issue, identification of resource management needs, planning and design activities, and decision-making. While these activities are broadly sequential, there is considerable overlap, and activities are commonly repeated during each iteration of plan evaluation and improvement. Even watershed management activities that are landholder based or are *community-managed* involve many of these stages, albeit in an informal and less structured manner than project cycle terminology suggests. Three additional issues are included that are of general interest to the IWP. These relate to the role of non-local stakeholders in the conceptualisation and planning of the resource management activity.

3.1 Identifying resource management problems or issues

Different philosophical and theoretical approaches have led to distinctly different emphases underlying the way problems or issues are perceived and recognised.

People-centred approaches focus on the social aspects of problem definition based on the understanding that conservation is about sustainably managing the human-use of resources. These define issues in terms of who the activity *needs* to work with. What are the limits? Who can/should be included? Why an activity may work with these people and not others? The priority of working with various sub-groups and categories of people at the site (e.g. Cordes, B., 1999, p.4).

The Global Environment Facility's (GEF) Biodiversity Programme and BCN promote a *threat reduction approach* to problem definition and resource management (T. Clairs, pers. com., 2001; Margolius & Salafsky, 1998). This approach tries to simplify management design by directly identifying, addressing and tracking the threats to biodiversity. It is useful within integrated conservation initiatives as threats may include a wide range of resource use, social, political, and cultural factors as well as biological issues. It is also suited to participatory endeavours, as capturing and responding effectively to the diversity of threats requires an understanding of the behaviour and perceptions of diverse stakeholders.

> Properly conducted stakeholder analysis and socioeconomic analyses can help avoid false assumptions.
>
> For example,it is often assumed that local people have excellent knowledge of their local environment. This is not always the case. Cordes (1999) cites an example from Indonesia. A PIDs' example can be found at Wiawi, Malekula, Vanuatu. The landholder family moved to Santo. Two generations later the landowners returned to their custom lands. Soon after they set up a protected area as an alternative to logging. The landholder's knowledge of the environment they were seeking to protect was limited.
>
> Whyte et al. (1998)

More conventional approaches to identifying management issues consider the function and *environment services* provided by a watershed or ecosystem. Areas in need of protection or management are selected for their current condition, their susceptibility to degradation, their susceptibility to drought or flooding, the importance of water availability, biodiversity valuesor other characteristics (MacKinnon et al; 1986).

For some resource management decisions, the choice of site or locality assumes prime importance. For these, site selection is a critical component of problem definition and a key influence on why a particular watershed is targeted. Multiple factors may underpin site selection approaches;

- The philosophies of donor or partner organisations. For example both Conservation International (CI) and TNC focus on "biodiversity hotspots" *vis a vis* the University of Rhode Island Coastal Resource Center (URI-CRC) target in Indonesia of a representative model of average communities with typical problems.
- Personal contacts and networks that provide a link between communities, in-country and international organisations.
- Pre-existing conservation or development activities.
- Expressed local interest.

Local communities may use quite different criteria to define resource management issues. Studies in Vanuatu have linked local community and landholder resource management decisions with desires to re-assert resource ownership, perceived decline of used resources, needs to manage resources for future use, and practice of custom (Whyte et al 1998; Whyte et al., 1999). Weber et al. (eds) (2000) reports on WWF's international experience that indigenous people's resource management decisions address maintenance of livelihoods, control over lands, preservation of culture and provision for future generations.

Gaps

⇒ Some, if not most, PIDS lack an *inventory* of their freshwater and watershed resources, and lack a strategic process for identifying management priorities and prioritising issues.

Lessons learned

⇒ A pragmatic mix of approaches is optimal. There are usually limited resources. It is best to target genuine resource management needs and areas where the socio-economic setting provides a reasonable chance that management objectives can be realised (MacKinnon et al., 1986; Wyckoff-Baird, 1992). Failing to address and reduce threats will decrease the likelihood of success (MacKinnon et al., 1986; Margolius and Salafsky, 1998).

⇒ Small scale projects are more easily managed and monitored and more likely to be successful (White et al., (eds), 1995). Complex projects provide many opportunities for failure, not in the least is due to the high demands on local institutions (Chambers, 1993). It is sensible to start with small groups and small problems, and advance to larger problems once confidence, knowledge and capacity has increased (Chambers, 1993; UNDP-GEF, undated; White et al., (eds), 1994). Multiple small sites with fewer stakeholders may be more appropriate than a single large initiative with complex relationships (Fry et al., 2000, p. A15).

⇒ Building on an existing (small, local) initiative is more likely to be effective than starting from scratch, as participants benefit from existing experience and capacity and have already established their interest (Whyte et al., 1998; Brown and Wyckoff-Baird, 1992). In doing so, managers need to be alert to inappropriate practices or expectations carried over from past experiences (I. Reti, pers. comm., 2001).

⇒ Project success is a function of the social and cultural environment specific to the area (McCallum and Sekhran, 1996). Before commiting to a site it is valuable to review information from

- a participatory stakeholder analysis,
- an assessment of local motivations, social structures and investment history, and
- participatory assessments (both qualitative and quantitative) of the needs and priorities of different user groups; existing controls over resource access; and of the capacities of local institutions and authorities involved with resource control. Scientific assessments feed into this process (Chambers & Guijt;, 1995).

⇒ PLA tools have been used effectively at the broad geographical scale to ensure participation in the narrowing of options and final definition of problem and site selection (Pretty and Scoones, 1995). The mix of stakeholders participating will change as the selection process becomes more specific.

⇒ Consultation and participation require flexibility and time (Borrini-Feyerabend, 1997b; Gilmour and Fisher, 1997). It may not be possible to be participatory if conditions do not provide adequate flexibility and time. In such a case decisions will need to be made about why and how to proceed, whether it is appropriate to proceed in the absence of adequate participation and the trade offs that will be involved.

⇒ While the goals of conservation organisations and indigenous people may overlap their motives often differ World Bank, 2000; Weber et al. (eds), (2000). Understanding and recognising these differences are important in maintaining effective conservation consortiums and partnerships.

Tools available

- Brown and Wyckoff Baird (1992). *Designing integrated conservation and development projects.* Contains biological and socio-economic criteria for assessing ICAD feasibility.

- Salafsky and Margolius, (1999). *Greater than the sum of their parts: designing conservation and development projects to maximise results and learning.* Includes tools and tips for designing conservation and development programmes so as to maximise results and learning opportunities. Available over the internet from www.bsponline.org

3.2 Participation in identifying resource management needs

The current emphasis in development work is to enable local people to do things for themselves, rather than doing things for them (Sutherland, 2000; Burkey, 1993). Further, management commitment is usually higher when stakeholders feel they are *equal* partners and that initiatives serve their economic and cultural interests (Sutherland, 2000).

Consequently, many practitioners suggest *bottom up* is better than *top down*. Others see this as unduly simplistic and not a constructive view of participatory processes (Cordes, 1999). Good projects have been conceptualised by external stakeholders yet developed as fully participatory activities (e.g. Sabana Protected Area, Commonwealth of Northern Mariana Islands (CNMI). Conversely, locally conceived projects have failed because they were not participatory (e.g. Nagha mo Pinea Protected Area, Vanuatu). In reality, many cases described by practitioners as "bottom up" are often better characterised as having full involvement of local stakeholders and resource users (see section 1.2). Some watershed decisions are of clear benefit to external stakeholders and are likely to be conceptualised by external stakeholders. A common example is management of urban water supply catchments. For other issues, such as maintenance of subsistence fisheries, the reverse applies. Decisions are of greatest relevance to local stakeholders and are more likely to be conceived by local stakeholders. Regardless of who initially identified the issue, participatory approaches to the design and implementation of resource management initiatives can help ensure balance between local and national issues, and that impacts are addressed in an equitable and open manner (Borrini-Feyerabend, 1997b; Pretty and Scoones, 1997).

> "Self imposed objectives are more likely to be achieved than those that are imposed from the outside."
>
> Sutherland, 2000, p.124

> A highly top-down project structure that has effectively identified threats and solutions involving multiple stakeholder groups is the International Marinelife Alliance / World Resources Institute Destructive Reef Fishing Initiative.
>
> Fry et al., 2000, p.A34.

Some practitioners are wary of *raising local community expectations* at *too early a stage* or *before there is something tangible* to discuss. Fears of this nature were also raised in review of the SPBCP programme (J. Axford, pers. comm., 2001). Other practitioners see this attitude as a barrier to

stakeholder participation in initial planning. It assumes that development is about 'delivering' something to the community, that the community will be disillusioned if they do not 'receive' and that community members need to be sheltered from the real world. Not involving stakeholders at preliminary stages is contrary to development best practice which encourages enabling processes and building internal capacity to address needs (Sutherland, 2000). It is also contrary to the goal of maximum local stakeholder participation.

Another barrier to early stakeholder involvement is the development project cycle itself. Often organisations lack untied funds to commit to proposal development, yet donors will only consider a project proposal that precisely defines the activities to be undertaken. Many donors remain wary of proposals based on process approaches and adaptive management that cannot give a specific blue print of activities (Pretty and Scoones, 1997).

Lessons learned

⇒ It is not essential whether a watershed management issue is identified by local or external stakeholders. What is important, however, is participation of local stakeholders and other resource-users in identifying resource management needs, in design of action plans and in implementation (Sutherland, 2000; McCallum and Sekhran, 1996).

⇒ Help all stakeholders to talk together, listen to each other's perspectives and concerns, establish a commonality of interest, and define that interest jointly. Establish that a watershed management process is relevant and that there is community support and interest before suggesting collaboration towards a specific goal. Do not unilaterally suggest how collaboration should be realised or what management initiatives are required (Weber et al., (eds), 2000; Grant, 1996). As many stakeholders as possible should work together to set a shared vision or goal, then continue to work together to plan how to achieve that vision (B. Raynor, pers. com., 2001; Margolius et al., 2000).

⇒ To minimise the chance of causing misunderstanding or undue expectations; foster effective communication; mutual learning; transparent and open relationships; a process approach; and a supportive role (Weber et al., (eds), 2000).

⇒ Landholder-based resource management initiatives often have specific resource management goals and often start without external funding (Whyte et al., 1998; Whyte et al., 1999; Weber et al., (eds), 2000). They provide experience to stakeholders, and demonstrate commitment and capacity (Fry et al., 2000). Building on these experiences can reduce problems from raising community expectations.

⇒ Be informed about the expectations and past experiences of stakeholders through stakeholder and socio-economic analyses. Be aware of how stakeholder dynamics and socio-economic factors may impact upon resource management initiatives and consider appropriate responses (Borrini-Feyerabend and Brown, 1997)

Exemplary Practice

👍 USP/SPACHEE/Verata, Fiji: The concept of motivating conservation through bioprospecting was an external one. Stakeholders talked in different ways and through different media for over six months prior to agreeing to develop resource management plans (B. Aalbersberg, *pers. comm*., 2001; Aalbersberg et al.1999).

👍 WWF South Pacific Programme support for Community Resource Conservation and Development, Western Province, Solomon Islands. WWF defined the region and scope of work. Through a long-term approach WWF has established relationships and presence, allowing individual communities to elect to participate (or not) in different ways (Fry et al., 2000; S. Hite, *pers comm*., 2001; Hamnett, 1995)

Useful tools

- Grant (1996). *Community entry for ICAD Projects – the participatory way*. Includes tools for participatory information gathering developed from the Bismark-Ramu experiment in PNG.
- Borrini-Feyerabend (ed) (1997), *Beyond fences. Seeking social sustainability in Conservation*. A comprehensive package of participatory tools and reference notes for information gathering and participatory planning exercises.
- Salafsky and Margolius (1999), *Greater than the sum of their parts: designing conservation and development projects to maximise results and learning.* Includes tools and tips for designing conservation and development programmes so as to maximise results and learning. Available over the internet from www.bsponline.org

3.3 Participation in the planning or design of a natural resource management activity

> There are multiple problem definitions and numerous potential solutions. Site planning should look at past progress, the current issues and future needs to identify the full range of possible management interventions.
>
> Brown and Wyckoff-Baird, 1992.

The design stage of a natural resource management activity provides an opportunity to:

- Agree to priorities for action;
- Organise complex programmes into sensible sequences;

- Assign responsibilities for action;
- Determine budgets and work programmes;
- Agree on what and how to monitor and evaluate success; and
- Provide a framework for ongoing action even if key parameters change.

This is recorded as the initial *management plan*. The plan should be accepted and agreed to by all who take on responsibilities within it, and it should be formalised in some way (Brown and Wyckoff-Baird; BCN, 1999; Margolius and Salafsky, 1998; Finlayson, 1996). While written memoranda of understanding are more common, custom agreements may be an effective means of formalising plans in some PIDS.

Design, budgeting and capacity assessments (section 6.4) need to be integrated (Sutherland, 2000). A good plan can be implemented with available resources and capacities, and then expanded within a process of adaptive management (*ibid*).

> A plan is more likely to be successful if:
>
> a) the need for it is understood by those who will accept and adhere to it;
>
> b) there is an open process of monitoring and review so the plan can be adjusted as necessary; and
>
> c) the resource user implications have been considered so that the plan is realistic.
>
> Sutherland, 2000, p.124

Resource management systems cannot be separated from other aspects of life and livelihood where people depend on their immediate environment for their livelihood (Alcorn, 1997). There must be clear links at the planning stage between any socio-economic benefits (and impacts) and the behavioural responses sought from resource users (Salafsky et al., 1999; Brown and Wyckoff-Baird, 1992).

> For local resource users ... livelihood requirements will always take precedence over resource conservation needs, although often the two are connected.
>
> Fry et al., 2001.

The design of a resource management system should involve any group involved in resource management or resource use within the envisioned target areas (Paka, 1998). These stakeholders can be identified through social and institutional analysis, often called stakeholder analysis (Brown & Wyckoff-Baird, 1992; Overseas Development Administration, 1995; Borrini-Feyerabend (ed), 1997). While it would be ideal for every stakeholder and resource user to be fully involved and in consensus over details of the plan, in complex watershed settings it is often impractical to achieve this. Instead, it is common to strive for representation of different stakeholder groups; nested institutions (Ostrom, 1997; Girot, 1997); and information feedback systems.

Lessons learned

⇒ The planning process is often more important than the plan itself (Weber et al., 2000). The plan becomes obsolete, the process is on-going (Sutherland, 2000; C. Kick, *pers. comm*., 2001). Maximising the involvement of local stakeholders and other resource users in this process can help avoid plans being seen as inflexible.

⇒ Donors need to accommodate projects that have flexible planning processes rather than pre-set fixed activities (Hamnett, 1995; Weber et al., (eds), 2000). Inviting donor representatives to attend and participate in planning processes can help them understand the basis for changes (www.unesco.org/csi).

⇒ Human issues (e.g. sanitation, resource use, alternative livelihoods) are often more important to successful design and implementation of watershed management activities than natural science or environmental service factors (e.g. contamination of aquifers) (Brown & Wyckoff-Baird, 1993).

⇒ Common planning pitfalls include making the plan too complicated, making the plan the goal rather than the tool, making the plan inflexible, and not matching the resources available with the implementation costs (Finlayson, 1996).

⇒ A plan has a clear purpose. It should be in appropriate formats and languages for those who may use it. Usually this includes plans being in simple and brief formats, and in local vernacular languages.

⇒ Plans need to have clear visions and goals (Cunningham, 1999). Visions should be shared by local and external stakeholders and resource users. Goals should be meaningful to local as well as external stakeholders and resource users. A clear statement of the problem or threat can help create a common understanding and vision (*ibid)*.

⇒ Where potential participants do not have equal capacities and experiences, invest in technical assistance, capacity-building and awareness raising to facilitate equitable and efficient participation processes (Johnson and Walker, 2000; Fry et al., 2000).

⇒ Community-level activities within a watershed management plan should be developed and implemented by the local communities concerned in accord with community protocols (J. Axford, pers. com., 2001).

⇒ Where employing tools such as representation of different stakeholder groups; nested institutions and information feedback systems be aware that the individuals involved do not always report back to others in the ways envisaged (J. Axford, *pers. comm*., 2001). It can be useful to have multiple ways to share information with diverse stakeholders.

⇒ Many partnerships, teams and individual staff have had difficulties balancing and integrating the natural and social science components of integrated conservation activities, and sharing both with local communities (Hamnett, 1995; Fry et al., 2000). The latter inevitably prevents stakeholders using information for planning and adaptive management.

Exemplary practice

👍 Sabana Protected Area, Commonwealth of Northern Mariana Islands. Although selection of the site was unilateral, planning was participatory.

Tools for design

- Participatory research, action learning or PLA can be useful tools to raise awareness and understanding of issues and build stakeholder capacity within the planning process.
- Borrini-Feyerabend (ed) (1997) *Beyond fences. Seeking social sustainability in Conservation*. is a two volume handbook, which includes descriptions of a range of participatory tools for design of conservation initiatives.
- Brown and Wyckoff-Baird (1992) *Designing integrated conservation and development projects.* includes checklists and brief summaries of a set of planning tools.
- Salafsky and Margolius (1999) *Greater than the sum of their parts: designing conservation and development projects to maximise results and learning* is a practitioners guide to the design of conservation and development programmes. Can be downloaded from www.bsponline.org.

3.4 Participation in decision-making

Decision-making is separated from planning because in most PIDS there are individuals who have particular respon1sibilities for resource management decisions. The titles or names of these people or institutions vary from country to country. Of particular importance are three groups of stakeholders;

- Individuals, families or institutions with traditional or customary decision making responsibility,
- Stakeholders whose cooperation is essential for successful implementation of resource management measures,and
- those organisations holding statutory responsibilities.

At a local level, a chief or head of the landholder family or clan often holds responsibility for resource management decisions, and may consult with traditional advisors or other senior landholders. Some countries have laws that codify traditional authority structures or resource management practices. However, in other places, the authority of traditional leaders has been diminished compared with the recent past. National resource tenure rules may reduce the degree of authority these traditional decision-makers now exercise. Especially in Melanesia, intra- and inter- clan jealousies and rivalries, disputes over chiefly titles and disputes over rightful land ownership are problematic and serve to undermine chiefly authority.

The second group, those stakeholders whose cooperation is essential to resource management success, is more amorphous. Specifically who these stakeholders are vary on a case by case basis. In the case of North Tarawa Conservation Area, Kiribati, they were externally based resource users who did not respect decisions taken at the local level (J. Axford, *pers. comm*., 2001). In the case of Lolorugu Resource Management Area, Vanuatu, they were locally resident people, but not members of the landowner group, who felt they had resource access and user rights, and were aggrieved at not being considered within decisions (Whyte et al., 1998). In the case of the Rock Islands Conservation Area, Palau, they were stakeholders who felt alienated because they were informed about a decision, but not consulted during the decision-making process (J. Axford, *pers. comm*., 2001). In the case of Lekavik Tak Tabu Area, Vanuatu, they were groups who disputed the authority of the Chief who protected the area and who wilfully chose to undermine the Chief's decision (Whyte et al., 1998). Stakeholder analysis can help identify who these stakeholders may be at a given site.

> The first attempt to establish a protected area in the Arnavon Islands, Solomon Islands, was by the colonial administration.
>
> The second attempt was in 1981 (Leary & Biliki, 1993) when the Provincial Government declared the Arnavon Wildlife Sanctuary. Declaration of the area passed legal ownership/control to the Province. There was no consultation nor any attempt to obtain agreement from the landowners or resource users. Conflicts arose. The warden was withdrawn because of threats to his safety, and the turtle harvest continued. The area reverted to traditional use.
>
> From 1992 TNC and the Ministry of Natural Resources renewed interest in the islands. It has received funding for six years under the SPBCP. There is optimism that improved community consultation, local involvement in decisionmaking and cooperative management has built greater respect for conservation (SPREP, undated (d)).
>
> Nevertheless there remain stakeholders who do not respect the current management, and exploit opportunities such as the 2000 breakdown in law and order, to poach
>
> Anon, 2000.

In general, stakeholders who may fall within this group are able to access and use resources, may decide not to respect conservation decisions and do not feel bound to respect the authority of the decision-makers. The extent to which these stakeholders subsequently accept and adhere to conservation decisions depends on diverse factors including the strength of tradition and custom, the respect held for the individual leader or chief; and the degree of adverse impact they suffer. If they choose to passively respect the decision, they are unlikely to assist with implementation and management (Whyte et al.,1998).

Lastly, governments, provinces or states may have legal rights that complement or override traditional decision-makers. There are many reports of decisions taken unilaterally at a government level that are neither respected nor adhered to by local communities (e.g. Gilman, 1997).

No formal studies have been identified. However, anecdotal evidence suggests that:

1. Even where traditional or legal institutions have authority to make unilateral decisions, doing so without inputs from other stakeholders will reduce the likelihood of respect and cooperation with the decision. The converse also applies. Earnest attempts to secure participation are more likely to generate respect.
2. Where unilateral decisions are taken, considerable investment may be needed in awareness-raising and cooperation building to realise effective community support for resource management e.g. Pohnpei Watershed Conservation Area, Arnavon Islands Marine Conservation Areas (see text box previous page). Dependent upon layout.
3. In locations where custom beliefs remain strong, decisions that are endorsed or mandated through traditional mechanisms may be better respected than those that are not.

> Local management is most effective where the benefit from resource management accrues to the local stakeholders. This is not always the case with watershed management, where for example, the benefits of resource management accrue to distant urban populations.
>
> Decentralisation and local level management over decisions about resources of national or global significance can be problematic.
>
> Barborak, 1995.

Lessons learned

⇒ Avoid seemingly unilateral decisions, even if traditional or legal authority exists.

⇒ At a minimum, consult or facilitate active involvement of all those stakeholders whose cooperation is necessary for success. Ideally, facilitate their full involvement.

