

Caribbean Natural Resources Institute
in collaboration with the
Tobago House of Assembly

**Participatory Resource Management Approaches
for Managers and Decision-Makers**

Week 2: Designing Participatory