⇒ Invest in awareness-raising and cooperative approaches to realise effective community support (McNeely (ed), 1995; Borrini-Feyerabend (ed), 1997).

⇒ Where respect for custom remains significant, employ traditional mechanisms to confirm, ratify or introduce conservation decisions.

⇒ Participants in the decision-making process can be frustrated or become disempowered if their decisions or the process can be overridden at another level (J. Axford, *pers. comm*., 2001). Stakeholders with alternate sources of authority need to be party to the decision-making process, and it may be important to ensure enabling conditions (section 5.4).

⇒ Intra-community structures don't always work in ways that may be anticipated or expected (J. Axford, *pers. comm*., 2001)). It is important to have diverse pathways for communicating about resource management decisions.

> People support what they believe to be valuable. People are usually most positive and active in their support if that value accrues to themselves.
>
> Increase support through:
>
> - Better management
> - Raising awareness of values and benefits
> - Maintaining knowledge of stakeholders' interests and assessing how well they are being met
> - Having a management committee composed of those with the most direct interest.
>
> McNeely (ed), 1995

3.5 The commitment of national or international stakeholders

National or international stakeholders need to consider the commitment they can make to a resource management activity before entering discussions with local stakeholders. This includes consideration of the responsibilities they are able to take on and the time-frame they are working within. This information should be openly shared, particularly during preliminary discussions with local stakeholders that lead to common visions and decisions to collaborate. This knowledge is an important guide in assigning roles and responsibilities between stakeholders during planning activities.

> "International organisations should have clearly defined roles and these should be more supportive – such as providing funding, policy support and technical assistance. Project management, implementation and oversight should be left to organisations close to field operations."
>
> John Sengo, FPCD,
> quoted in BCN, 1999.

International partners often bring to a watershed management activity visions that exceed local or national capacity and likely sustainability. These ideally remain long-term visions. Resource management plans should focus on realistic goals and objectives that are likely to be achievable in the short term, and sustainable with the capacity and resources available locally (Salafsky et al., 1999; Sutherland, 2000). As collaboration builds in-country capacity there is potential to progressively build upon initial achievements.

Important issues include:

- Any agency taking a lead in the management of projects or external funding should be an in-country organisation (Salafsky et al., 1999; Fry et al., 2000; I. Reti, *pers. comm*., 2001; AusAID, 2000). See also section 2.2.
- International organisations are often effective in technical and organisational capacity building roles that support organisations closer to the field (Fry et al., 2000, A9) .
- There are long-term benefits in nurturing in-country institutions and individuals so they are capable and confident at adaptive management and learning (Salafsky and Margolius, 1999; Biodiversity Support Programe, 1998; Margolius and Salafsky, 1998; Fry et al., 2000, p.A13).
- Institutional arrangements will vary and evolve during implementation of natural resource management initiatives (Salm et al., 2000). The collective monitoring of organisational systems, capacities and stakeholder roles can help stakeholders identify emerging issues and needs, and to address these within implementation plans.

Evolution of roles and responsibilities can be important for success. The directions in which they evolve will be case dependent.

Takitumu Conservation Area in the Cook Islands moved out from a government-lead agency to an independent office to improve community linkages and allow greater focus for project staff.

Conversely, a Waste awareness project in Vanuatu moved from the Municipal to Government to allow greater focus for project staff and improve stakeholder linkages.

- Care should be taken not to create dependence or undue reliance on a stakeholder group or individual that only envisages temporary engagement.

UNDP-GEF (undated) suggests project responsibilities should be with national staff at an early stage to ensure sufficient time for them to benefit from support under the project.

Lessons learned

⇒ Partners whose involvement is unlikely in the long-term should occupy a supporting role with:
- ➢ Clearly defined subcontracted tasks and inputs;
- ➢ Organisational and individual capacity building;
- ➢ Training provision; and
- ➢ Technical expertise (legal, policy, business management as well as conservation science and development practice).

⇒ Where they exist, it may be more sustainable to collaborate with, and build the capacity of, established organisations, rather than create new single purpose organisations.

⇒ Partnerships with universities can help to satisfy long-term needs for trainers and technical persons (Fry et al., 2000).

⇒ National and international organisations may have capacity to facilitate measures to address any intra- and inter- organisational problems that may undermine the likelihood of conservation success (Sutherland, 2000; Clark et al. (eds), 1994).

A common "exit strategy" is for international organisations to form a new in-country organisation as partner and gradually transfer responsibility. One problem observed with this strategy is sustainability of the new organisation without the "parent organisation's" support. Young in-country organisations lack:

- established reputations;
- donor connections and relationships; and
- the capacity and resources to devote to writing funding applications.

Consequently they are not able to compete equally with their international founders for access to international funds. There are limited self funding opportunities within most PIDS.

Fry et al., 2000.

3.6 Strategies for community entry by national or international agencies

Complex watershed management activities require collaboration between multiple stakeholders. This often involves external as well as local stakeholders, government agencies, local government authorities, provinces or states, and possibly international organisations. While some practitioners have a stereotyped image of international organisations selling their agendas to local stakeholders, the World Bank (2000) (see text box this page) and many practitioners in the field observe that villagers often perceive a need for outside assistance.

Community entry is a term that has been used to refer to the initial contacts between external stakeholders and members of local communities (Grant, 1996). It aims to initiate a relationship between outsiders and locals based on trust, mutual respect, honesty and understanding and provides a foundation for shared visioning, decisions to collaborate and participatory planning (*ibid*). Community ownership can be enhanced when community entry occurs in a gradual and participatory way.

However, some practitioners provided examples of conservation priorities where time is of a premium, and funds not available for extended preliminary consultations. Common examples from PNG relate to high biodiversity locations threatened by large scale timber harvesting. Questions arise as to whether, and in what circumstances, it may be appropriate to reduce the investment in participatory processes in the interest of conservation immediacy.

There is no single strategy for effective community entry. Rather, appropriate strategies depend upon the issues being addressed and the local natural, social, political and cultural environments. Three examples of effective community entry strategies are given. The first two stem from existing relationships, whereas the third does not assume pre-existing relationships.

> A World Bank study of coastal resource management in the Pacific found that community based management was found to be deficient in five major areas.
>
> 1. Villagers perceive need for outside assistance to handle complex or technical threats.
> 2. Many villages lack mechanisms to control their own resource use.
> 3. Communities had difficulty enforcing local rules when it was unclear whether the rules were confirmed by national laws.
> 4. Communities may need advice on technical aspects of resource management.
> 5. Many communities lack ways to prevent their leaders from engaging in private business interests that may conflict with their management respons-ibilities toward the community.
>
> World Bank, 2000, p.ix.

Example 1: Entry through "inside-outsider" and "outside-insider" relationships, USP/SPACHEE/Verata, Fiji (BCN, 1998, p.14; Allbersberg, *pers. comm*., 2001)

Community entry at Verata spanned six months. It included three one-day environment awareness workshops, a one week PRA and a village resource management planning workshop. Over this period the community became familiar with with participatory approaches and project concepts, and became better prepared for more technical phases. Less formally, members of the USP team made extensive use of personal links with Verata spanning several decades and relationships with past and present students from the community. They consulted and involved villagers living in Suva in initial discussions and in introducing the concept to village leaders.

Example 2: Entry by invitation. Wetlands International and Kamiali Wildlife Management Area (A. Jenkins, *pers. comm*., 2001).

The Kamiali Wildlife Management Area (Kamiali WMA) was gazetted in 1996. Establishment of the WMA and continuing conservation and development activities has been primarily supported by the Lae-based NGO, Village Development Trust (VDT). While VDT is an external stakeholder, it has had almost a symbiotic relationship with Kamiali for close to a decade. Several Kamiali villagers are VDT employees. While VDT has, and is supporting, a range of community development activities in the vicinity,Wetlands International (and other external groups) have intermittently played a scientific research and advisory role upon request of VDT and the Kamiali community. That a key Wetlands International staff member also has *outside-insider* relationships, having spent his childhood in PNG, has made it easier for such an invitation to be issued.

> "Kamiali WMA is a unique situation in watershed management in PNG. I believe the Kamiali WMA/VDT relationship has made for perhaps the best example I have seen of the concept of ICAD that is totally locally run. The actual successes in terms of biodiversity conservation have been mixed but management regimes are slowly being strengthened by a variety of learning experiences. I think that the Melanesian pace at which things are being approached at KWMA will contribute to making this a lasting and working community endeavour."
>
> A. Jenkins, *pers. comm*., 2001

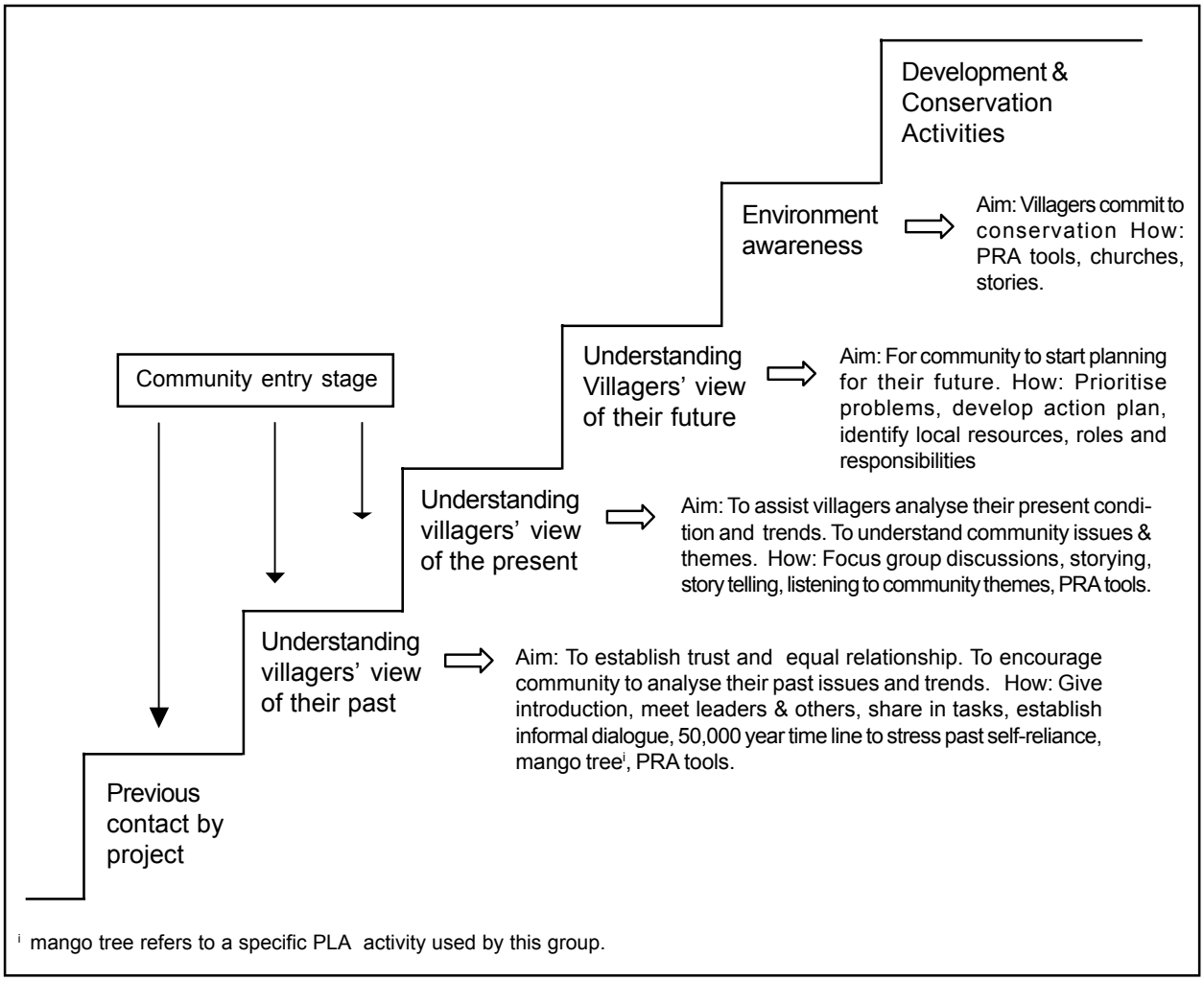
Example 3: A structured participatory community entry strategy, the PNG Biodiversity Conservation and Resource Management Programme, (Bismark-Ramu, ICAD).

Given its multi-stepped and phased approach, this entry strategy is presented using a diagram from Grant (1996). In such approaches, the definition of management objectives and strategies is a participatory process several steps after community entry and rapport building.

Gaps

- Clear guidance as to when a conservation initiative is justified in short-circuiting participation, and the trade-offs this may involve.

Fig 4 The Bismark Ramu community entry strategy



[i] mango tree refers to a specific PLA activity used by this group.

Lessons learned

⇒ A common strategy has been for outsiders to initiate community entry through meetings with village leaders that are in accord with traditional protocols. While valuable and possibly essential, these are not sufficient in themselves.

⇒ In moving beyond meetings with village leaders, and in realising broader participation in information gathering, problem and need identification and planning, it remains important to recognise and work within local protocols, especially relating to speaking rights and authority in public fora. Many communities will be accustomed to hierarchical authority and may need time to become comfortable with the benefits of an alternative i.e. the more participatory approaches.

⇒ Initial meetings need to focus on establishing a platform of trust for on-going discussion and mutual enquiry and learning (Orsak, 1998b). External stakeholders should neither enter with preconceived solutions nor introduce project plans (Weber et al. (eds), 2000, p.141; Grant, 1996; Sutherland, 2000; McCallum and Sekhran, 1996).

⇒ It is widespread experience that where external stakeholders such as government departments, national or international organisations introduce solutions or take an initial lead in nominating the resource management need or solutions, they will have difficulty transferring responsibility to local stakeholders.

⇒ Community awareness and education are often found to be useful during community entry to build the capacity of stakeholders to contribute to planning and management (Orsak, 1998b). However, it is best to initially focus on acquiring an understanding of local stakeholders' perspectives of their community needs and natural resource constraints, and facilitate dialogue about these issues (Grant, 1996). Awareness raising and education can then help to meet the expressed interests of the community.

⇒ Structured participatory entry approaches such as example three require considerable time and flexibility. If time is very limited time and there is little or no flexibility, they are likely to create perceptions of token participation in an externally driven agenda, with consequent difficulties in harnessing local commitment and management involvement at later stages (Grant, 1996).

⇒ Many organisations have found PLA tools useful for community entry (Fry et al., 2000).

⇒ When non-local stakeholders initiate contact, this is usually done by staff or contracted consultants. Stakeholders need to recognise that this creates an immediate division that can flow through to implementation and management activities. The staff are paid salary for their time and contributions, while local stakeholders are commonly expected to volunteer. During subsequent activities it becomes important to ensure that volunteers receive clear and tangible benefits in *lieu* of salary or lost productive time (Okiira, 2000).

⇒ When contact is initiated by external stakeholders who are expatriates additional pre-conceptions may arise (Ericho, 1998). These misconceptions often stem from historical associations that link people of European decent with the delivery of goods, services and cash (*ibid*).

⇒ Collaborative management systems need time to evolve. White et al. (eds) (1994) suggest it may take three to five years for a collaborative effort to mature to a point where the community and outside supporters have a harmonious and beneficial relationship.

⇒ Focus initially on the practical and tangible resource benefits sought by local stakeholders rather than introducing external concepts (Weber et al. (eds), 2000; Brown and Wyckoff-Baird, 1992).

4. Best practice resource management systems and mechanisms

The approaches and tools used to effect resource management are important considerations for conservation success. This chapter summarises lessons from management experience and presents information on measuring the success of resource management outcomes.

Watershed management and watershed management plans are ultimately about managing human societies and their use of resources within a catchment area (Cunningham, 1999; Brown and Wyckoff-Baird, 1992; www.epa.gov/owow/). No single resource management system is universally appropriate. *Collaborative* and *co-management* systems have evolved that provide for a complex mix of ecological, social, cultural, political and economic factors within a particular environmental framework (Cunningham, 1999, p.6). Four systematic approaches to management have been widely recommended. Due to their recurrence and importance, these have been presented earlier in the report, and are not repeated here:

- Collaboration (section 2.1);
- Full participation (section 2.2);
- Integrated resource management (section 2.5);
- Adaptive management (section 2.6).

Experience further suggests that to be effective these management approaches benefit from a clarity of purpose, good leadership, *monitoring* and benefit from local level resource *stewardship*. These concepts are introduced in section 4.1.

> The leadership function is a case of building and inspiring a shared vision and a sense of equal ownership in the outcome, especially where there is a dominant partner. If not inequality was a common cause of problems in partnership processes.
>
> de Landerel, J, et al. (eds), 1994, p.14.

4.1 Successful management tools

4.1.1 *Clear purpose*

The primary goal of integrated conservation and development projects is conservation of natural systems (McNeely, 1995; Brown and Wyckoff-Baird, 1992; Larson et al., 1997). They operate by involving and addressing the needs of human stakeholders to maintain a sustained natural resource base. This requires an understanding of ecological principles as well as social and economic aspects of natural resource use. If development objectives become the ends, rather than the means, then the activity is more a development project than an ICAD (Brown and Wyckoff-Baird, 1992).

Having clear and shared visions and objectives are fundamental (MacKinnon et al; 1986). If not: inappropriate resource management decisions will be made that benefit neither the people nor the resource base (Cunningham, 1999); activities may become side-tracked (White et al. (eds), 1994); or misunderstandings and tensions may arise from different stakeholders seeking to address disparate goals (Weber et al., (eds), 2000; Sutherland, 2000).

> Experience from the Verata project in Fiji suggests..
>
> Lack of leadership in some villages is .. a challenge. Two of the seven villages have seemingly less effective leadership than the others, and it is difficult to work through them to include the participation of members of their villages in Tikina wide activities.
>
> Biodiversity Conservation Network , 1998, p.14.

4.1.2 *Leadership*

The BSP (Margolius et al., 2000); SPBCP (J. Axford, *pers.comm*., 2001), the United States of America's Environment Protection Agency (USA EPA) (www.epa.gov/owow/lessons) and many individual practitioners report

that effective individual leadership is an important factor for success at the partnership level, at the organisational level, and at the community level. Good 'leaders' are critical in empowering others.

Characteristics of successful leaders include (Margolius et al, 2000; www.epa.gov/owow/lessons; R. Horoi, *pers. comm*., 2001; J. Axford, *pers.comm*., 2001):

- They reflect community values and know what works;
- They are good communicators;
- They are able to set things in motion and mobilise others;
- They are committed to making their group's vision a reality;
- They know how to engage, respect and empower others;
- They are able to find new or leverage existing resources;
- They understand the issues and constraints.

> At an ICM initiative in Africa the pool of "national experts" was far too small. A decision was made to subcontract a number of local institutions, and to augment their staff with the training necessary to undertake the required work. This was found to increase local ownership, improve local capacity and increase participation.
>
> UNDP-GEF, undated.

Many organisations in PIDS are small and have been dependent on a single leader (e.g. Palau Conservation Society). Others may have invested in building the capacity of just one or two individuals. Similarly, some projects have focused capacity-building initiatives on a small number of individuals. For example, several of the SPBCP project sites primarily built capacity of project staff, or key members of project coordinating committees (South Pacific Regional Environment Programme, undated a; South Pacific Regional Environment Programme, undated c; South Pacific Regional Environment Programme, undated d; South Pacific Regional Environment Programme, undated e). The departure and replacement of these individuals can be traumatic for the organisation and problematic for resource management activities (e.g. Salafsky et al; 1999; Fry et al., 2000).

Several strategies have been adopted to address this issue:

- Some NGOs have sought to strengthen the capacity of their board: training board members in organisational management; assigning board members responsibility for specific programmes; asking board members to represent the organisation nationally and internationally (Fry et al., 2000);
- Some activities select diverse stakeholders to participate in learning and training activities and encourage subsequent peer to peer training (e.g., Orsini, 2000);
- Some activities provide leadership training to a pool of potential leaders from diverse stakeholder communities (Fry et al; 2000);
- Another strategy is to develop collaborative arrangements with other organisations to transfer and share capacity (e.g. UNDP-GEF, undated, text box this page);
- Another approach is to institutionalise learning and training at all levels of an organisation or a project's activities (for example, University of Rhode Islands Coastal Resource Center's Indonesian programme) (Fry et al., 2000).

4.1.3 *Resource stewardship*

Some practitioners emphasise the importance of local stakeholders having resource ownership. However, tenure of itself does not make resource use sustainable, nor does giving authority to local communities (Crocombe (ed), 1995). Crocombe suggests that where sustainable development is practiced under customary tenure, people have been in the same place for a long time, with little external influence, and have been able to evolve conservation techniques suited to their own best interests. This situation rarely applies today due to increasing access to technology, rapid population growth, high mobility and other changes that place communities in a situation for which they have limited precedent.

It has been proposed that *stewardship* authority may be more important for conservation success than ownership (BCN, 1999). Stewardship involves more than legal rights, it requires internalised commitment to the goals of resource management activities, and diverse capacities so as to be able to choose optimum resource management paths.

Some Pacific island communities benefit from traditional stewardship institutions, although these cannot be taken for granted. A World Bank (2000) study spanning five PIDS found that 40 per cent of villages lacked local mechanisms to control fishing effort. Where local mechanisms existed, external partners had acted as catalysts for community action or the village benefited from strong local leadership and from a high dependence on coastal resources. Further, communities had difficulty enforcing stewardship through local rules due to uncertain relationships with national laws. This lack of stewardship authority has affected several SPBCP project sites, for example North Tarawa Conservation Area and Kiritimati Conservation Area, Kiribati, and Rock Islands Conservation Area, Palau (Axford, *pers. comm., 2001*.).

Gaps

- Knowledge of what moves people to accept and exercise environmental responsibility and stewardship, and how to foster stewardship where it is not present or has been diminished.

Challenges

- To be adaptive and responsive as individuals and organisations. This entails being open to the limitations of present knowledge; being open to learning from mistakes and failures, being open to alternative possibilities, and investing in monitoring and learning (Okiira, 2000). This can be particularly difficult in Pacific cultures that place leaders and elders in a position of respect, and where commenting on the success of activities may be taken as voicing criticism in inappropriate ways.
- To create *enabling conditions* for local stakeholders to be able to exercise stewardship, and to want to do so (See section 5.4).

Many BCN project sites experienced a disaster (natural or man induced). In several cases conservation work was suspended while project teams helped with relief efforts. This response earned the project teams the trust and respect of local communities and ultimately facilitated project implementation.

This experience led the BCN team to recommend that in times of chaos, a flexible approach to implementation,can lead to long-term conservation gains.

Salafsky et al., 1999.

Lessons learned:

⇒ Invest in training future leaders (www.epa.gov/owow/lessons) and invest in leadership succession (C. Kick, *pers. comm*., 2001), to develop the potential of future leaders at the organisation, partnership and community levels.

⇒ Do not overly invest in single individuals (Fry et al; 2000).

⇒ Try to develop commitment to stewardship through extension and information strategies.

⇒ Primary barriers to co-management and collaborative management include a distrust of the process by agencies and a lack of political support for small scale resource users (Pinkerton, 1999). Opportunities for overcoming these barriers involve data sharing, building networks, linking local efforts to institutions operating at larger scales and increasing institutional capacity for alternative solutions (*ibid*.).

Tools available

- Salafsky and Margolius (1999). *Greater than the sum of their parts.* A how to guide-book about using adaptive management across multiple projects.
- Blumenthal and Jannink (2000) *A classification of collaborative management methods* provides a set of criteria that describes the characteristics of different collaborative management methods to aid comparison of methods and selection of an appropriate method for a given set of circumstances.

4.2 Application of a resource management system

While there are many collaborative management systems and approaches (Blumenthal and Jannink, (2000), their application can be enhanced by facilitation, flexible and responsive managers and an understanding of the ecological system in which decisions will be implemented. These are briefly discussed below.

Resource management benefits from a facilitator at the watershed level. This person's role is to maintain contact between stakeholders, liaise with external parties, celebrate successes, call, facilitate and summarise meetings, help to secure funding and training,and ensure that plans are developed, implemented and effective (www.epa.gov/owow/lessons; SPREP, 2001a).

Good managers need to be proactive in identifying changing circumstances and flexible in making appropriate changes to implementation plans (Salafsky and Margolius, 1999). Conservation situations are usually dynamic. On the management side, roles and capacities of government agencies change in light of government restructuring, civil unrest and financial constraints. Capacities of organisations change with leadership and staffing. On the environmental side, the potential for natural disasters, abnormal seasons and shortages or delays in provision of equipment or technical support is routine. Collaborators' capacity to contribute to particular activities changes. Managers need to be skilful coordinators and analysts, able to manage complex consultations and integrate the results effectively. They may benefit from training in the techniques of coordination, consensus building and critical analysis (Capacity 21, 1996).

Management systems need to be informed by an understanding of the underlying ecological systems. If not inappropriate, resource management recommendations may result (Cunningham, 1999).

Experience from ICM approaches also suggests;

- Project designs frequently underestimate the time required to design and establish collaborative management systems.

- Consensus and support from every resource user is unlikely. Consequently, enforcement of objectives or management rules remains a need. Those responsible for management must have the authority, capacity and determination to fulfill enforcement roles.
- Threats that may undermine sustainable resource management can be characterised as either internal (caused by local stakeholders) or external (caused by outside influences). Local stakeholders often find it easier to unite to address external threats as opposed to internal threats (BSP, 1998). Enforcement of rules against internal threats often becomes tangled in complexities of community and family relationships and cultural issues. These intra-community dynamics and their impacts on resource management outcomes are not well understood (Whyte et al; 1988).
- Management staff or teams are often under pressure to make quick decisions in the field with little or no information and a deadline of yesterday. In so doing, they may respond intuitively to individual situations as they arise, and may lose sight of biological science, traditional practices, participatory processes and their long-term work plans (www.unesco.org/csi). Where this is the case, realising individual outputs may begin to take precedence over the strategic long-term goals. This can reduce the effectiveness of management systems (*ibid.*).
- Those in management positions can find it difficult to recognise when to say no or withdraw from projects or project components that are not working (Salafsky et al; 1999). A "no" decision may apply to specific resource management and conservation activities; to non-viable and unsustainable socio-economic initiatives; or to whole programmes. Monitoring and adaptive management provides a mechanism to address failings in a positive manner and learn from them (*ibid*.).

Gaps

- Enforcement of resource management rules against internal threats often becomes tangled in complexities of community and family relationships, and cultural issues. Intra-community dynamics, and their impacts on the success of participatory resource management activities, are not well understood.
- Management requires integrated responses to socio-economic and natural environment factors. However, practitioners tend to be natural scientists or social scientists. There is a lack of tools to help one approach better integrate the other's disciplines (Fry et al., 2000).

Lessons learned

⇒ Take a medium-to long-term timeframe. UNDP-GEF (undated) suggested six to eight years is a realistic time frame for design and establishment of a collaborative ICM. SPBCP experience suggested that ten years was a ballpark time frame to enable collaborative management and income generation to begin to demonstrate achievements and to build adequate capacity for long-term local management (J. Axford, *pers. comm*., 2001). It is realistic to expect considerable variation in the time required on a case by case basis.

⇒ Adopt a flexible management style and review plans in response to situations that arise.

⇒ Strengthen the authority and capacity of those who fill enforcement roles. Complement this with information strategies designed to increase public support and understanding of resource management initiatives.

⇒ Small scale activities that are accessible, visible and easily monitored are more easily enforced. Conversely is difficult for local stakeholders to enforce rules in places that are not accessible and able to be observed regularly (Whyte et al., 1998).

⇒ Community members have their own priorities and responsibilities. Often these will not coincide with the implementation requirements of a watershed management plan. If there is limited commitment to an activity, community members may be unwilling to forego other interests or productive pursuits to voluntarily support the conservation initiatives, especially if project staff are paid for their contributions.

Monitoring has usually been designed by outsiders and implemented by consultants ... it was not part of the conservation design. Community-based monitoring enables the information to be used at the local level, where many of the threats originate and resource use decisions are made.

The community decides on what to monitor... and how the results of monitoring are integrated into community decision-making.

No matter how well you plan your project, it will never go exactly as you intended. That's exactly why monitoring is essential; in many ways the most interesting resources ...are the ones you never expected to get...You will only benefit from these...however, if you are ready to look for them, learn from them and act on them.

Tools

- Margolius and Salafksy (1998) *Measures of success. Designing, managing and monitoring conservation and development projects*. Chapter Four focuses on development of a management approach.

MacKinnon et al. (1986) *Managing protected areas in the tropics*includes check lists developed to evaluate protected area management and to evaluate managers and their on-going personnel development needs. In their current form these do not focus on participatory resource management. However, they provide a guide to issues that could be addressed in assessments of watershed management systems and managers to guide institutional and initiative strengthening.

4.3 Monitoring

Monitoring is an integral component of management (Finlayson, 1996) and a critical management tool (Baron, 1998). It provides a process that can be used to ensure the management objectives are being realised, and to guide modification to improve resource management. Community-based monitoring has also been used as a tool to build the capacity of local stakeholders, to demonstrate their achievements and to help stakeholders become advocates for on-going initiatives (e.g. Funafuti Conservation Area, Tuvalu; Verata, Fiji).

> Do the monitoring training in each village because then the people see what the training is all about. Don't just send one or two people somewhere, because it there is just one voice it won't be heard... more people reinforcing and emphasising that really works.
>
> Pio Radikedylce, Verata, Fiji
> quoted in Baron, 1998.

Monitoring is basically about how to improve project design so as to have the optimum environmental and social impacts. This is irrespective of whether you have stakeholder commitment and can keep them involved; or whether you can be confident you are meeting your objectives.

Common obstacles to monitoring include work overload, fear of failures, lack of clarity about what to monitor, disagreement about what to monitor as a result of different agendas, irrelevance on the monitoring programme and arrogance ("I know what I am doing!"), (Baron, 1998). For some there is also lack of ability and resources. This often reflects a failure to employ monitoring as a management and planning tool, or to give it adequate priority in budgets and work plans. BCN programmes emphasised monitoring, and found it was advantageous to have off-site monitoring coordination as field staff often became caught up in the urgencies of every day management activities (Salafsky & Margolius, 1999).

> Natural resource monitoring can be a tool for community empowerment:
>
> In the Padaido Islands, Irian Jaya, community members monitor and map reef resources to aid their decision making. A scientist spent two years to strengthen the resource science and conservation skills of the local NGOs and communities. Partnerships were formed with a specialised in-country NGO and a local university to provide ongoing scientific and technical support.
>
> Fry et al. (2000).

Often when project applications and budgets are being rationalised, monitoring and internal review costs are the first to be cut (J. Whyte, *pers. comm*., 2001). This view that monitoring is a luxury, rather than a management fundamental, is a barrier to resource management success.

Several major programmes have grouped conservation projects into *learning portfolios*. This includes the Biodiversity Conservation Network, the World Wide Fund for Nature, and the MacArthur Foundation. This concept shifts the principal purpose of initiatives from specific resource management outcomes to learning about the conditions for achieving environmental and social success.

Gaps

⇒ Many PIDS lack appropriate institutional frameworks through which to coordinate and conduct monitoring, including scientific capacity. This can be a significant limitation (Finlayson, 1996).

Lessons learned:

⇒ From the Biodiversity Support Program come ten recommendations for successful monitoring (Baron, 1998):

- Make sure stakeholders know and care why they are monitoring, have buy in, active roles and support. Focus on indicators that are relevant to those doing the monitoring;
- Develop monitoring plans at the same time as thinking about project goals, objectives and activities;
- Have a simple focused design leading to a small set of data;
- Help people become creative about how they go about solving their own problems;
- Good leadership;
- Work with and within the community's structure;
- Involve all key stakeholders;
- Respect rhythms of community life;

- Be open to unexpected results;
- Repeated stakeholder analysis to see how stakeholders and their roles have changed.

⇒ Endeavour to fully involve local stakeholders in monitoring and evaluations (White et al., (eds), 1994). However, in light of "field realities and human nature, do not rely exclusively on stakeholders, to get the monitoring work done" (Salafsky and Margolius, 1999, p.19). Day to day crises and problems in the field, and the other commitments of stakeholders, may mean that monitoring will be postponed. Responsibility for ensuring monitoring takes place should be discussed and included in management plans (*ibid*.).

⇒ Relevance is a key to monitoring (White et al., (eds), 1994; Baron, 1998; Finlayson, 1996). Indicators are more likely to be relevant, if the stakeholders who will be doing the monitoring identify and select them (White et al., (eds), 1994; Baron, 1998). Simple focused designs that can be integrated into routine activities and lead to a relatively small data set have been recommended (Baron, 1998).

⇒ Establishing a baseline is a pre-requisite for monitoring (Finlayson, 1996). This has sometimes been neglected in resource management activities in PIDS, with monitoring being formalised after resource management initiatives have commenced.

⇒ To enable stakeholders to participate fully in choosing responses to what is learnt through monitoring, it is important that monitoring outcomes are communicated to stakeholders appropriately (Davis et al., 2001). Use of local languages is vital to inform local stakeholders.

⇒ Make adequate provisions for the costs of monitoring and sharing the resulting information in all budgets.

⇒ Monitoring needs to address the implementation process, including participation, alliance and stakeholder relationships, not only outcomes.

Exemplary practice

👍 Participatory environmental monitoring approaches employed at Verata, Fiji, by University of the South Pacific (USP) and South Pacific Association for Environment Education (SPACHEE) and subsequently used by World Wide Fund for Nature (WWF) South Pacific Programme. These are described in Baron, 1998. Further information is available from Bill Aalbersberg at USP.

👍 Simple analytical and macro-biotic indicators have been used to good effect by the Water Watch Project in Australia. School children and local landcare groups can monitor local waters and forward their data to a centralised location for inclusion in broader scale monitoring programmes. Handbooks and manuals are available from participating State Government Departments in Australia. General information is available from www.waterwatch.org.au or parallel sites with state governments.

👍 Participatory mapping and monitoring at Padaido Islands, Irian Jaya (see text box previous page). Text is dependent on layout.

Tools

- The International Development Centre (IDS) has a participatory monitoring and evaluation topic pack, with collected papers on the philosophy of participatory monitoring, tools for participatory monitoring and reports on experiences with participatory monitoring.
- Borrini-Feyerabend (ed) (1997) *Beyond Fences: seeking social sustainability in conservation.* Volume two of this handbook includes a section on Monitoring and Evaluation with four process monitoring tools.
- Margolius and Salafksy (1998) *Measures of success. Designing, managing and Monitoring Conservation and Development Projects*. Chapter Five of this handbook focuses on development of a monitoring plan.

4.4 Measures of resource conservation outcomes

How best to document resource conservation outcomes depends on the nature and purpose of the conservation activity.

Community-based initiatives are usually undertaken for clearly defined and understood motives, often relating to family or community resource access needs, exercising landholder authority or practice of custom (Whyte et al, 1998; Whyte et al; 1999). Studies in Vanuatu and Fiji suggest communities informally measured success using simple indicators of whether their resource management goals were met (for example, whether harvesting expectations were achieved when a site protected under *tabu* for a period of time was reopened) (Whyte et al., 1999).

> "The most significant change" is a qualitative approach to monitoring that collects data about the impacts of a project and promotes organisational learningIt involves the systematic collection and review of stakeholders' stories of change and the periodic staging of round tables to discuss domains of change.
>
> Dart et al., 2000.

For specific and non-complex resource management goals these measures are adequate. However, watershed management is usually a complex and multisectoral activity involving diverse stakeholder groups. In formal biological terms conservation success in such a context can be extremely difficult to define, let alone measure, especially over a brief project time-frame and in the context of changes in the resource management practices (Salafsky et al., 1999). Monitoring programmes designed for ecological impact, are often too academic, ill-focused and unsustainable from a community or site manager perspective. They conventionally seek to monitor indicators such as habitat integrity, habitat quality and ecological processes.

Force Field Analysis is a technique to visually identify and analyse forces affecting a situation so as to plan a positive change. Its visual character, simplicity, suitability for group work and applicability in planning for change makes it a potential tool with wide application in PRA.

Kumar, 1999, p.17.

In collaborative endeavours there is the additional consideration that the measures of conservation success selected must be meaningful to project stakeholders, and easily monitored and observed by them. Some models proposed have been highly complex (e.g. Ward et al., 1999). Alternative innovative participatory qualitative tools for review and evaluation are being developed. Two examples are shown in text boxes on this page: the "Most significant change approach" (Dart et al., 2000) and 'Force field analysis' (Kumar, 1999). Tools such as these could be readily adapted for use in PIDS. Their participatory approach can help with team building and capacity building. Their use of verbal information exchange is also empowering for Island communities.

A workshop of practitioners reviewing lessons learnt from sustainable resource management projects in Melanesia (Hamnett (ed), 1995), identified four criteria for conservation success:

- Project activities should be sustainable;
- Project activities should build local capacity to sustainably manage resources;
- Communities should be involved in planning and implementation; and
- Knowledge and skills gained through the project activity should be replicable within the community involved.

From sustainable development experience in the Philippines, Dacanay et al. (1999) suggested five criteria for exemplary practice:

- Strong community orientation;
- Positive impact on resource regeneration and conservation;
- Heightening of social/ecological awareness and practice;
- Improvement in the quality of life of people and communities; and
- Serving a broader agenda of model building and policy reforms.

Both these sets of criteria are inherently measurable and could provide a basis for developing indicators of conservation success.

BCN sought to measure conservation success in terms of four criteria:

- State of biodiversity;
- State of threats to biodiversity;
- Project intervention processes; and
- Status of the institutions at the site.

Developing practical indicators for these criteria proved difficult. Instead BCN settled on two primary indicators of conservation success: a Threat Reduction Index and the Future Conservation Success Ranking (see text box). Both were ranking techniques (Salafsky et al., 1999). The Threat Reduction Index related to the change in threats as a result of management interventions. Future Conservation Success Ranking estimated the ability of project managers to respond to future threats at the end of the BCN funding period (Margolius and Salafsky, undated). In choosing these measures, BCN wanted indicators that would not require the collection of huge amounts of data, could be linked to management interventions, were uncomplicated and would not depend on outside (academic) researchers (*ibid.*).

Threats are dynamic influences that cause some degree of negative impact on a conservation site. Threats can be classified as:

- Internal direct threats – factors that have a direct impact on biodiversity and are caused by local stakeholders using the project sites.
- External direct threats – factors that have a direct impact on biodiversity and are caused by outsiders.
- Indirect threats: social, political and economic factors that induce changes in the direct threats, such as threats from poverty or inadequate government policy.

Opportunities are the inverse of threats and have a positive impact on biodiversity.

Margolius and Salafsky, undated.

Gaps

- There is unutilised potential for sharing information on monitoring processes and data sets between countries, agencies and projects in PIDS.

- There has been limited experience in monitoring conservation projects (as distinct from monitoring ecosystems) in PIDS.

Lessons learned

⇒ It is difficult, if not impossible, to measure direct changes in ecosystems within the timeframe of most project activities (Salafsky and Margolius, 1999). Indirect indicators (such as the BCN's threat reduction approach) are more appropriate as management tools (*ibid.*).

⇒ Clear definition of problems and goals can help to describe what success might be in a particular context (Finlayson, 1996). Stakeholders need to know the changes a resource management activity is trying to achieve, to guide them to identify appropriate indicators and monitoring systems.

⇒ Keep monitoring as simple as possible. Identify a few indicators or benchmarks that are meaningful to, and chosen by, stakeholders; relate to your conservation target and that is simple to measure (Baron, 1998; Salafsky and Margolius, 1999). Do not try to measure every variable (*ibid.)*

⇒ The effectiveness of integrated watershed management work is often constrained by poor data to inform decision-makers, poor understanding of key issues for sustainable resource use and limits to the data processing and analytical capabilities of participants in the decision-making process (www.epa.gov/owow/lessons).

Tools

- The BSP project has two publications that guide others in the use of threat reduction assessment and future conservation success rating. Both are available from www.bsponline.org.
  a) Margolius and Salafsky (undated), *Is our project succeeding*?
  b) Margolius and Salafsky (1998) *Measures of success: Designing, managing and monitoring conservation and development projects.*
- SPREP developed measures of success specifically for PIDS and tested these in three of the SPBCP conservation areas. CD-ROMs were produced to guide conservation officers in developing meaningful monitoring activities.

5. Social and economic activities within resource management projects

There are several reasons why conservation projects address social and economic issues.

Firstly it is important for the sustainability of resource management initiatives that they are accepted by the society in which they are placed (Borrini-Feyerabend (ed), 1997). Whether they are accepted may depend on stakeholders having the perception that resource management is in their own economic and cultural interests (Brown and Wyckoff-Baird, 1992). Acceptance is particularly relevant in most PIDS. Most PIDS governments cannot afford the economic costs of imposing resource management systems on an unaccepting public: acquiring land, fencing, over-seeing resource use, policing poachers, land and resource management costs (for example, control of invasive species), and, possibly, paying compensation to resource owners. Further, difficult political issues could arise from imposed conservation, not the leas are the conflicts that may emerge should land compulsorily be acquired from unwilling traditional owners. (needs rewording for clarity) While some practitioners suggest that public acceptance is a necessary condition for success, experience in a few instances (for example, the Bonriki Water Reserve Area, Kiribati (www.csi.wise; E. Barako, pers. com., 2001)), suggests that it is possible to achieve acceptance after establishment. An understanding of socio-economic issues and addressing the social and economic needs of stakeholders can inform initiatives to foster acceptance.

Secondly, natural resources are managed or mis-managed by people, individuals, families, groups, communities, associations, businesses and governments (Borrini-Feyerabend (ed), 1997). To find out why an environment thrives or is exploited destructively, it is essential to find out about the people using it (ibid). This information is acquired through social and economic analyses, and is an important component of baseline studies and monitoring.

Further, resource management plans are fundamentally concerned with changing people's behaviour and resource-use practices. Social and economic initiatives, as components of conservation activities, aim to reduce or deflect usage pressures on the natural resource base (Brown & Wyckoff-Baird, 1992). They might improve natural resource management practices; promote incentives for conservation as part of a contractual agreement; or diversify economies and promote 'protective enterprises'.

Social and economic initiatives also endeavour to address the social, economic and cultural needs of stakeholders and help to create *enabling*

> It is not clear how people understand and value the natural world in their lives, and how they come to accept personal responsibility for nature conservation. Some research shows that improving people's scientific understanding can lead them to better understand issues and their consequences. Other research suggests people's understanding and responses can be better understood through ethics, social values and everyday experiences.
>
> Slattery, 1998, p. 182.

conditions (for example, finance systems, technology, political authority and social organisation and consensus) for sustainable resource management (Borrini-Feyerabend, 1997; Brown and Wyckoff-Baird, 1992; Cordes, 1999). Sustainability depends on stakeholders who use the natural resource base being able to satisfy their social, economic and cultural needs in ways that are consistent with conservation objectives.

This chapter reviews experience from the more common social and economic activities within resource management projects in PIDS:

- Awareness-raising, education and extension activities (section 5.1);
- Social and economic development (section 5.2);
- Income generating activities (Section 5.3);
- Creation of enabling conditions (Section 5.4).

5.1 Awareness, education and extension strategies

Awareness raising is a tool commonly used to raise interest, build social acceptance and change people's attitudes. *Education* and *extension* aim to go beyond this to specifically change resource users' practices. All three can be important tools to build the public's acceptance and support that is necessary for resource management success (Brown and Wyckoff-Baird, 1992).

Awareness raising, extension, *social marketing*, conservation education and training are commonly dedicated information exchange activities set out within resource management plans. Within participatory resource management, process tools also provide valuable ways for sharing information. These include the participatory planning process, monitoring and reporting (see also text box, this page).

Effective resource management communication requires:

- Understanding of the issues;
- Understanding of the audience;
- Care with terms and language so as to convey a clear and appropriate message to the target stakeholders;
- Knowledge of how and from whom the target audience likes to receive its information;
- Knowing how that audience can respond to problems; and
- Knowing who will deliver information.

Peer to peer communication has been recommended as one effective communication tool (e.g. BCN, 1998). Common examples of peer to peer communication include placements of conservation workers within other organisations for fixed periods of time, exchange visits between conservation sites; and lessons learned workshops. Orsini (ed), (2000), describes peer to peer communication in Asia for enterprise development. In the Pacific, peer to peer communication appears largely to have been used at the level of conservation professionals. Communications reaching local stakeholders and the general public are more commonly facilitated by staff or consultants. One exception, would be the visit of community leaders from the Vatthe Conservation Area (Vanuatu) to the community-based conservation sites in Fiji organised under the auspices of the SPBCP programme (C. Vatu, pers comm., 2001).

There are many opportunities to make reporting a useful information tool for project partners and to empower partners by allowing reporting formats they can easily use.

When supporting solar power systems in the Solomon Islands, Solar Electric Light Foundation (SELF) accepted photographic reports of work undertaken (R. Horoi, *pers. comm*., 2001).

The traditional coastal fisheries project in Vanuatu has made extensive use of video reporting so information can be returned to source as well as meet other project purposes.

F. Hickey, *pers. comm*., (2001).

Engagement of respected leaders is another communication tool used in the Pacific. An example of this is targeting church ministers as intermediaries able to pass information and set an example to members of their congregations. Chiefs (and other traditional leaders) have similarly been targeted, although junior or mid-level staff may not always be able to work with Chiefs in this way.

The RARE Center for Tropical Conservation (RARE) has facilitated conservation education programmes in several PIDS: Palau (Palau Fruit Dove and Jellyfish), Pohnpei (Pohnpei Fruit Dove), Kosrae (Kosrae White-eye), Samoa (Tooth-billed Pigeon), and Fiji. RARE uses *social marketing* techniques to rally national pride around a charismatic target species (www.rarecenter.org). These campaigns reach out to people at an emotional level to build pride and draw attention to positive ways the community can help local species, including habitat protection and sustainable agriculture[2].

[2] RARE has partnered with the Durrell Institute of Conservation and Ecology, University of Kent, UK to offer a fully accredited diploma that includes education theory and social marketing. A student from both Papua New Guinea and Palau are in the course's first intake.

PLA tools, action learning and participatory research (monitoring) have been used effectively to promote learning and understanding. In PIDS with more hierarchical social structures, PLA can be used effectively, but practitioners need to be careful not to challenge community leadership hierarchies (S. Siwatibau, pers. comm., 2000; A. Planitz, pers.comm., 2000)

Awareness Community Theatre (ACT) or *Development Theatre* uses drama, puppetry, mime, song and dance to foster community awareness of development issues and foster discussion and behavioural change (Bowden, 1999). There are many ACT groups in PIDS from professional groups down to community-level voluntary groups. Vanuatu's *Wan Smol Bag* is a well established professional group reaching a regional audience. Other Vanuatu-based groups such as Health-force Theatre (Port Vila) and Wuhuran Theatre (North Ambrym) do not have the same regional profile. Four theatre groups have been active in Kiribati: CHAR; *Te Ibitiwerere;* and two playback theatre groups, one on Bikenibu and one on Marakei. ACT may be more effective in some countries/cultures than in others. Those countries with high exposure to sophisticated international telecommunications tend to expect a more professional performance (Whyte (ed), 2000).

Simple fun activities with children or communities (e.g. Clean up the World Day, Kid's clubs) can stimulate public awareness and community organisational capacity (Fry et al; 2001). Children often take messages back to other family members (ibid.).

Gaps

- There appears to have been limited use of strategic tools for communication planning and review, such as the use of surveys to document people's knowledge, attitudes and practice (*KAP* surveys[3]), for conservation and natural resource management work. These have been used more widely in other sectors such as health.
- While many practitioners have an intrinsic understanding of '*Pacific ways'*, the factors that influence Pacific island people to accept personal responsibility for the environment in which they live are not necessarily well understood nor documented. This knowledge would help direct and guide extension and awareness-raising efforts.

Challenge

⇒ It is a challenge to use multiple communication tools to reach multiple audiences with diverse interests and capacities (Salafsky and Margolius, 1999).

Lessons learned

⇒ Awareness-raising and information dissemination needs to meet the internal communication needs of stakeholders and partners, and the needs of a wider public. It must be a two-way communication process, not a one-way flow of information (Brown and Wyckoff-Baird, 1992).

⇒ Take a professional and planned approach to information and extension. This includes a communication strategy at design stage; baseline surveys; monitoring impacts and effectiveness of communication tools; and adapting the communication strategy as appropriate.

⇒ Communication budgets should allow for pre-testing and post-testing of communication activities.

⇒ SPBCP experience suggests that education and awareness activities must be a continuous and constant component of a natural resource conservation initiative (J. Axford, pers. comm., 2001).

⇒ Targeting national or local pride can be an effective awarenessraising strategy (e.g. RARE campaigns). White et al., (eds), (1994) note that gaining pride can be a tangible benefit from involvement in conservation activities.

⇒ Budgets should allow for translation of all written communication tools (plans, reports, monitoring data) into appropriate languages and formats for stakeholder use.

⇒ Never assume that effective education and extension delivery tools in one culture or country will be effective in another.

Pre-testing information and awareness materials can help ensure they have the desired impacts.

A poster produced almost a decade ago by the SPREP Regional Marine Turtle Conservation Campaign, is still being distributed. Visually striking, it shows many turtles in spiral pattern, thought to symbolise something going down a drain.

As the poster was released with Bislama text it is assumed it was intended for use among rural ni-Vanuatu.

Rural ni-Vanuatu's initial reaction to the poster is awe at so many turtles in one place.

The poster's message is less striking, almost hidden. The poster employs international road signs to signify "don't". Recognition rates for these signs is low in rural Vanuatu.

The drain symbolism is also misplaced. Few rural ni-Vanuatu have drains.

Pretesting would have allowed designers to address these inadequacies.

J. Whyte, *pers. comm.*

[3] A KAP survey is a survey of individuals, groups or organisations, often administered through a questionnaire, to document people's knowledge, attitudes and practices.

⇒ Extension work will fail if it is only motivated by the communication interests of particular stakeholders (i.e. a one-way flow of information) (Brown and Wyckoff-Baird, 1992).

Exemplary practice

- Planning documents for Sa'anapu and Sataoa Conservation Area, an SPBCP conservation areas in Samoa, were translated into Samoan so as to be accessible to villagers.
- The RARE programme is exemplary for its professional use of *social marketing* approaches to raise conservation awareness and commitment.
- Wan Smol Bag Theatre pre-tests its plays through a small number of performances at which the audience gives feed back.
- The SPREP waste management and education project used opinion polls to establish a baseline for future impact assessment. Surveys were conducted in Port Vila and Luganville (Vanuatu), South Tarawa (Kiribati), Suva (Fiji) and Apia (Samoa). (Thumbs down, it was late in the project, and analysis of the Vanuatu surveys remains incomplete.)
- FSP Kiribati used surveys of people's knowledge, attitudes and practices to inform activities within their Kiribati Environmental Education Project (KEEP).

5.2 Social and economic development

Within developing countries, and in the Pacific particularly within Melanesia, social and economic development have been important components of integrated natural resource management activities, with the terms Integrated Conservation and Development (ICAD) or Integrated Conservation Development Project (ICDP) in wide usage. These projects aim to enhance conservation success by addressing the social and economic needs of stakeholders (Brown and Wyckoff-Baird, 1992). Integrated approaches that address links between conservation and development have been considered most likely to bring sustainable long term resource management success in developing countries (MacKinnon et al., 1986; Machlis, 1995).

ICAD approaches have been widely debated over the past decade (Saulei, 1998b). There have emerged divergent schools of practice, characterised at one extreme by the Bismark Ramu Group in PNG through to the large well-funded development projects conducted by international conservation groups. The 1997 Motopore Conference provided an opportunity for people involved in ICADs in PNG to share their experiences and dilemmas, and the proceedings of this conference has been an important reference for this report (Saulei and Ellis, (ed) 1998).

The role of income-generating activities for economic development purposes is discussed in the following section of the report.

Gaps

⇒ ICAD is considered a relatively new and complex approach to conservation, and is still being tried in the Pacific on an experimental basis (Paka, 1998).

Challenge

⇒ It is a challenge to convey to stakeholders a balanced understanding of development. Some stakeholders at a local level have a simplistic notion of development, seeing development as the provision of goods and services or royalties[4] (McCallum and Sekhran, 1996). This attitude is an obstacle to sustainable social development. However, it can be deeply entrenched, especially in communities that have received such benefits in the past. Social development needs to be a process of change from within, a process that builds capacity, resilience and independence (*ibid.)*.

Lessons

⇒ The goal is sustainable resource management and the development activities are a tool to achieve this (Brown and Wyckoff-Baird, 1992).

⇒ Many landholders, and communities, have entered ICAD partnerships to find an alternative to extractive industries, such as logging, to meet their development needs. This places pressure on project teams to provide direct short term cash benefits to support communities. However, the methods and approaches to ensure short and long- term benefits are not well developed (Saulei and Ellis (eds), 1998). In practice ICADs have only been able to generate relatively small material benefits to the stakeholders (compared with alternatives such as logging). The social development benefits from ICADs may exceed their economic benefits and include capacity-building and skills enhancement, and strengthening of community identity (Sengo, 1998; Orsak, 1998b).

[4] Some people refer readily to this concept as a "cargo cult mentality". This is not constructive as it is usually a gross simplification of both development expectations and a cargo cult. The situation might more realistically be a case of shrewd negotiation over optimum economic arrangements: bartering over access to a resource base.

⇒ Saulei and Genolagani (1998) question whether the micro-economic focus of the 'conservation industries' frequently promoted within ICAD activities is able to achieve biodiversity conservation at the national level.

⇒ It would appear that short-term economic benefits are unlikely to provide a strong argument in favor of conservation. Consequently, education of local stakeholders about the balance of the long-term costs and benefits and the costs and benefits of alternative resource uses appears important to engendering long-term commitment to sustainable resource use (Orsak, 1998b; Nari, 1999. Orsak (1998b, p.57) suggests that education needs to be "more intensive and detailed than the current 'awareness' activities most ICAD projects engage in".

⇒ There may be strong rhetoric for maintenance of traditional values and cultures, but people are often simultaneously embracing their perception of the developed world ideal. Finding a balance can be difficult (Saulei and Ellis, (ed) 1998).

Tools available

- Brown and Wyckoff-Baird's (1992) handbook, *Designing integrated conservation and development projects* continues to be a useful introduction, with short summaries of key tools.
- Margolius and Salafsky (1998) *Measures of success: designing, managing and monitoring conservation and development projects.* This handbook can be downloaded from the BSP website.

5.3 Use of enterprise and income-generating activities

Not all participatory resource management activities include income generating activities. Some explicitly meet stakeholders' goals in other ways, such as improved resource stocks or increased capacity to control outsiders' use of traditional lands. For some, increased cash income is not an issue or need. For others there may be no readily apparent marketable products or services. However, for some resource management activities, income generation is a useful tool for increasing support and participation (e.g. Takitumu Conservation Area, Cook Islands and Huvalu Conservation Area, Niue) and deflecting resource use pressures.

Opinions diverge on the ideal time to initiate enterprise activities. Fry et al. (2000) report that strong community organisations, and awareness and education about resource management needs should be in place before enterprises are introduced. Conversely other sources suggest that early tangible benefits help demonstrate commitment to local stakeholders and earn commitment in return (e.g. Salafsky et al.,1999).

A major obstacle to the introduction of income-generation and enterprise activities is the naïve understanding some stakeholders hold of the concept of development (see section 5.2). Other obstacles to the introduction of income generating activities include (McCallum and Sekhran, 1996; Salafsky et al., 1999):

- Low business management, marketing and enterprise capacity at the local level;
- Communities' have limited experience of the cash economy;
- High production costs;
- Fragmented, small or distant markets;
- Inconsistent quality and volume of marketable product available;
- Difficulties in servicing remote areas; and
- The inward and localised approach of landowners (i.e. where jealousies, transient decisions and established power differentials make it difficult to forge a common interest).

Inadequate market assessments are a common failing.

One example comes from the nut oil business proposed for Makira in the Solomon Islands. The enterprise initially paid a high price per kg of raw nuts. The managers realised they had to reduce the price they offered. This caused suspicion among community members who felt they were now being cheated.

Similarly at Lakekamu Basin, PNG, facilities for a research tourism business were built. Only, noone came. There had been inadequate assessment of market demand.

Salfsky et al., 1999.

Overcoming these barriers, especially when working with innovative products and those new to markets, takes time (years in the case of SPBCP and BCN project sites), and the up front investment in feasibility studies, marketing strategies and training can be high.

Lessons learned

⇒ An enterprise or income-generating activity is unlikely to lead to conservation on its own (Salafsky et al., 1999; Orsak, 1998b). It is a tool to meet some stakeholders' income needs or change stakeholders' resource use patterns, and is possibly able to contribute towards the costs of conservation management (Salafsky et al., 1999; Orsak, 1998b).

⇒ Income-generating activities are unlikely to be able to cover the costs of maintaining conservation activities (SPREP, 2001b). Therefore, where management systems incur ongoing costs sustainability strategies must address long-term financing of conservation.

⇒ Carefully review if there is a role for income-generating activities within a resource management activity? Why? Which stakeholders would be involved? Only if the activities have a clear purpose that adds value to and supports the primary resource management objectives should they be included in ongoing planning and incorporated into project activities.

⇒ Monitoring of enterprises is critical;

- to ensure that the enterprise meets both its socio-economic and conservation objectives (Fry et al., 2000).
- to determine if the resource base is adequate and benefits are not spread too thinly (Cordes, 1999, P.6); and
- to assess and address negative impacts (Fry et al., 2000);

⇒ Keep people with business management and entrepreneurial skills at the forefront of economic initiatives (Fry et al., 2000; Salafsky et al., 1999; Encarnacion, 1999). Seek to involve local stakeholders with entrepreneurial ways of doing things, and with management and leadership skills. Bring groups with appropriate business training capacity into your partnership. Do not assume that development NGOs or conservation practitioners will have entrepreneurial skills (Salafsky et al., 1999).

⇒ Assess whether there is a market for any product or service, and what that market is expecting (Salafsky et al.,1999). Although this may seem trivial many projects have done this inadequately. Salafsky et al. (1999) suggest that some income- generating activities appear to place greater importance on getting productive systems in place than on marketing.

⇒ Expect to spend significant amounts on business management capacity-building (McCallum and Sekhran, 1996).

⇒ Expect a high failure rate in small business enterprises. This is normal experience the world over, not only in community-based resource management initiatives.

⇒ Invest in multiple ventures, involving different stakeholders. Some will succeed and others fail. If there are clear subgroups among stakeholders, do not expect composite groups to cooperate to manage a single venture (Salafsky et al., 1999). Break the venture into discrete components for separate management or promote several different IGA activities (ibid.).

⇒ Don't prop up business ventures that are not able to cover the costs of production and management (ibid.).

⇒ Consider whether a private business model, a cooperative model or a community business is most appropriate and most likely to be effective: a cooperative or a community-run business introduces additional management complexities. They will require up-front agreements as to how responsibilities will be shared, how workers will be rewarded for effort, how conflicts will be resolved and how profits will be disbursed.

FSPI's SPCEF programme included a revolving loan fund: to finance enterprise development and incorporate the true costs of capital. Problems emerged. On the one hand the loan traps communities into high levels of production that may not be socially appropriate or economically achievable. On the other hand even if the bank elects to repossess on loan defaulters, the perception is that the FSP affiliate has repossessed, affecting relationships with the communities.

Tilling and Holzknecht, 2001.

The BCN project gave grants to eligible non- profit organisations. In effect the programme tested these organisations' capacity to establish enterprises for conservation purposes.

BCN found that the enterprise success rate was low.

Had BCN been able to give loans or other disbursements to private business and entrepreneurs, there results may well have been quite different .

(Salafsky et al., 1999)

5.4 Enabling conditions for change

The term *enabling conditions* refers to a policy, legal, financial, political, organisational and social environment that is conducive to allowing natural resource management goals to be fulfilled.

Participatory resource management cannot succeed in the absence of a favourable policy context (Renard, 1997; Natural Resources Management Program, 1999) or where the policy environment works to counter project goals. Consequently, an important component of social and economic activities within resource management projects can be to create *enabling conditions.* Activities that build enabling conditions includes policy and legal measures to address *perverse incentives*, legal barriers and policy obstacles; and initiatives to build necessary organisational and institutional capacity. The first step is often a review of the relevant policies that may impact on a project, identify appropriate changes to create a more enabling policy environment and assess the feasibility of achieving policy change (Brown and Wyckoff-Baird, 1992).

Intergovernment organisations such as SPREP can be in a strong position to address policy obstacles in their advisory role to governments,

Conservation and development projects may include an advocacy role to target policy change. For example, FSPI's South Pacific Eco Forestry Project and its partner agencies Solomon Islands Development Trust and FSP Vanuatu became involved in campaigning for policy development to facilitate portable sawmill activities.

and can advise on model laws for resource management purposes. This has been done in the context of several SPREP projects such as the Waste Education and Awareness Programme. Some practitioners suggest that international stakeholders can be effective and influential in facilitating changes at a government level (e.g. Fry et al., 2000). However, there is also a perception held by many that external organisations should be careful not to become involved in local politics. Management teams and other stakeholders will need to decide what is most appropriate in their local situation.

UNDP-GEF experience is that awareness-raising at top levels needs to be a continuing long-term effort, due to high turnover at the senior levels of political leadership in many countries. This is relevant to many PIDS.

The State holds important responsibility for creating the conditions necessary for effective resource management including:

- Establishing a policy framework conducive to sustainable resources management;.
- Providing a legal framework for resource tenure;
- Investing in building institutional capacity at a local level;
- Acting as an arbitrator of last resort in the event of conflict;and
- Providing the appropriate macro-economic framework, including equitable policies on subsidies, transfers and prices, and investment in infrastructure…". (Wyckoff-Baird, 1997, p.72)

Lessons learned

⇒ In many PIDS current policy settings give priority to economic goals rather than sustainable natural resources management. This is demonstrated within formal policy documents and laws, within departmental hierarchies, departmental work programmes and within annual budget allocations.

⇒ Building effective partnerships and networks at national, provincial (or state) as well as local level is important in effecting administrative, policy and legal change (Fry et al., 2000). Multi-stakeholder policy processes provide an opportunity for linking the various players within the policy-making process (Natural Resources Management Program, 1999).

⇒ The reluctance of government institutions to share power and authority is a common obstacle to collaborative management arrangements (Renard, 1997). It may be necessary to advocate and support policy changes in directions which are more conducive to participatory approaches (ibid.).

⇒ Influential individuals in leadership roles can effectively lobby for policy change.

Exemplary Practice

👍 The model provided by URI-CRC's Coastal Resource Management Program (Indonesia) which has two major components. One targets policy and legislation at different levels of governance in Indonesia, including capacity building to service new institutional arrangements. The other targets practitioners and local communities. The two are complementary, yet distinct.

Successful enterprises can become a threat to sustainable resource management.

E.g. seaweed farming was introduced as an IGA in Bunaken National Park, Indonesia. The venture was economical. Good incomes attracted immigrants and led to rapid expansion of seaweed farming. Increased population pressures had a negative effect on resource management and mangrove forests proved vulnerable to the high use of mangrove timber stakes for sea weed lines.

Fry et al. (2001).

5.5 Social and economic outcomes

The intended outcomes from social and economic activities include enhanced social acceptance of project activities, more sustainable resource use practices, diversified economies; and enhanced community well-being. However, other, often unintended social and economic outcomes sometimes arise,indirect impacts on the resource base, reduced well-being for some stakeholders, changes in the position and authority of stakeholders institutions (Sutherland, 2000; Salafsky et al., 1999).

Wollenberg and Colfer (1997) observe that the social dimensions of conservation are often poorly understood. They suggest three factors that have influenced this. Firstly the conventional approach to conservation that has seen people as a threat to natural resources. Secondly is the ambiguity over the difference between 'sustainability of the natural resource'and 'sustainability of people's lives'. Integrating the two concepts has been problematic. Thirdly, it is not easy to measure social conditions. These difficulties have discouraged many practitioners, especially those from a natural science discipline, from focusing on social aspects (ibid.).

The most common approach to economic benefits have been to nurture business activities, establishment of cooperative or community business ventures, provision of communal social services, and payment of royalties. All approaches have had problems.

Rural communities in PIDS have established routines and commitments that hinge around seasonal resource use and subsistence agriculture. Outside urban areas, people are not always motivated for the major social change required for a shift to full time paid work or entrepreneurial activity (BCN, 1998; Tilling and Holzknecht, 2001). If this is the case, entrepreneurial models have to be 'doable' and economically viable as part time or seasonal businesses.

Increased cash benefits and profitable business opportunities can lead to increased expectations and even immigration to take advantage of the improved conditions or employment opportunities (Sutherland, 2000; Salafsky et al., 1999). This may reduce the amount of benefit per person, increase pressure on the resource base, contribute to social transition and create conflicts between immigrants and locals. It can fuel jealousies and rivalries between beneficiaries, and between beneficiaries and other stakeholders. Resentment and infringements can emerge if there is no explicit link between the benefit and the conservation objectives (Sutherland, 2000).

Some projects have sought to provide communal rather than individual benefits. These may also create or increase jealousy or conflict between different community factions over the way benefits are shared or allocated (Salafsky et al., 1999). Communal distribution of benefits in the form of social services (such as schools, clinics, and roads) also has many shortcomings. Their provision is generally not economically sustainable and may create a need for ongoing external subsidies for maintenance and repairs. In the absence of on-going maintenance facilities may rapidly deteriorate.

Many resource management projects have emphasised generation of cash income. Tangible and practical benefits in terms of improved resource access or improved social cohesion can be as effective a motivating force as cash income (e.g. Whyte et al., 1998; White et al., 1994).

Increased tourism can cause conservation problems. It is important to consider whether there is a net benefit. Damage can be indirect such as the demand for water, firewood or impacts of polluting activities.

Sutherland, 2000, p.152

Communal allocation of revenues can be problematic.

At one site it was agreed sawmill revenues were to be used by the community to build a church. The problem was that half the community wanted a Catholic Church while the other half wanted an SDA Church (Salafsky et al., 1999).

At one eco-tourism venture communal distribution of revenues encouraged community members to expect benefits regardless of the consistency of their contribution. To get work undertaken in a timely and consistent manner the manager (a villager) tried to employ people from a nearby village, but was met with strong opposition from other villagers. Eventually the accommodation was re-established as a private business

Whyte, *(pers. comm.)*.

The value of a particular socioeconomic benefit can be subjective. A village survey at Crater Mountain, PNG found that households were earning more money per year from handicrafts than coffee. None the less, men valued the money from the coffee more because it came in one lump sum. Women liked the smaller more frequent payments that came from handicrafts.

Salafsky et al., 1999, p.29.

Lessons learned

⇒ Feasibility studies, cost-benefit analyses and monitoring are vitally important. These should be participatory studies and lead to multi-stakeholder decision-making. Stakeholders need to understand why some proposals are inappropriate, and have to select ventures that they are interested in pursuing.

⇒ To motivate improved resource management there must be a clearly perceived link between the income-generating activity or enterprise and the conservation of the targeted resources (Salafsky et al., 1999).

⇒ An entrepreneurial initiative needs to be run like a business, not a project (Encarnacion, 1999, p.75; Salafsky et al., 1999). People involved and those overseeing the initiative must have book-keeping skills and understand basic profit and loss equations.

⇒ Focus on simple enterprises that use skills local people already have in preference to complex enterprises that require new skills (Salafsky et al., 1999).

⇒ Many enterprises, and especially tourism, are dependent on capricious circumstances and market fluctuations that are beyond the control of the stakeholders (Fry et al., 2000). If the commitment to conservation is based solely on enterprise profits conservation will fail if the enterprise cannot be sustained.

⇒ Cash benefits are not a necessary condition for conservation success (www.BCNet.org/qual.htm; Salafsky et al., 1999; Whyte et al., 1998). However, where they can be realised, they can enhance local stakeholder commitment and support, and hence the likelihood of conservation success.

⇒ If benefits are to be allocated communally there is a need to have clear up-front arrangements for their distribution, maintenance and upkeep. Have in place a mechanism for funding ongoing business costs, including replacement of infrastructure and other capital items.

Exemplary models

- Dive tourism in Palau as a means of funding conservation. However, this is not a model that can be replicated as it is a result of a special combination of circumstances: suitable resources and market access.
- Conservation International and CIDESA full title working with customers, suppliers and investors to create opportunities for economic development at a local community-level based on use of biodiversity products.
- Takitumu Conservation Area, Cook Islands, for its clear agreement on income sharing.

5.6 Measures of social and economic outcomes

The outcomes of social and economic activities are not always those envisaged. Some activities may have adverse impacts on the natural resource base being managed or more indirect impacts, in the form of adverse local economic or cultural change. Introducing new resource management systems or new commercial resource uses may lead to changes in lifestyle and socioeconomic conditions, not just to the ecology of the area. It is important to consider whether there is a net benefit (Sutherland, 2000). In other cases it is important to understand the capability of the natural resource base to support altered levels of resource use and new resource use practices (Fry et al., 2000), and to set guidelines and resource use restrictions as appropriate. Consequently, baseline studies and monitoring are important components of social and economic activities.

Social and economic monitoring appear to have been neglected in the context of conservation projects in the Pacific region. However, there is considerable international experience that could be applied. Wollenberg and Colfer (1997) define social sustainability and list broad indicators of social sustainability that are important in resource management initiatives:

- The well being of people including the security and sufficiency of their access to resources, economic opportunities available to them, decision-making opportunity, justice, expression of culture and identity, safety and health.
- Social capital, or the capacity of a group of people to cooperate effectively for the management of resources including clear resource boundaries, stewardship capacity, effective decision-making and conflict resolution mechanisms, capacity to monitor resource quality, organisational efficiency, incentives for sustainable resource management, access to the necessary economic inputs for sustainable management (labour, technology, information, capital and other economic inputs) and a shared value towards the natural resources.
- Intergenerational equity indicators of intergenerational benefits include the stability of people's well-being, the maintenance of social capital, equitable inheritance systems, tenure security and opportunities available to the younger generation.

Also most development agencies active in the Pacific Region promote established techniques for social and economic analyses (e.g. Overseas Development Administration, 1995; Australian International Development Assistance Bureau, not in references 1991; Asian Development Bank, 1994).

The BCN programme provides the most thorough attempt to document the outcomes of income generating activities (Salafsky et al., 1999). Initially each BCN project partner was asked to prepare an annual profit and loss statement for each enterprise. Most project teams couldn't do this, many couldn't even provide basic financial information. So BCN developed a simple ranking system of business effectiveness:

1 No revenue.
2 Some revenue.
3 Revenue covered variable costs of production.
4 Revenue covered fixed as well as variable costs (capital expenditure).
5 Revenue covered fixed and variable costs, and management & monitoring costs.
6 Revenue covered the opportunity cost of capital (i.e. all the costs above were covered plus it paid a return at least equal to a safe investment.).

Many of the enterprise initiatives of the BCN programme failed to cover variable costs (ibid.), therefore couldnot recover the costs of production. They lost money on every unit of a good or service produced. Those enterprises with accurate book-keeping and accounting capacity were significantly (Chi squared statistical test) likely to be more profitable (ibid.).

Many enterprises established by conservation and development projects have been heavily subsidised, with management and training costs commonly borne by external project funding. This may be valid when new and innovative products are being developed and tested. However, failing to include management costs within pricing structures and annual returns can undermine financial sustainability, the enterprises cannot stand on their own as commercial businesses if they cannot cover variable, fixed and management costs.

Gaps

- Monitoring the broad social and economic components of resource management activities appears to have been neglected in the context of conservation projects in the Pacific region. This includes monitoring the impact of education and awareness activities, monitoring activities directed toward creating enabling environments; and measuring general social and economic impacts.

Lessons learned

⇒ Monitor and evaluate the range of social and economic activities relevant to a particular project. This may be done in terms of simple indicators such as those developed by the BCN programme (Salafsky et al., 1999), relative to targets and milestones established in project work plans or through qualitative assessments as described by Overseas Development Administration (1995). Involve local people in evaluations and use benchmarks and indicators they select (Baron, 1998; Salafsky and Margolius, 1999).

⇒ Monitoring activities based on a project logframe will not explore the unplanned-for, unintended consequences and impacts of a project, whether good or bad (Orr, 2001).

⇒ Link social and economic monitoring with ecological and resource monitoring to assist stakeholders to understand the sustainable use level for the resources targeted and allow resource use to be regulated accordingly.

⇒ Do not entrust enterprises to people who are not managers and are unable to monitor and assess their capacity to cover costs. Similarly, do not promote community enterprise models where communities have not been able to demonstrate cooperation toward shared goals. Other management models might be more appropriate.

⇒ Close enterprise activities that cannot cover variable costs or carefully consider why a subsidy on production is warranted (Salafsky et al., 1999).

⇒ A recent examination of six participatory natural resource management projects in Asia and the Pacific noted the inadequate and unsystematic information about community participation in project documentation, and the failure to set participation or social process indicators (Orr, 2001).

Tools

- Thomas-Slayter et al. (1995) *A manual for socio-economic and gender analysis: responding to the development challenge. Provides participatory tools for social, socio-economic and gender analysis.*
- Overseas Development Administration (1995) *A guide to social analysis for projects in developing countries."* Chapter Six is devoted to assessing social achievements.
- Borini-Feyerabend (ed), (1997) *Beyond Fences: seeking social sustainability in conservation, Vol. 2*, includes practical advice and guides that can help with participatory social and economic analyses of activities within conservation projects.

An enterprise that protects one element of the environment cannot be classified as an eco-enterprise. For example, non-timber forest products have been a favoured incomegenerating activity. However, the commercial exploitation of non-timber resources is plagued by destructive harvesting, over exploitation and a disregard for the functional ecology of tropical plant populations. Six steps for ecologically sustainable harvesting plans are:

1. *Species selection*. Some species (because of their reproductive biology, regeneration or growth patterns or population structures) are inherently more able to withstand continual resource extraction than others.
2. *Forest inventory*. Inventories of density and size class structure of suitable species are fundamental. However they are time consuming, costly and extremely tedious.
3. *Yield studies*. These will indicate how much of the desired resource is available for harvest.
4. *Regeneration studies*. To give an indication of the impact of harvest on species longevity, and the harvest rate that is sustainable.
5. *Harvesting assessments*. Used to gauge the ecological impacts of resource harvesting.
6. *Harvesting adjustments*. Using adaptive management to adjust harvesting in light of data obtained.

BSP, 1998.

6. Cross cutting themes

Several additional issues were considered of interest to the IWP programme:

- relationships between international, regional and national stakeholders;
- engagement of donor partners;
- engagement of the private sector;
- capacity building.

These have relevance across all aspects and stages of participatory resource management and have been grouped together under the title of cross cutting themes. They are briefly discussed in this chapter of the report.

6.1 Building and maintaining effective relationships between international, regional and national stakeholders

The institutional arrangements of international, regional and national stakeholders vary (Salm and Clark, 2000). Inherent to effective partnerships are a focus on common interests, respect for each participant's view point, respect for each other's capacity, willingness to learn about others' needs and positions; and trust (Salm and Clark, 2000; White et al., (eds), 1994; C. Peteru, pers. comm. 2001). Effective partnerships are purposeful, of manageable size, create synergy and represent key interests (Salm and Clark, 2000; White et al., (eds), 1994). An important management role is to broker the interests of stakeholder groups, and to manage and resolve tensions and conflict (Margolius et al., 2000).

Interorganisational problems are common and significant, and can detract from resource management activities. Often problems are underpinned by a failure (or refusal) to understand and accept why others have chosen to become involved (Sutherland, 2000).

The BSP's analysis of organisational relationships found that clearly defined relationships with only a few partners were more easily managed and more effective in meeting their objectives (Salafsky et al., 1999). As organisational relationships became more complex the benefit of additional capacity was off-set by increased management and maintenance requirements (ibid.). Lengthy chains of institutions between donors and lead implementers, have been found to complicate reporting, management and financial arrangements (e.g. SPREP's SPBCP programme). FSPI's experience suggests that administration becomes more onerous when multiple donors contribute to a single initiative but retain individual reporting and financial arrangements (J. Whyte, pers. comm., 2001)

Many practitioners have found that there is no substitute for face-to-face meetings between stakeholders and partners, even though they can be expensive, and at face value, time consuming. The need for face-to-face contact increases if there are changeovers in staff within partner organisations or within critical government departments (Cordes, 1999, p.8; SPREP 2001a).

Permanent field staff can assist with face-to-face relationship building. However frequent turnover in field staff can have a negative influence on relationships and on conservation progress and continuity (e.g. SPREP, undated b).

"BCN occupied an interesting position between being a donor and an implementing organisation… This role as an intermediary was initially quite difficult." Given the perception "that it is important to impress a donor, it was hard for our grantee partners to 'trust us' and to feel that they could be candid about their project's challenges and problems".

This problem was overcome over time by assigning staff to work with specific projects and to build more personal working relationships.

Salafsky and Margolius, 1999, p.20.

"...projects are more effective if implemented nationally or locally, and .. SPREP should work further upstream providing technical and policy advice, assistance to members and partners…"

AusAID, 2000.

SPREP's Capacity Building for Environmental Management in the Pacific (CBEMP) project found flexibility in the development of country workplans improved national level ownership.

However, as implementation activities varied from country to country the project became more difficult to manage from a regional perspective, and the potential for undertaking regional activities was diminished.

SPREP, 2001

Gaps

- While it is recommended practice, no examples of monitoring of international, regional and national partnerships and partner relationships were identified during preparation of this report.

Lessons learned

⇒ Within consortia agreements and work plans it is helpful to clarify and define the implementation roles and relationships of each organisation (Salafsky et al., 1999; Renard, 1997; Margolius et al., 2000; Borrini-Feyerabend (ed), 1997).

⇒ Building partnerships takes time and commitment. Within project plans and agreements time and hence finances may need to be allocated for this alone, particularly where international or inter-island travel is a requirement for face-to-face contact (SPREP, 2001a; Margolius et al., 2000).

⇒ Partnerships between widely different organisations should be nurtured, discussed and monitored so that improvements can be made in partnership arrangements or work plans (Margolius et al., 2000). In the Pacific, relationships between very different organisations arise when well resourced international organisations endeavour to partner indigenous peoples or community based organisations.

⇒ Plan and budget for regular team meetings at local, national and regional levels (Margolius et al., 2000). This requires that external agencies should plan to have sufficient staff to be able to have regular faceto- face contact with project managers and key national level stakeholders and to maintain working relationships with other partners.

⇒ Take an adaptive management approach to institutional arrangements so that optimum administrative and management arrangements can evolve on a case-by-case basis (Salm and Clark, 2000).

⇒ Good leadership at an organisation and alliance level can help drive effective relationships between international, regional and national stakeholders (Margolius et al., 2000).

⇒ Some conservation stakeholders have tended to be competitive (in the search for funds or in building kudos for their programmes) rather than collaborative (see text box).

Conservation stakeholders are often more competitive than collaborative, especially when it comes to their donors and their reputations.

For example, significant funds may become available in PNG for coastal resource management in the next few years. Mangubhai (ed) (2001) suggests that this increase in investment will strain local capacity.

There is opoortunity for stakeholders to pool resources and expertise for cost efficiency and impact, and to adopt a holistic approach through liaison and joint planning.

PNG's National Strategy for Marine Conservation is a step in this direction.

Tools

- Margolius et al., (2000) *In good company*: *effective alliances for conservation*. Analysis of the conservation alliances within the BCN programme, and insights into factors that influenced experiences.
- Borrini-Feyerabend, (ed), (1997) *Beyond Fences. Seeking social sustainability in conservation,* includes sections advising on formation of collaborative alliances.

6.2 Engagement of donor partners

Donors are important stakeholders. As donors' expectations, policies and interests vary there is no single strategy for donor involvement.

Donors are important stakeholders in a resource management project (www.unesco.org/csi). Giving donors a real and meaningful role to play in a project helps donors better understand what is happening, why changes in implementation plans are necessary, why targets weren't achieved, why budgets are under or over spent and so forth. It may also increase their sense of joint ownership and responsibility, and hence their long-term commitment (ibid). At a minimum donors should participate (as a stakeholder) in internal reviews and team meetings.

Usually donors' roles are more appropriately defined at the level of project management or in building links with other work, than at the grass roots of implementation activities (Salafsky and Margolius, 1999).

Donors have real responsibilities to *all* project partners, and these have been identified in the Hundestaad recommendations on donor best practice (www.unesco.org/csi). Hundestaad was a multi-stakeholder forum focusing on donor practice when working in the context of indigenous peoples. Many of the recommendations are pertinent to conservation work in the Pacific region (see text box).

Hundestaad recommendations for Donor Best Practice:

1. Have a written policy. Enforce safeguards.
2. Have direct contact and a relationship with the people in the target area.
3. Base relationships on respect, mutual learning and reciprocal accountability.
4. Empower and effectively engage indigenous social and political structures.
5. Stay on course. Long-term relationships are the key to success.
6. Be transparent.
7. Support indigenous peoples in efforts to address core social issues that affect all citizens.
8. Raise the priority of indigenous rights and environmental concerns among other competing priorities during all bilateral and multilateral negotiations.
9. Value donor coordination and work together on these issues.

Indigenous Peoples and Biodiversity Governance: Donor Best Practices for Supporting Civil Society.

Hundestaad, Denmark, 7th-9th March 2001.

Some donors' organisational policies require a strictly defined project timeframe and framework of activities. Coupled with many lead organisations' lack of untied funds, this can create situations that drive an output focused project management style. It can also be a barrier to full stakeholder involvement in project conception and design, and it can be problematic in the context of adaptive management that responds to experience in the field. Orr (2001) is critical of the competitive tendering and contracting out processes of some donors (e.g. AusAID) as creating a barrier to participatory processes. A further barrier is the output nature of many contracts for large development projects, that includes techniques such as milestones as a trigger for the payment of project funds (ibid.). Project managers focus on achieving these milestones to the detriment of participation and community development processes. Logframe formats encourage specific outputs and time bound performance indicators, rather than process approaches. Review of logframes for six major natural resource management projects in Asia and Pacific indicated inadequate and non-systematic mention of participation and social processes (ibid.).

Several in-country project managers have complained about problems arising when donors expect full acquittal of a funding tranche before a further payment is to be made. They effectively experience a funding gap during which many operational activities are put on hold. This becomes particularly frustrating if it occurs repeatedly. More equitable arrangements is to advance adequate funds for several months beyond the reporting timeframe.

Some project holders complain about the time devoted to reporting and financial management and call for less frequent reporting periods. There is considerable variation between donors in their requirements, and organisations need to develop their own standards that meet their capacity. Quarterly reporting is possibly a good ball park. Six monthly reporting is perhaps more onerous, because of the time lag from implementation to reporting, the greater number of activities to report on and the time lag should changes need to be discussed.

Lessons learned

⇒ Raising the issue of donor – project holder – stakeholder relationships is problematic: everyone has something to complain about. Building relationships based on trust, with donors recognised as valued stakeholders, may help build mutual understanding (White et al., (eds), 1994).

⇒ Project managers should invite and involve donors where appropriate, and nurture their sense of being an active partner. Opportunities include attending roundtable meetings and special events; assisting with organisational capacity building; providing training; providing facilitators; and participating in internal reviews and planning activities (www.unesco.org/csi; K. Fry, pers. comm., 2001).

⇒ Donors should recognise their position in project partnerships and exercise this position responsibly. This may include insisting on local accountability; ensuring problems are addressed; and funding ways to level power differences. Donors need to encourage managers to review expectations of evaluations, benchmarks and indicators and check that the interests of all stakeholders are included (www.unesco.org/csi).

⇒ Donors and lead agencies need to create processes that fit local needs and strengths, rather than use processes that exclude ordinary stakeholders, simplify processes, avoid onerous reporting requirements, accept alternative reporting mechanisms; avoid time frames that don't fit subsistence cultures (www.unesco.org/csi).

⇒ Where there are several donors co-funding a programme or project, grant holders or management teams, are often able to negotiate with donors to establish a standard reporting schedule and requirements. If not, undue time will be devoted to preparing separate reports to meet the schedules and requirements of different donors, at the expense of attention to implementation activities (J. Whyte, pers. comm., 2001).

⇒ Arrangements for financial disbursements need to be negotiated so that there should not be a funding gap. This is best achieved by adequate funds being advanced to cover expected costs for several months beyond the reporting period.

6.3 Engagement of the private sector

Partnerships between business, government or NGO sectors can be important to: reduce production impacts and move towards sustainable production; to improve natural resource management; and to promote socioeconomic development and self reliance.

PIDS' have had limited experience of partnerships with the private sector. In part this is due to the small and undeveloped private sector, and in part because support has been available through conventional donors. Examples of private sector engagement include;

- Symbiotic relationships between bungalows, lodges and resorts and owners of sites of interest to tourists. In some cases tourist operators directly contribute to resource management costs. The dive tourism industry has many examples of this kind of relationship.
- Donations toward environmental activities from business houses. These are often small contributions in-kind or through technology support, rather than cash.
- Substantial sponsorship brokered through influential external partners e.g. provision of vehicles through a TNC sponsorship agreement with manufacturers, Chevron's sponsorship of WWF to manage the Kikori Basin ICAD.

The PNG Dive Association (PNGDA) provides a model of private sector collaboration for conservation, in the marine sector.

In Madang Lagoon, PNGDA collaborates closely with Wetlands International (WI). WI provides training in marine conservation and minimum impact diving for PNGDA, which in turn provides tourists of benefit to the communities that WI works with.

Jais Aben resort, PNG, provides a modest base for Wetlands International in PNG.

The environment officer of PNGDA has installed safe moorings around PNG and conducts education activities. He carries marine conservation information to dive centres, tourists and scattered villages.

PNGDA also has collaborative relationships with TNC, Mahonia Na Dari, and may involve dive operators and tourists in reef monitoring.

Fry et al., 2000, p.159.

- More conventional business relationships through the marketing of products or services provided through income generating activities (e.g. businesses in the supply chain for butterflies, nuts, oils, eco-certified timber and other products.).

A recent initiative in Guam is the Micronesia Conservation Society. This was formed by businessmen with the aim of getting the business community involved in all aspects of environmental management. Their first activities have been to raise awareness of environmental issues such as waste. One example has been placing information on the back of place mats and menu cards in food outlets (M. Ham, pers.comm., 2001).

A more unusual engagement of the private sector is the work of the International Marine Alliance to address destructive fishing practices in Asia, and now also in the Pacific. The project has targeted diverse elements within the supply and demand market chain. One component of this work has focused on the market sector: it has sought to influence the markets and merchants in Asia, and includes testing fish samples for traces of cyanide poison (Fry et al., 2000). It has some parallels with work to develop eco-certification for the ornamental fish trade and rainforest timber trade.

Gaps

Even in an international context, experience of cross sectoral partnerships involving the private sector remain limited. While there is growing anecdotal evidence of their benefits there is much to learn on how to structure, manage and replicate them (de Larderel et al., eds, 1994, p.11).

Lessons learned

⇒ Businesses may look for a market benefit to come from their engagement in conservation, perhaps in the way users of Tagua nut buttons (see text box) are authorised to use a conservation story in their promotions. If you want to engage the business sector, consider how you in turn will be giving a benefit to them and build this into your agreements.

⇒ Successful business partnerships have much in common with other conservation partnerships. From an evaluation of 16 partnerships in diverse countries de Larderel et al. (eds) (1994) listed six factors for success:

a) Strong leadership and vision;
b) Clear focus and purpose based on mutual and tangible benefits;
c) Agreed management structures and systems that include operational and decision-making guidelines, processes for conflict resolution and systems to review and evaluate progress;
d) Open and transparent communication;
e) Equality of contribution and accountability in the process of partnership building and decision making, even though partners have different skills, resources and activities within the partnership; and
f) Local applicability and capacity for the technologies, finances and management solutions brought to the partnership by business or international partners.

Conservation International's Sound Environmental Enterprise Development project started in Ecuador marketing buttons from Tagua nut. It has expanded into 20 products in 8 countries. The project has worked through various partnerships to address supply and marketing. Conservation International developed a licensing agreement for Tagua buttons. Button manufacturers and distributors ensure that all their disks and buttons come from the project site and pay a small royalty to CI, which supports the marketing initiative. In exchange they are given marketing rights to use the trademarks and ecological story in their sales.

de Larderel et al., (eds) 1994.

Exemplary practice:

👍 PNG Dive Association's collaboration for marine conservation in Papua New Guinea (see text box p.52). depends on layout.

👍 Conservation International's (CI) *Sound Environmental Enterprise Development programme has created opportunities for conservation and economic development through trade in biodiversity products* (de Larderel et al., (eds), 1994). A younger initiative employing a similar philosophy is FSP Vanuatu's *Island Palm Products*.

👍 While it is too early to fully recommend this initiative, the business leaders who formed the Micronesian Conservation Society have a great new concept in the Pacific. It may have potential to be replicated elsewhere to secure involvement from the local business sector in environmental work.

6.4 Capacity building strategies

Capacity building is a broad term that can encompass many activities, and that can mean different things to different people. Similarly there are many approaches to capacity building, from the social perspective that has grown through community development work to the organisational systems and financial management approach promoted by TNC.

In the context of participatory resource management activities communities, resource users and owners need capacity to:

- Understand,assess and address conservation threats and impacts on their lives;
- Clarify tenure and user rights (e.g. PNG marine tenure documentation) and the relationships that define resource use (Fry et al., 2000);
- Build the effectiveness of organisations and institutions (Fry et al., 2000);
- Understand and participate in resource management decisions that affect their lives; and
- Take responsibility for sustainable resource use.

Strong local organisations that can sustain conservation activities are recognised by international NGOs as a precondition for success (Fry et al., 2000, A10; Sutherland, 2000). Organisational strengthening, networking and partnerships have been key avenues for building this capacity.

Local capacity-building requires donors and external stakeholders to adopt management systems that: accommodates and builds on local needs and strengths; simplified processes; less onerous or alternative reporting requirements and use of local languages. On the other hand it requires enabling programmes that increase the confidence and capacity of in-country organisations to meet external requirements such as financial accountability, transparent management systems, critical analyses and adaptive management.

Far more has been done to mobilise local capacity in countries such as Indonesia and Philippines than in PIDS, and useful lessons come from this experience.

In the Philippines and Indonesia the University of Rhode Island – Coastal Resource Center (URI-CRC) recruits local staff for their facilitation, organisation and management skills, then provides "on the job" training in biological sciences. In its coastal resource management program in Indonesia URI-CRC has two broad foci. A local level component addressing good practices for sustainable fisheries, including institutional strengthening. A second component focuses on improved policies at national and provincial level, strategic planning at provincial and local level, and dissemination of lessons and replication of good practices.

Kemala in Indonesia promotes organisational self assessment, peer assessment and cross training between organisations (see section 2.3) and has been instrumental in building the capacity of in-country conservation NGOs.

Organisational assessment tools have also been developed by The Nature Conservancy (TNC) in Latin America. These take an institutional capacity approach that is now being introduced to the Pacific. TNC's capacity building specialist is working closely with the Palau Conservation Society. A regional course in financial planning for sustainability was conducted in 2001 in association with FSPI.

Engagement of staff, board members and general members in strategic planning has also been an effective tool for strengthening organisation structures and leadership (Fry et al., 2000).

Mobilisation of local capacity in PIDS has been more limited than in Asian countries. Limiting factors include: the small economic bases of most PIDS; the small pool of people with management, community development and conservation expertise; and, with exception of PNG, the relatively small number of civil society organisations active in resource management work. SPREP has been a leader in promoting environmental capacity building at government and local levels in the Pacific, through specific training programmes, workshops and within many of its projects. International conservation NGOs, such as WWF, TNC and CI are also active in capacity-building, often focused on the needs of local partner organisations and communities at project sites. The impact of this work appears not to have been monitored or quantified.

Stakeholder capacity is critical to effective conservation.

A discussion with staff of the Vatthe Conservation Area, a SBPCP site, suggested:

- SPREP lacked capacity (staff time, appropriate focus) for the management role it came to fill, and could not always attend to in-country needs in a timely fashion.
- The lead agency, the Vanuatu Environment Unit, lacked capacity (staff, budgets, commitment and skills) to fill the role envisioned for it.
- No-one in the partnership had capacity (time, skills) to analyse and address the root causes of problems.
- No-one had the capacity to attend to internalising capacity building in the host community.

J. Whyte, *pers. comm*., 2001

Inadequate management and financial capacity in in-country organisations and community based organisations is visible in their high mortality rate.

Capacity building initiatives should be monitored to ensure they are beneficial.

Many organisations in PIDS have small staff complements. The number of regional "capacity building" initiatives leading to repeated absence of staff may reduce capacity rather than enhance it.

Conversely the networking and information collaboration seeded at regional meetings is important.

Institutional self assessment can assist in determining capacity building needs … Facilitated self assessment is often more objective and NGOs can assist each other with this process.

Fry et al., 2000.

Gaps

⇒ There has been no monitoring or comparative impact studies of different capacity building initiatives in the Pacific.

⇒ There appears to be under-used opportunity for cross-training between institutions, organisations and individuals, within the Pacific.

Lessons learned

⇒ For effectiveness, it is important to establish baselines and monitor the impact of capacity-building initiatives.

⇒ Improved conservation and development results requires capacity building at all levels: local, NGO, government, and regional institutions (Fry et al., 2000).

The Pacific Islands Association of NGOs (PIANGO) has launched the Unitech (NZ) Graduate Diploma in Not for Profit Management.

Studies are completed on the job through a mix of intensive 1 week (usually in-country) courses, readings and assignments. Successful completion of core and elective subjects over several years leads to a formal management qualification with international recognition.

⇒ Diverse technical capacity can be brought to community based initiatives at low cost through networking sites to university researchers or research programmes (Fry et al., 2000).

⇒ Funding, in particular the lack of adequate financial resources, is the most mentioned capacity problem for in-country organisations and government agencies. Networking with international and regional organisations with better access to international funding is one solution (Fry et al., 2000) but may be perceived to undermine local independence. Clearly defined relationships may manage this threat.

⇒ Visualising, designing and linking conservation projects as *learning portfolios* provides for on-going informal learning and capacity building of local, national, government and international partners (Salafsky and Margolius, 1999).

Best practice examples

👍 Padaidos islands, Irian Jaya, Indonesia. Two local NGOs and WWF Indonesia have maintained a flexible facilitation and capacity building role that has assisted local communities to realise conservation of resources through monitoring and self-management.

👍 Kemala in Indonesia, links NGOs for collaborative capacity building, self assessments and cross-training.

👍 University of Rhode Island's Coastal Resource Management Program, Indonesia (and Philippines) has institutional programmes in programme management, fiscal management and responsibility, and adaptive management.

👍 Pacific Islands Association of NGOs / Unitech Graduate Diploma in Not For Profit Management (see text box previous page or www.unitech.ac.nz).

👍 TNC has training programmes in institutional and financial capacity building.

Useful Tools

- Salafsky and Margolius, 1999. *Greater than the sum of their parts: designing conservation and development programmes to maximise results and learning*. Salafsky and Margolius also have information on learning portfolios on the Foundation of Success web site: www.fosonline.org
- Model capacity needs assessment and strategies for cross training between NGOs, have been developed by Kemala, Indonesia.
- URI-CRC's coastal management institutional development models developed in Philippines and Indonesia.
- TNC's institutional capacity-building tools developed in Latin America.

7. Key lessons for the IWP

This final chapter summarises the key lessons that emerge from this review of participatory and integrated watershed management initiatives and that could provide guidance to the IWP in the implementation of pilot projects.

IWP pilot projects will address sustainable resource management and conservation issues in PIDS in one or more of four programme areas, marine protected areas, sustainable coastal fisheries, freshwater resources, and waste management. Most will be cross sectoral, and it is anticipated all will require stakeholder participation and some form of collaborative management. Consequently, while this report has focused on freshwater watersheds, many of the participatory resource management lessons will be relevant to all programme areas.

Six principal lessons are highlighted in this chapter. These lessons apply to resource management activities that involve multiple stakeholders, and are addressed through collaborative or co-management models that enable a high level of stakeholder participation. Jointly they provide a guide as to what is currently considered good practice, although they will not in themselves guarantee success within IWP demonstration project. The lessons are:

- Embrace tensions and conflict;
- Build capacity;
- Adopt flexible and responsive management styles;
- Learn from experiences and help others to learn;
- Build model intra- and inter- organisational relationships; and
- Make realistic commitments.

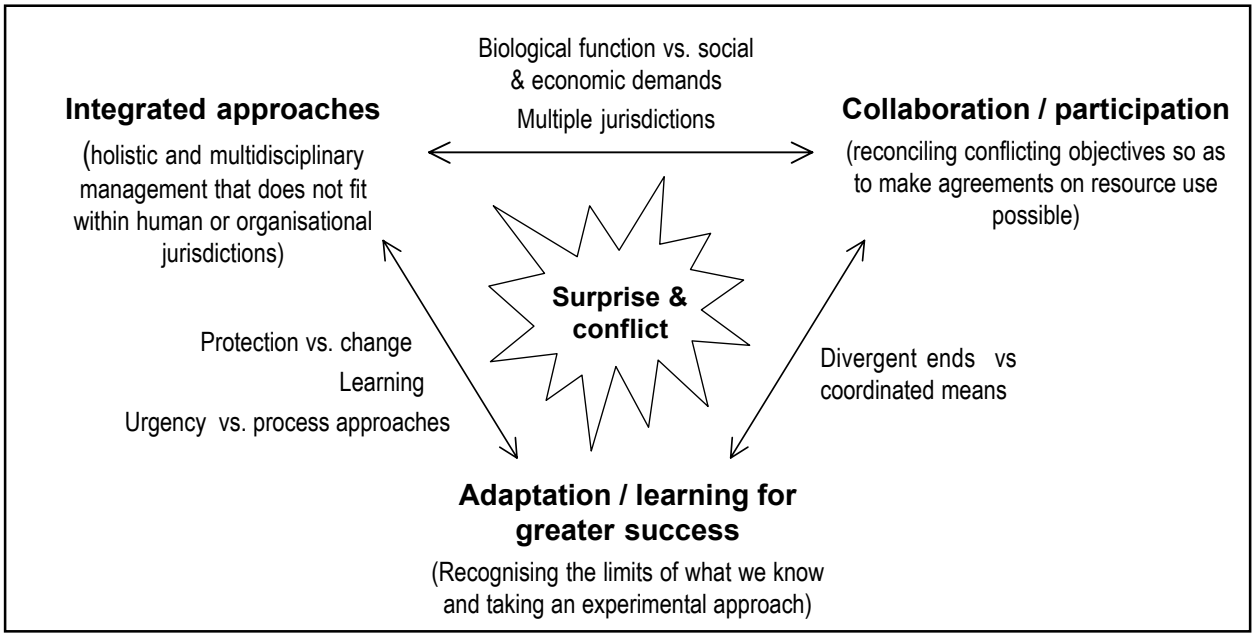
7.1 Embrace tensions and conflict

Watersheds are characterised by complex social and ecological situations that require solutions based on integrated approaches, stakeholder collaboration and adaptive learning. This complexity is manifested as multiple ecosystems, supporting diverse productive systems and environmental services, and many stakeholders. It is unlikely that all productive systems, environmental services and stakeholders' aspirations are fully compatible. Consequently, management of watersheds presents structural challenges.

Lee (1999, p.13) suggests that the over riding theme of resource management activities in complex contexts will be surprise and conflict, tensions between different stakeholders, tensions over different, at times conflicting, goals, conflicts within and between institutions and systems of authority, uncertainty over the best programme of activities to generate success and challenges in reconciling social, natural science and economic inputs. These are presented visually in Figure 5 below. Where conflicts are apparent, many scientists and resource managers tend to be wary: "Why look for hassle when there is all that uncertainty" (ibid. p.13). However in situations of high environmental values, it may not be appropriate to walk away from the uncertainty and potential conflicts.

Two strategic approaches commonly guide responses to resource management issues in situations of competing demands, tensions and conflicts: planning and conflict reconciliation. Planning seeks to establish a strategic programme of activities that will lead toward an acceptable outcome. The planning process often indirectly identifies opportunities for cooperation that were previously hidden, while also illuminating some of the disagreements. Planning is iterative and can progressively lead to more appropriate solutions. Reconciliation looks to negotiated settlement to identify initial objectives that are agreed upon even though stakeholders do not necessarily agree on the 'big picture'outcomes. Experiential learning from these initial activities can lead to on-going initiatives to progressively achieve outcomes (Lee, 1999). Natural science, social science and economics are tools that can inform both planning and reconciliation processes, but lead neither.

Fig 5 Structural challenges for watershed management (adapted from Lee, 1999)



IWP demonstration projects should be based on the premise that uncertainties and conflicts will be present and will arise during the resource management processes. Project staff should be equipped with skills in conflict resolution and mediation, and in planning and reconciliation. Given the limited experience in conflict resolution within a resource management context in the PIDS, monitoring and learning from conflict situations and promoting these lessons, would be a valuable outcome from the demonstration projects.

7.2 Build capacity

There is limited participatory resource management capacity in PIDS at local, organisational and national levels. At a local or village level traditional community structures are often weak, skilled individuals tend to have been drawn to urban areas, there is limited access to information and there is limited knowledge of alternatives. At island, province or national level, organisations have limited finances, few resources and few staff. Many have weak organisational structures, inadequate or weak management systems, limited access to information, and limited knowledge of alternatives. At a national level authority systems may be poorly developed, ill-defined or ineffective, there is only a small number of skilled individuals, there is limited experience of participatory or integrated resource management approaches; extremely limited financial and technical resources; and possibly political reluctance.

Demonstration projects such as those proposed for IWP are well positioned to have a strong capacity building impact. Capacity building initiatives could target diverse stakeholders and address a wide range of needs, often indirectly enabling sustainable resource management rather than directly targeting the IWP thematic areas. Potential capacity building opportunities include the following:

- All stakeholders in IWP demonstration projects might benefit from enhanced skills in: conflict resolution; participatory socioeconomic analysis; planning; monitoring; and adaptive management. Many in-country partners may also benefit from strengthening in areas such as project definition and reporting;
- Institutional capacity at a national level might benefit from: policy development and legislation; baseline inventories and ongoing monitoring programmes; enforcement capabilities; strengthened cross-sectoral cooperation; diverse organisational management skills; and more sustainable funding bases;
- Institutional capacity for NGO stakeholders might benefit from sustainable financing and strengthened financial management; strategic planning and management skills; and technical skills in terrestrial and aquatic conservation; and
- Capacity for local stakeholders might be strengthened in areas such as: governance; financial accountability, sustainable resource management and capacity to recognise and benefit from sustainable economic opportunities.

Significant new investments in coastal conservation are expected over the next few years in some PIDS, and Papua New Guinea especially (Mangubhai (ed), 2001). Concern has been expressed that in-country agencies and systems lack the capacity to effectively absorb this possible increase (ibid.). SPREP is well placed to take a lead role in building collaborative approaches for coastal resource management, so as to minimise negative impacts and maximise success, and provide a framework where common issues and learning experiences are shared. The IWP demonstration projects provide one context for realising such a leadership role.

7.3 Adopt flexible and responsive management styles

A fundamental lesson has been that there are many roads to success – and even more leading away from it (Biodiversity Conservation Network, 1998, p. 5). The path that any group or resource management activity will follow depends on their starting point, their goals, the changing conditions at the site and the conditions in the broader social, political and economic context in which they are operating (ibid.). Often the final achievements may be quite different to those initially envisaged.

If following current best practice IWP needs to adopt a process approach to integrated resource management, fully involving key stakeholders in design and implementation, and employing flexible and responsive management philosophies. Adaptive management may be considered by some an optimum management approach, but it may not be realistic in some PIDS in the short time-frame available to the IWP given the limited capacity and experience to date as well as the complexity and scientific rigor it requires.

Full participation of local and in-country stakeholders requires time, resources, and enabling conditions. IWP will need to identify appropriate staffing, timeframes and budgets to supportively create these conditions.

Demonstration projects are more likely to achieve their goals if they are initiated as small simple activities that are within the institutional and individual capacities of in-country stakeholders. Initial successes can provide a foundation for local capacity building and progressively larger successes.

7.4 Learn from experience and help others to learn

A learning portfolio approach might maximise the benefit of IWP to PIDS. It has potential to maximise opportunity for evaluation, cross-training, discussion and learning through doing. It may also help to institutionalise monitoring (not only of conservation outcomes, but of information and education strategies, policy interventions, and stakeholder relationships) and help build adaptive management capacity.

Learning portfolios could be structured by IWP on a thematic or subregional basis. It may not be appropriate to include every project in the one learning portfolio. Some thematic gaps identified in this report that it may be fruitful to consider include:

- The impact of intra-community dynamics on participatory resource management processes and outcomes;
- Application of conflict mediation tools;
- Factors that move people to accept and exercise environmental responsibility and stewardship; and
- The social impacts of participatory resource management on stakeholder groups.

In this context SPREP could further provide a useful link between in-country programmes, the IWP and other learning portfolios for information sharing purposes.

Baseline assessments and thorough documentation are fundamental if learning is to be maximised. The data that might be gathered through social and environmental inventories, would be supported and enhanced by the strategic compilation of video footage, still photos and personal reflections from the very start of demonstration project activities.

Extension and information sharing activities should be strategically planned, meet the needs of diverse stakeholders (not only perceptions of SPREP or lead agencies) and be field tested prior to production and wider circulation.

7.5 Build model intra- and inter- organisational relationships

Experience suggests that organisational relationships are important within collaborative resource management activities, and that effective relationships can be important factors influencing resource management success.

IWP, in its middle-man role of programme manager and intermediary donor, is in a position to demonstrate to others in the region best practice organisational relationships and collaborative structures. This could include demonstrating to others effective donor involvement, local and in-country management responsibility and innovative links with the private sector.

Strategies toward this end include: clearly identifying and formalising the roles and responsibilities of project partners, building itself a legitimate role within each demonstration project that is empowering to others; and setting in place systems to monitor partner relationships.

7.6 Make realistic commitments

A final lesson for the IWP demonstration projects is a brief one. Sustainable conservation and development initiatives at a community level in the Pacific requires a long term perspective. There will be important work involved in creating enabling situations and building capacity within communities and within in-country government and NGO organisations. This will create a foundation for long term sustainability, but long-term sustainability itself is likely to be a more distant goal.

Consequently IWP must be realistic about what can be achieved in the timeframe for which it has secured funding. Care should be taken not to create unrealistic impressions and expectations. Initial goals should be modest and achievable. They can be progressively built upon for greater success.

8. Conclusions

The term 'best' in the context of 'Best Practice' may be taken to imply that there is a single optimum method or approach. For integrated and participatory watershed management this is not the case. There is no single best method, no single solution and much yet to be learned about sustainable solutions to resource management problems. What constitutes good practice will vary according to starting point, goals, changing conditions at the site and conditions in the broader social, political and economic context in which work proceeds.

There are several tools that can be employed to maximise effectiveness in dynamic and complex situations. These include:

- Collaboration between multiple stakeholders;
- Full involvement of local stakeholders;
- Holistic integrated approaches;
- Adaptive and evolving plans and management systems;
- Planning and conflict mediation; and
- Information gathering, monitoring and repeated analysis.

These process tools need to be employed flexibly, and benefit from a clarity of purpose, good leadership and local level resource stewardship. However, while these tools can help achieve conservation goals, they are not in themselves a guarantee of resource management success or sustainability.

The likelihood of success of collaboration and co-management of natural resources can be further enhanced through:

- Effective awareness-raising and education, directed toward garnering support and increasing the capacity of stakeholders at all levels;
- Fostering and creating enabling conditions both for collaboration between diverse stakeholders and for the realisation of conservation goals;
- Committing resources to maintaining and strengthening relationships between stakeholders and partners;
- Effective leadership at a community, organisation and programme level;
- Better management;
- Knowing the interests of stakeholders and the broader public and how well they are being met;
- Having a management committee that involves those with direct interests in resource management.

In reviewing the experience from participatory resource management activities in the Pacific and elsewhere, this report presents several opportunities to the IWP. Through embracing resource management tensions and conflict, building capacity within the region, demonstrating to others flexible and responsive management styles, taking a learning approach to project implementation; and demonstrating model intra- and inter- organisational relationships the IWP may be able to maximise its long-term impact on integrated resource management in the Pacific.

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Annex II: Contact list, including those who commented on the draft report

(The email or fax numbers of people contacted is included where known.)

Aaron Jenkins	Wetlands International aaron.jenkins@ea.gov.au
Abel Tapisuwe	FSP Vanuatu / FSPI atapisuwe@fsp.org.vu
Albert Williams	FSP Vanuatu/ Environment Unit fspvan@fsp.org.vu
Aketa Tiaon	CDPP Officer, FSP Abarao,Kiribati
Alifereti Bogiva	Fijian Affairs Board
Andrew Tilling	Consultant AJTilling@xtra.co.nz
Betsy McGean	TNC bmcgean@tnc.org
Bill Aalbersberg	USP aalbersberg@usp.ac.fj
Bill Raynor	TNC, Pohnpei braynor@mail.fm
Bob Curry	National Institute of Water and Atmospheric Research r.curry@niwa.cri.nz
Cedric Tutaki	NIUANGO (Fax: 683-4010)
Charles Kick	ESCAP drkick@vanuatu.com.vu
Charles Vatu	Vatthe Conservation Area vatthe@vanuatu.com.vu
Clark Peteru	OLSSI Chairman peteru@samoa.ws
Clive Carpenter	SOPAC Water Resources Unit Clive@sopac.com
Eita Metai	Ministry of Works and Energy, Kiribati
Erimeta Barako	FSP Kiribati fsp@tskl.net.ki
Filipe Rokovasa	OISCA, Fiji
Floyd Boy Robinson	FSP Fiji fspsuva@is.com.fj
Gerald Billings	FSP Fiji kanaproject@is.com.fj
Gerard Marquet	New Caledonia camille.marquet@freesbee.fr
Gilbert David	French Polynesia
Helene Takemoto	US Army Corp of Engineers helene.takemoto@usace.army.mil (PCB Contamination, Tanalag Village, CNMI)
Henry Vira	PIANGO piango@vanuatu.com.vu
Jo and Peter Walker	Wan Smol Bag Theatre jopet@vanuatu.com.vu
Joanna Axford	SPREP joannaa@sprep.org.ws
Joe Reti	SPREP joer@sprep.org.ws
John Roughan	SIDT jroughan@welkam.solomon.com.sb
John Stansfield	UNITEC Institute of Technology jstansfield@unitec.ac.nz
Joshua Craig	American Samoa EPA cosh_jraig@hotmail,com
Kath Means	Conservation Learning Company kmeans@internetnorth.com.au
Kath Shurcliff	Kemala kathsh@cbn.net.id
Katherine Yuave	FPCD, PNG katyuave@datec.net.pg
Kathy Fry	Consultant kfry@vanuatu.com.vu
Kilyali Kalit	PNG Country Manager, WWF wwfpng@dg.com.pg
Koroseta To'o	Past Director OLSSI Koroseta.Too@waitakere.govt.nz
Marilyn Gilmore	Counterpart Caribbean Programme marilyn.gilmore@sunbeach.net

Mark Renzi	Management Systems International Mrenzi@msi-inc.com
Michael Ham	Micronesia Conservation Society mham@ite.net
Mocelolo Saurara	Fiji Department of Agriculture
NT University	Wetlands Training Programme g.hill@banks.ntu.edu.au
Peter Thomas	TNC, Oceania Project peterejt@csi.com
Phillippe Gerbeaux	Department of Conservation, NZ pgerbeaux@doc.govt.nz
Pitasoni Tanaki	Hakupu Heritage and Cultural Park, Niue Fax: 683-4301
Rex Horoi	FSPI rhoroi@fspi.org.vu
Roger Jaensch	Wetlands International Roger.Jaensch@ea.gov.au
Ronald Lucas	FSP Fiji fspsuva@is.com.fj
Rudy Susurua	The Nature Conservancy
Seri Hite	WWF SP Program serihite@solomon.com.sb
Susana Tuisawau	Fiji Department of Forestry
Sylvia Troost	FSPI sylviatroost@yahoo.com
Tarita Holm	Palau Conservation Society pcs@palaunet.com
Tavale Lameko	Samoa envdlse@lesamoa.ws
Tinauare Taeuea	Senior Health Inspector, Ministry of Health, Kiribati

Annex III: Useful Web Sites

Organisation, Web Address and brief description

Biodiversity Support Program www.BSPonline.org

A US-AID funded consortium of the Worldwide Wildlife Fund for Nature , The Nature Conservancy and the World Resources Institute. Extensive range of publications that are available over the internet.

Biodiversity Conservation Network www.bcnet.org

A learning portfolio of the Biodiversity Support Program. Extensive range of publications are available over the internet.

Conservation Ecology www.consecol.org/journal

An electronic peer reviewed, scientific journal devoted to integrative ecological and fundamental policy research.

Forest, Trees and People's Programme and Network http://www.trees.slu.se

Foundations of Success www.fosonline.org

A network of individuals and organisations committed to furthering conservation practice through adaptive management and conservation learning portfolios. This network includes many of the key individuals who were associated with the BSP programme.

Institute of Development Studies, Sussex University www.ids.ac.uk

The Institute of Development Studies focuses on participatory methodologies or development. They publish PLA Notes, and support a reading room and training provision. Access to some of their information is available over the internet.

Institutional development tools www.innonet.org

Institutional assessment and development tools aimed at non-profit NGO type organisations.

International Institute for Environmental Development http://www.iied.org

An academic organisation at the forefront of participatory development. Their internet site includes access to an extensive reference collection.

Kemala www.BSPonline.org/Kemala

Kemala has assisted development of the NGO conservation sector in Indonesia.

RARE Center for Tropical Conservation www.rarecenter.org

RARE Center for Tropical Conservation is a US based NGO with a focus on training and technical assistance to assist conservation of rare and endangered species and ecosystems. Rare operates in two programme areas: Conservation Education; and Ecotourism and Community Development.

SIDSnet www.sidsnet.org

Information and databases on experts, institutions and topics relating to sustainable development in small islands developing states.

Small islands www.upwi.ca/~siin

Information network on small islands environment and sustainable development issues, including directories if organisations and sources, full reports and information.

Societe pour l"etude, la protection et l"amenagement de la nature dans les regions inter-tropicales www.scalp.fr/sepanrit

UNESCO Programme for Environment and Development in coastal regions and in small island states www.csi.org/wisepractices

Documentation from learning portfolio sites and access to publications.

Useful Web Sites: Organisation, Web Address and brief description

UNESCO Coastal Regions and Small Islands Unit http://firewall.unesco.org.csi/act

Includes documentation on a number of UNESCO supported or studied issues in the Pacific: e.g. Sa'anapu-Sataoa Project, Samoa and water resource conflicts in Tarawa, Kiribati. Also includes information from CARICOMP, a scientific study of the interactions between land and sea.

University of Hawaii,
Building Bridges with Traditional Knowledge www.botanu.hawaii.edu/traditionalknowledge/

Abstracts and information from an International Summit Meeting on Issues Involving Indigenous Peoples, Conservation, Sustainable Development and Ethnoscience. Over 700 participants discussed strategies for incorporating traditional knowledge into research, conservation and development projects.

University of Rhode Island Coastal Resource Center www.crc.uri.edu

US EPA Office of Water Oceans and Watersheds www.epa.gov/owow/watersheds

Experiences, lessons learnt and publications relating to participatory watershed management in USA.

World Conservation Monitoring Centre http://wcmc.org.uk

World Neighbours www.wn.org

A US based not for profit community development agency with a natural resources and environment portfolio. Publications are available through its on-line store.

World Resource Institute http://www.wri.org/watersheds

Watershed learning portfolio of the World Resource Institute

Annex IV: Glossary

Adaptive management	The term adaptive management comes from business management. It describes a systematic process of reviewing assumptions and operations, to effect improvements.
Alliance	A loose affiliation of organisations and individuals working toward a common goal. Alliances can be defined according to the number of organisations involved, and the relationship between the alliance members.
Amphidromous	A species that needs both freshwater and marine ecosystems. e.g. species that live much of their adult life in freshwater, migrate to marine areas to spawn, the larvae mature in the ocean and young return to freshwater to mature.
Awareness raising	Awareness raising refers to the dissemination of information, including marketing techniques, to build social acceptance and change people's attitudes.
Blue-print approach	A distinction is often made between a *blueprint* approach and a *process* approach to project design and management. The blue print approach involves reasonably fixed objectives and predetermined outputs with well structured implementation procedures. The process approach allows for flexible project designs that can develop as a project proceeds and lessons are learnt through experiences.
Capacity	Capacity is the ways and means needed to do what has to be done, **effectively, efficiently and sustainably.** Capacity is much broader than simply skills, people and plans. It includes commitment, resources and all that is brought to bear on a process to make it successful. Capacity includes the following components, people who are willing to be involved, skills, knowledge and abilities, community well-being, ability to identify and access opportunities, motivation and the wherewithal to carry out initiatives, infrastructure, supportive institutions and physical resources, leadership and the structures needed for participation, economic and financial resources; and enabling policies and systems. Its effectiveness is enhanced when constituents define their own needs and shape their own learning processes.
Capacity Building	Capacity building refers to an internalised process that enables individuals, institutions and communities to address components of capacity to improve their ability to do what they want to do. Capacity building is not something external interests can readily do or deliver in the absence of self motivation.
Collaboration	Working together.
Collaborative management	Situations in which multiple stakeholders work together to realise resource management goals.
Co-management	Management systems that are managed through partnerships or consortiums of multiple stakeholders. Co-management systems imply more formalised management structures and more clearly defined relationships and vesting of authority than is implied by collaborative management.
Community-based management	The vesting of all management authority and responsibility in local community members. Community-based management is rare at the watershed scale because of the diversity of stakeholders and diversity of management needs.
Community entry	Community entry refers to the initial contacts made between outsiders (project staff, government workers, expatriates or nationals from outside the project site) and members of the local communities. This takes place *before* any collaborative development or conservation activities are actually planned or launched. The time devoted to community entry can vary from a few hours to a few years.
Conflict	A situation in which there is a clash of interests or ideas.
Conservation	Resource management systems that are environmentally, economically and socially sustainable over the long term.
Conservation education	Education aims to (a) increase people's awareness of the value of natural resources and the ecological processes that maintain these; (b) show people threats to the well-being of their environment and how they can contribute to its improved management; and (c) motivate them to change behaviour in a way that leads to improved environment management.

Consortium	A consortium is similar to a partnership but includes three or more organisations working together on specific projects involving joint liability and joint decision making. The degree of responsibility and accountability depends on predetermined arrangements among the participating organisations.
Economics	Economics is the study of the use of resources for the production and distribution of wealth. Within a conservation or development project economic analyses help to ensure that human and financial commitments bring about the intended benefits. Further, many resource management activities seek to create specific economic results.
Enabling conditions	A policy, legal, financial, political, organisational and social environment that is conducive to allowing natural resource management goals to be fulfilled.
Environment services	The environment services provided by watersheds include maintenance of freshwater quality and flows, ecosystem functioning, water supply and storage, maintenance of biological diversity, maintenance of resource stocks; and energy production.
Extension	Extension is a tool to promote new behaviours and practices, not merely to pass information. It is usually initiated by an exchange of information from conservation interests to a particular community and from the community to the conservationists. This information must be related to actual local issues concerning natural resource management and be essential to making rational decisions. Scientific knowledge and practical skills may be passed on to the community while local knowledge and skills are passed from the community to the conservation team. The two-way communication should be followed by joint action aimed at solving mutually identified problems. (Brown and Wyckoff-Baird, 1992).
Factor	Circumstance, fact or influence contributing to a result.
Income Generating Activities	Initiatives and project activities with the primary purpose of generating monetary income. In resource management activities income generating activities tend to focus on increasing the monetary income of some or all project stakeholders or on increasing the financial resources available for resource management activities.
Inside Outsiders	People initially from beyond a local community who through long term involvement and engagement with a community have earned respect, often becoming honorary members of the local community. Common examples are priests who have worked in a local community for long period of times, and expatriates who have married into a local community.
Integrated	The term ***integrated*** appears in this report in the contexts of integrated conservation and development, integrated watershed management and integrated coastal management. In all contexts the term refers to holistic approaches to mitigate the primary threats to ecosystems and human well-being with full involvement of stakeholders (US EPA WOW). In general integrated approaches need to be considered as a process and philosophy of work where-in the challenge is to develop, implement and adapt sustainable solutions to resource use problems and conflicts. Integrated approaches are not an activity or end in themselves. They are by definition multi-sectoral and multi-disciplinary. Integrated coastal management, integrated watershed management and integrated ecosystem management employ the same process approach, the same principles, and the same philosophy. Examples throughout this report may be drawn from the diverse contexts in which the approach has been applied.
Integrated Catchment Management	A process and integrated approach to the management of human resource use impacts on catchments to maintain environmental and human well-being. Five components of integrated catchment management include institutional mechanisms for participatory planning and management, strategic initiatives for education and awareness raising, targeted research and a monitoring system to track project progress, consolidating the legal basis for management and developing sustainable financing mechanisms.

Integrated Conservation and Development Projects	Integrated conservation and development (ICAD)activities aim to enhance the conservation of biodiversity by focusing on the social and economic needs of people living in nearby communities. ICADs represent a shift from traditional approaches to conservation to increased emphasis on promoting the participation of local resource users in conservation activities. Another term in wide use is Integrated Conservation Development Project (ICDP).
Inventory	An inventory compiles information descriptive of an ecosystem, and generally includes investigative steps to obtain more information. It is a prerequisite for conservation and management at a holistic level. It can assist in identifying conservation priorities, establish the basis for monitoring, promote awareness of sites and management issues, and facilitate exchange of information of information. The usefulness of inventories can quickly diminish if they are not updated.
Issue	Topic for discussion.
Knowledge, attitude and practice surveys (KAP)	Surveys of peoples knowledge, attitudes and practices are an analytical tool, usually administered through a questionnaire or interview, that seeks to document the links between peoples' practices with what they know and what they believe.
Learning portfolios	A learning portfolio is a network of projects that share three goals, implementing more effective conservation projects, learning about the conditions under which these conservation initiatives will be successful and why; and improving the capacity of members of the portfolio. The learning portfolio's net impact thus becomes far greater that the sum of the individual conservation activities. Learning portfolios will require staff and money to cover research and communication costs, perhaps a more restricted focus and a willingness to experiment and value failure.
Management	The systems, strategies and operations employed to attain set resource management objectives or goals or those individuals or organisations responsible for overseeing a management system. It is unavoidable that the term management is used in this report in multiple contexts: resource management, management systems, the management team, and management plans. Reference to the context in which the word is used is important to avoid ambiguity. For greater clarity management systems may be described by key characteristics, participatory, collaborative, adaptive and so forth.
Management Plans	Management plans, written or unwritten, detail the activities, rules or procedures through which management goals can be realised.
Managers or Management Team	The individuals or organisations responsible for a management system. In participatory natural resource management systems those stakeholders who are fully involved in resource management activities (or their agents or representatives) take responsibility for management, although this may be only a small proportion of stakeholders. At times management responsibility transfers from one set of stakeholders to another over a period of time.
Monitoring	The systematic collection of information to observe and describe a situation. In watershed management monitoring may relate to physical, chemical, social, economic or ecological conditions, and commonly seeks to observe and describe changes over time. Monitoring in an integrated conservation and development context encompasses the myriad human, political, social, cultural and contextual elements that are involved.
Outside Insiders	People from within the community who have knowledge and experience from interaction beyond the local level, through education, employment or other opportunity, but maintain family and community ties.
Outcome	Result, visible effect.
Participation	Stakeholder participation is the process whereby all the people and people's institutions with an interest in a natural resource base play a role in resource management decisions and the consequent activities which affect them.
Participatory Learning and Action	PLA (and a range of effectively similar techniques: PRA, MARP, CDA etc.) refer to a philosophy of development approach that facilitates local stakeholder responsibility for problem definition, action planning and implementation. This report uses PLA as the generic term to refer to this development approach.

Participatory Rural Appraisal	Is the name applied to a participatory learning and action (PLA) technique that has been widely used for development and natural resource management purposes. It facilitates local stakeholder responsibility for problem definition, action planning and implementation.
Partnership	A partnership involves two organisations that have agreed to work together to achieve a specific mutually beneficial goal. Partners share decision making, liability and information in their joint efforts.
Perverse incentives	Laws and policy regimes that inherently encourage landholders to practice unsustainable resource management. Examples include some tax regimes that favour unsustainable land and resource management practices, the failure to place an economic value on environmental services; and agriculture policies and extension services that emphasise large scale planting of commercial crops without providing advice on maintenance of the environment.
Process	The methods, decisions and activities that gradually progress between the start and completion of an initiative or project and through which an initiative or project is implemented.
Process approach	A distinction is often made between a *blueprint* approach and a *process* approach to project design and management. The blue print approach involves reasonably fixed objectives and predetermined outputs with well structured implementation procedures. The process approach allows for flexible project designs that can develop as a project proceeds and lessons are learnt from past experiences.
Rapid Rural Appraisal	Refers to the use of participatory techniques to gather information that is primarily used by a small group of, often external, stakeholders to define problems and develop action plans on behalf of all stakeholders.
Resource management	Resource management is the 'set of rules, labour, finance and technologies that determines the location, extent and conditions of human use of resources and consequently the rate of resource depletion and renewal". (Renard, 1991, p.4.) Resource management systems are ***participatory*** when they are established through the cooperative efforts of multiple stakeholders.
Social Analysis	Social analysis or social studies refers to the study and analysis of human social behaviour. Social analysis is concerned with how people and groups understand, order and value their social relationships and systems of social organisation. Within a conservation or development project social analyses help to ensure that human and financial commitments bring about the intended benefits. Further many resource management activities seek to create specific social results.
Social impact	The effects (both adverse and positive) on human societies: including social relationships, systems of social organisations, human well-being and value systems.
Social marketing	Social marketing refers to the tools used by marketing professionals to effect changes in social behaviour, whether to encourage more people to drink coke or to reduce littering.
Socio-economic	Socio-economic is used in this report in the sense of information sets, factors or processes that include both social and economic dimensions. The foci of much socio-economic work are the relationships of authority and subordination within a society, and the access to, use of and control over social, economic and environmental resources.
Socio-economic analysis Analysis of socio-economic factors	Integrated watershed management occurs within a social and economic setting. It seeks to influence resource use and management. Consequently social, economic and socio-economic factors are important considerations within resource management planning.
Stakeholder	An individual or group with a direct interest in the use and management of the natural resource base. Stakeholders can include local resource users and owners, people with user and owner rights but living elsewhere, government officials, extension workers, representatives of industry, indigenous and international NGOs and other groups.
Stakeholder analysis	Identification of all groups and individuals who may have an interest or be directly or indirectly affected by resource management changes, and analysis of their practices, responsibilities, interests and relationships.

Sustainable	Resource management systems that can be applied indefinitely without detracting from the capacity of the resource base to meet needs of future generations.
Stewardship	Stewardship refers to the commitment, capacity and authority to manage the use of resources in a sustainable manner.
Threat reduction approach	Threat reduction assessment examines the ability of a project to achieve biodiversity conservation at a site by evaluating the area, intensity and urgency of each threat, as well as the degree to which all threats have been addressed by project activities.
Watershed	A watershed is the area of land from which all water, sediments and dissolved materials flow or drain into a common body of water
Watershed approaches	Watershed approaches to resource management focus on holistic and integrated measures to mitigate the primary threats to ecosystems and human well-being with full involvement of stakeholders (www.epa.gov/owow). In general watershed approaches need to be considered as a process and philosophy of work not a project or end in themselves.

Annex V: Sample project outlines

IWP requested three sample project outlines of one page each be appended to the main report. While not comprehensive, these draw upon the substance of the report to provide examples of the activities that might be appropriate within the demonstration project component of the IWP.

Sample one: Urban watershed management

Urban water supply is problematic throughout the Pacific. The historic approach of declared water protection zones has been ineffective in some locations, lack of capacity, lack of motivation, lack of direction, lack of authority. Issues to address are multi-sectoral; agriculture, freshwater fisheries, formal and informal human settlements, waste management (solid & sewerage), past clearing. Residents include squatters who have few alternatives and no investment in the water system, piped water does not reach their homes. Education and awareness will need to target water users as well as those who impact on the watershed.

Purpose	Outputs	Measurable indicators	Assumptions
Ensure reliable water quality and supply.		Water quality Sustainable water yields	• Quality problems are not intractable.
Objectives			
Use a participatory process approach to respond to deteriorating water quality & potential supply shortages.	Broad knowledge base Consensus policies & plans Changed behaviour	KAP survey Implementation of policies & plans Water quality / usage	• It is possible to change human resource use patterns.
Activities			
Education and awareness • With local school students & youth clubs set up an action research project focusing on the catchment. • Disseminate findings widely and in varying formats to local and urban stakeholders.	Research findings and multiple reporting formats.	Research findings and multiple reporting formats.	• Schools can accommodate a major action learning project within curricula. • Schools sufficiently close to, or within, the catchment • Findings from action research indicate that key issues can be addressed locally. • Findings from action research motivate local concern. • Small local actions achievable in the short term can be identified. • Action research and PLA work raises motivation to an appropriate level for a policy development forum to be established. • Forum activities can be held out of working hours and at decentralised venues.
Participatory planning • Use PLA with interested natural groups to develop action plans on a sub-catchment or locality basis. • Facilitate implementation of plans.	Local action groups formed and active. Local action plans implemented	Participation in local action groups Achievements against plans	
Policy Development • Form a stakeholder forum to identify broader strategic needs. • Set up smaller working groups to progress individual or thematic issues and report back to the forum.	Strategic watershed policy and action plan implemented Participation in working groups Outputs from working groups.	Participation in forum and working groups. Achievements against plans.	
Extension • Urban (demand & supply losses). • Peri-urban (informal settlements). • Rural (agricultural wastes, village needs etc.)	Decrease in wastage & loss. Improved sanitation and waste disposal Improved livelihoods Lower impact from rural activities.	Household consumption. Supply side wastage KAP survey. Health. Socioeconomic statistics. Water quality	• People can become motivated to change practices through tangible benefits.
Capacity building Separate initiatives targeting government, municipality, community and households.	Diverse capacity building activities	Capacity assessments	

Sample two: Rural watershed management

A village on the coastal stretch of a river is concerned about the frequency of health problems associated with water borne vectors, the declining catch of freshwater fish and prawns, increased turbidity, and die back of coral near the river mouth. From 'outside-insiders' they believe this is partly a result of their own resource management practices and partly a result of activities by others in the watershed. They have started to address their own sanitation practices, and have fenced their stock out of river banks. They have raised issues with the area chiefs' council, with a view to engaging up stream communities. There will be a need to change commercial activities for optimum effectiveness. Government agencies view the activity as a potential demonstration site to motivate similar activities in other locations.

Purpose	Outputs	Measurable indicators	Assumptions
Sustainable management of a rural watershed.	Environmental productivity & water quality maintained.	Presence & population of key species, health, turbidity.	• People can be motivated to change practices.
Objectives	**Outputs**	**Measurable indicators**	**Assumptions**
Improve sanitation practices. Reduce impacts from gardening, agriculture, forestry and livestock activities. Introduce environmentally sustainable income generating activities. Control invasive species problems	Improved toilet & rubbish management. Gardening, agriculture & livestock moved out of riparian zone. Replanting of degraded areas. Logging code of conduct followed. 6 income generating activities assessed and trialled and the 3 most suitable replicated.	KAP survey Toilet and rubbish pit location. Location of gardens etc. Vegetation cover in riparian zone. Logging practices. Families meeting their income needs.	• People can be motivated to change practices. • Potential income-generating alternatives exist.
Activities	**Outputs**	**Measurable indicators**	**Assumptions**
Education and awareness • Peer-to-peer awareness raising with nearby villages. • Demonstration sites/field days/ workshops.	Provision of opportunities for peer to peer awareness raising.	Events held and attendance.	• Existing institutions willing to take a lead.
Participatory planning • Village and area chiefs' councils provide an institu-tional base for planning. • Facilitate participatory planning & implementation.	Development plans that are meaningful and relevant to local communities.	Discussions and decisions at meetings. Existence of plans. Progress in implementing plans.	• Appropriate conflict resolution processes can reconcile conflicts between different groups. • Local communities have resource stewardship.
Income-generation • Assess resource base, markets & local interest to identify 6 options. • Provide advisory service to interested individuals. • Assist with supply side marketing linkages.	Reports that are meaningful and relevant to local communities. Provision of advice. Preparation of documentation (videos, pictorial etc.).	Progress in IGA trials. Market access. Income to participating individuals.	• Resource use opportunities and markets exist.
Gov't outreach • Document activities, successes and failures. • Demonstration activities	Holding of 5 activities annually.	Documentation Demonstration activities.	• Site is accessible and suitable for government demonstration purposes.
Capacity building Provide training, technical advise & networks.	Capacity building activities	Use of skills built.	• People are motivated to increase their capacity.

Sample three: Capacity strengthening for participatory watershed management.

A broad government planning initiative (e.g. BSAP) identified watershed management as a national priority. However to address this issue there is firstly a need to build capacity at a government, province(state) and local level. Issues to be targeted include planning, technical capacity (personnel and equipment), financial capacity (need for long term funding not just a four year project), and capacity to facilitate community commitment and action and resolve conflicts. Currently the legal and bureaucratic system separates water supply from broader resource management and waste and sanitation management, and there is a poor record of collaboration between different agencies. Major attitudinal changes will be required because water on and under the land is the property of the landholders, with no sense of water as a 'shared' resource.

Purpose	Outputs	Measurable indicators	Assumptions
Maintain watershed productivity and biodiversity.		Key biological indicators, water quality and flows, community well-being.	• Human activity patterns can be changed. Organisational systems can be changed.
Objectives	**Outputs**	**Measurable indicators**	**Assumptions**
Establish the capacity required for effective participatory watershed management.	Institutions at all levels demonstrate the technical, participatory and financial capacity to effectively manage watershed issues.	Capacity assessments at an individual or organisation level. Demonstrated use of capacity within work programmes. Decrease in scale or incidence of significant threats.	• Increasing individual and organisational capacity will create an enabling environment in which human use of watersheds can be addressed.
Activities	**Outputs**	**Measurable indicators**	**Assumptions**
• Inventory of freshwater and watershed resources. • Participatory development of a national watershed action plan and annual participatory reviews. • Interagency working groups tackle key issues (legislation, administration, sustainable resourcing, monitoring capacity etc.) • Participatory capacity assessments at an organisational level. • Social marketing training and pilot initiatives (with impact assessment for learning purposes). • In-country training through short courses and on the job training as appropriate. Demonstration community based and collaborative activities to enable 'learning through doing', and to form the basis of future extension activities.	Resource inventory. Pre planning capacity building with community and provincial participants. Provincial or island level planning workshops feeding into a national planning summit. Strategic action plan mandated at provincial level before being finalised. Adequate finances guaranteed for long term. Equipment or technical expertise available. Social marketing. programme. Capacity assessments. Training activities. 10 demonstration sites. Extension and learning portfolios based on experience gained.	Management and use of inventory data. Initial and project end capacity assessments. Comparison of the use & effectiveness of administrative and legal systems. KAP surveys.	• Community stakeholders can become more effective contributors to the planning process through pre-planning capacity building. • Institutional stakeholders and their staff motivated to improve capacity. • Administrative and legal changes will be supported if identified as desirable.

Annex VI: Key recommendations for integrated resource management

The following tables summarise the key recommendations listed by eight different publications. Although the numbers of recommendations in some varies between five and 13, and they address slightly different themes, there are clear similarities between the recommendations listed.

URI-CRC's 10 success strategies for Integrated Coastal Management **(From the Prospectus of the URI-CRC)**	**US-EPA Top 10 Watershed Lessons Learned** (www.epa.gov/owow/lessons)
Recognise that coastal management is essentially an effort in governance. Coastal programs follow a policy process where the challenge lies in developing, implementing and adapting sustainable solutions to resource use problems and conflicts. Work at both the national and local levels, with strong linkages between levels. Build programs around issues that have been identified through a participatory process. Build constituencies through public information/awareness programs. Develop an open, participatory and democratic process, involving all stakeholders in planning and implementation. Use the best available information for planning and decision-making. Good ICM programs understand and address the management implications of scientific knowledge. Commit to building national capacity through short and long term training, learning by doing and cultivating host country colleagues who can forge long-term partnerships based on shared values. Complete the loop between planing and implementation as quickly and frequently as possible, using small projects that demonstrate the effectiveness of innovative polices. Recognise that programs undergo cycles of development, implementation and refinement, building on prior successes and adapting and expanding to address new or more complex issues. Set specific targets and monitor and self-evaluate performance.	The best plans have clear visions, goals and action items. Good leaders are committed and empower others. Having a coordinator at the watershed level is desirable. Environmental, economic and social values are complementary and interdependent. Plans only succeed if they are implemented. A key element for implementation is charging an individual or organisation with the responsibility for follow through. It is also important to break things down to a manageable scale. Partnerships equal power and are essential to watershed work. Use good tools. Measure, communicate and account for progress. Education and involvement drive action. Build on small successes.

Larson et al., 1997. Ten recommendations for Integrated Conservation and Development	McNeely, 1995. Ten principles for successful partnerships
Ensure projects focus on biodiversity objectives. View integrated conservation and development activities as one tool within a regional conservation strategy. Seek consensus on conservation agendas among key interest groups. Address external factors. Provide support over the long term. Plan, monitor, learn and adapt. Build on what already exists. Clarify who controls what. Work in strategic partnerships and act as a facilitator. Generate economic benefits for local people.	Provide benefits to local people. Meet local needs. Plan holistically. Plan protected areas as a system. Define objectives for management. Plan site management individually, with linkages to the system. Manage adaptively. Foster scientific research – both natural and social sciences to assess basic ecological relationships and the dynamics of change, the needs of stakeholders, results of resource use or habitat manipulation etc. Form networks of supporting organisations including national, regional, and local government agencies, universities, landholders, NGOs, private businesses etc. Build public support.

Johnson and Walker, 2000. Factors crucial to successful development and implementation of participatory research and development.	Dacanay et al., 1999. Five criteria for exemplary practices in environment and sustainable development.
Formal analyses and interpretation of design considerations is necessary and fundamental. Capacity building within client and stakeholder groups is required if participatory approaches are to be successfully implemented in complex natural resource management domains. Rigorous and systematic *a priori* assessment of resource requirements is necessary to ensure the development of a robust and vigorous participatory process. Timely provision of adequate, appropriate and openly accessible technical support is essential to facilitate an equitable and efficient participation process. Skilled leadership and the support of 'champions' contribute to long term relationships amongst participants. Monitoring and evaluation needs to be rigorously implemented to both sustain the participatory process *per se* but also to allow the results of the process to have benefit in other related contexts.	Strong community orientation. Positive impact on resource regeneration and conservation. Heightening of social / ecological awareness and practice. Improvement in the Quality of Life of People and Communities. Serving a broader agenda of model building and policy reforms.

Motupore Conference recommendations: criteria for short term economic incentives within an ICAD project.	Lessons learned for community participation in natural resource management projects in Asia and the Pacific (Orr, 2000)
The project gives quick money, but not necessarily big money. The project benefits the whole community; facilitates education. The whole community contributes to and participates in the project. The project provides jobs (paid or unpaid). The project starts small and locally controlled, but can grow to be big. The project is structured to give community control over and access to, all needed information, and gives people the means to get that information (e.g., a telephone). The project does not deplete resources. The project builds trust between stakeholders and builds patience. The project does not build dependence. The project builds on local skills. The project builds, and expands on, those local skills and existing business opportunities. The project can last a long time. Any enterprise activities must have a market.	Consult communities from the outset. Select communities for participation on the basis of expressed interest. Build support amongst stakeholders for participatory approaches to implementation. Select a locally appropriate community unit for community mobilisation initiatives. Provide appropriate and phased training in community mobilisation. Develop trust. Provide mechanisms for community control. Strengthen community groups to carry on the work.

Annex VII: Some participatory watershed management activities in Pacific Island Countries

The following table lists participatory resource management activities that were discussed or reviewed during the consultancy and that include catchments or sub-catchments, or that relate in some way to watershed management. The list is not comprehensive. Watershed management may not be the prime objective of the resource management activity. Each member of the consultancy team provided information about the activities listed from their respective countries. Information was gathered through brief conversations with peers and colleagues in-country.

Activity	Objectives	Legal status	Key stakeholders	Notes
AMERICAN SAMOA				
Watershed Protection Plan. Riparian Habitat Restoration Program. Wetlands Restoration Plan.	Management of water resources.	-	Interagency Watershed Committee.	Some US EPA OWOW models used.
COMMONWEALTH OF NORTHERN MARIANAS (CNMI)				
Sabana Protected Area.	Wildlife habitat and only potable groundwater source for the island.	Legally designated a multipurpose protected area.	CNMI Division of Fish and Wildlife.	Gilman (1997) attributes management successes to community-based decision making, representation of all interest groups, multi-use management and coordination efforts by a neutral local government employee.
Kagman Conservation Area.	Protection of wildlife habitat.	Designated by law.	CNMI Division of Fish and Wildlife.	Gilman (1997) describes inadequate management of the area.
COOK ISLANDS				
Takitumu Conservation Area.	Biodiversity conservation, ecotourism and water resource protection.	Community managed area.	SPREP SPBCP, Conservation Area Coordinating Committee, Landowner families.	Encompasses 1 per cent of the forested land of Rarotonga, but provides a third of Rarotonga's drinking water. Insecure funding base for future activities (SPREP, undated a).

FIJI				
Vunia Forest Conservation, Vanua Levu.	Integrated initiative to protect water quality and conserve biodiversity.	In process of being formalised as a reserve.	Department of Forestry, Native Land Trust Board, Fiji Forest Industries, Department of Environment, Department of Fisheries. Four Mataqualis: Namoko, Nabunilagi, Tagituba and Naututu.	Started in 1998. Landholders expect compensation and may pursue logging if not compensated soon.
Wabu Catchment Reserve, Viti Levu.	Protection of forests, water quality and important timber species.	Reserve.	Naitasiri Provincial Office.	Started in 1992. Declaration as a reserve relatively easy as the catchment is isolated, only accessible by foot and involves only one landowner.
Organisation for Industrial, Spiritual and Cultural Advancement (OISCA) Children's Forest Program, Community Forest Development Program and Mangrove Replanting Project.	Environment restoration, awareness raising, prevent further degradation, promote watershed management by reforesting logged areas; and community development.	-	Six Provincial Offices, Department of Education, Ministry of Agriculture, Fisheries and Forestry, University of the South Pacific, WWF South Pacific Programme, SPACHEE, landowners and schools in project areas..	Started in 1993. Replanting activities affected by natural disasters. Primarily planting timber species: Pine and Mahogany. Ongoing planting and monitoring activities.
Baravi Kei Votua Project, Ba.	Flood mitigation and conservation.	-	University of the South Pacific and the Votua Qoliqoli Komiti.	A new activity that started in 2000 and is using participatory approaches.
Bouma Heritage Park, Tavern Island.	Conservation of biodiversity, forests and watershed through ecotourism based approaches.	Reserve.	Department of Forestry, Department of Town and Country Planning, Native Land Trust Board, Department of Environment, Fiji Museum, National Trust of Fiji, Landowners, Cakaudrove Provincial Council, Toko Tui Cakaudrove.	Commenced in 1988. Villagers currently responsible for administration. It took about 5 years before the communities took control and external assistance was reduced. Project financially and ecologically successful and stable.

FIJI- Continued

Savura Catchment Reserve, Viti Levu.	Conserve the Savura watershed (water source for Suva).	Reserve.	Department of Forestry, Native Land Trust Board, Department of Environment, Native Land Commission.	Held under government lease since 1930s. Has the support of some 75 per cent of the land owning unit. The political situation over recent years has affected landholders' interests.
FEDERATED STATES OF MICRONESIA				
Pohnpei Watershed Forest Reserve.	Watershed management and biodiversity protection.	Designated by law.	Pohnpei Conservation Society, The Nature Conservancy, Pohnpei State Division of Forestry, Pohnpei State Department of Natural Resources.	Set up under legislation in 1987 without community or landholder involvement. Gradual transition to participatory approaches.
Utwe-Walung Conservation Area.	Conservation of mangroves and wetlands.	-	Landholder villages, Conservation Area Coordinating Committee.	Linked with Kosrae Village Resort Eco-lodge. Community involvement and the slow pace of progress are seen as contributing to the success.
GUAM				
Ugum Watershed Restoration Project.	Prevent soil erosion through revegetation, promote awareness and public partnerships through education; and increase water deposit.	-	Water Planning Committee. Ugum Watershed Group.	Similarities with some US EPA OWOW approaches.
KIRIBATI				
Solar pumps for outer islands project.	To provide water supply from wells located at a distance from villagers, with wells covered and protected from environmental pollutants.	-	Ministry of Works and Energy, Water Engineering Department.	Rapid deterioration of pumps as villagers considered maintenance and repair costs the responsibility of the Ministry and because villagers lack experience to maintain or repair pumps. On going installations now accompanied by upfront community awareness and training.

KIRIBATI- Continued

Bonriki Island Water Reserve.	Water Resource Supply and Protection.	Leased and legally reserved.	Ministry of Works and Energy, Water Engineering Department.	Initial disputes between those living on Bonriki and the government and jealousies over compensation benefits from others in Tarawa. Situation largely resolved through legal mechanisms.
Sanitation, Public Health and Environment Project.	Increasing community involvement in the management of, and responsibility for, water resources and sanitation.	-	FSP Kiribati	Promoting water conservation, use of complementary water supply systems, instruction in the use of composting toilets and general environmental health and sanitation education.
Standard Sanitary Well Project.	Provision of standard sanitary wells and awareness on managing drinking water supplies.	-	Ministry of Health.	Initially all materials sponsored by an aid project. With end of the project communities now expected to contribute. Materials for repairs and maintenance not readily available on outer islands. Water resource protection standards (distance from toilets, control of livestock etc.) not always feasible on Tarawa.
NIUE				
Huvalu Forest Conservation Area.	Conservation of biodiversity and rainforest ecosystems.	Community conservation area.	Community Affairs Department, CASO, Conservation Area Coordinating Committee.	Perceived locally as a government project. Changes in the CACC composition in an attempt to capture and foster village interest, commitment and ownership.
Hakupu Heritage Area.	Biodiversity conservation and heritage sites.	Locally owned lands.	Hakapu Heritage Area Committee	Perceived as a local initiative.

PALAU				
Melekeok Watershed Management Plan.	Water resource management in Ngardok Lake, and marine conservation.	-	Ministry of Resources and Development.	
PAPUA NEW GUINEA				
Sepik Community Landcare Project.	Integrated conservation and development.	Custom owned lands.	World Wide Fund for Nature South Pacific Programme.	Initial difficulties in establishing focus given a broad objective and geographical area.
Kamiali Wetlands Wildlife Management Area.	Wetlands conservation and community development.	Custom owned lands.	Kamiali Community, Village Development Trust.	Encompasses freshwater catchment and marine wetlands.
Lakekamu River Basin Integrated Conservation and Development Activity.	Integrated conservation and development.	Custom owned lands.	Foundation for People and Community Development, PNG.	An area with high biodiversity values. Initial income generation proposals to provide facilities for researchers has metamorphosed into provision of eco-tourism facilities. Social development activities an important activity for the Foundation for People and Community Development.
Kikori/Lake Kutubu Integrated Conservation and Development Activity.	Integrated conservation and development.	Custom owned lands.	World Wide Fund for Nature, USA.	Unique in region due to link with Cehvron Oil., and consequent funding and resource base.
WWF Trans-Fly River	Integrated management of wetlands by customary communities.	Two Wildlife Management Areas and community lands.	World Wide Fund for Nature South Pacific Programme.	Includes the first PNG Ramsar Site “Tonda”. A young project with limited results as yet.

SAMOA				
Uafato Conservation Area.	Conservation of inshore marine area, littoral, lowland and upland forests.	Community conservation area.	Uafato Village, OLSSI, SPBCP.	Community request to OLSSI in 1991 led to SPBCP funding support in 1996. Strong sense of community ownership.
Vaisigano River Watershed Management.	Water resource management.	-	Western Samoa Water Authority and Department of Lands, Surveys and Environment.	Samoa's three major rivers are almost fully developed as water catchment and water pollution is a management problem. Initial proposals to expand watershed management to other areas appears to be delayed.
SOLOMON ISLANDS				
Solomon Islands Community Resource Conservation and Development Project (Marovo Lagoon).	Equipping landholding groups and resource owners to be primary conservation managers.	Locally defined marine and terrestrial areas. Terrestrial areas under custom ownership.	World Wide Fund for Nature South Pacific Programme. Thirty to forty landholder groups, village based communities, chiefs, community based organisations, Ministry for Agriculture and Fisheries, Ministry for Forests, Environment and Conservation.	WWF has valuable community conservation capacity-building experience from the eight years it has worked in this area.
Central Bauro , East Buaro and Hauta conservation areas Makira Island.	Integrated conservation in development activities with a focus on forest resources.	Locally defined and owned forest areas.	Solomon Islands Development Trust, Landholder groups and villages.	Three enterprises developed as conservation incentives on Makira Island were Ngali nut marketing, ecotourism and bee keeping.

Komarindi Catchment Conservation Area, Guadalcanal.	Water resource management, hydroelectricity generation, biodiversity conservation and cultural heritage conservation.	-	Custom landowner groups, Solomon Islands Government.	Unrest on Guadalcanal has affected activities. Present situation unclear.
TONGA				
Ha'apai Conservation Area	Biodiversity conservation.	-	Conservation Area Coordinating Committee, Ministry of Lands, Survey and Natural resources	Large area of 10,000 Sq km of ocean surrounding 62 named islands. Tree planting and giant clam farming are the only activities to date.
VANUATU				
Nagha mo Pineia Protected Area (sub-catchment).	Natural resource management and assertion of landholder rights.	Custom owned lands.	Chief Timothy Niapi, Wiawi Village, Malekula. Forestry Department (no longer involved).	Landholder has limited capacity to control resource users. Suggested ecotourism activities to generate income not successful due to remoteness of area and lack of communications.
Port Vila Water Protection Zone.	Protection of groundwater resources.	Defined in urban plans but legal management responsibility unclear.	Department of Physical Planning (responsibility unclear).	Encroachment of informal urban settlements and agriculture activities. However no clear management authority.
Vatthe Conservation Area (sub-catchment).	Managed use of forest resources and biodiversity conservation.	Custom land owned by villagers from Matantas and Sara Village.	CASO, Conservation Area Coordinating Committee, SPBCP.	Long term sustainability of project initiatives unclear. Objectives of local landholders differ from those of international programmes supporting the project.
Lolihor Watershed Project: strengthening local governance through increased access to land for sustainable human	Social development through improved land resource management.	Custom owned land.	Jerry Moli, Department of Lands Survey.	Project activities hav expanded beyond Lolihor watershed.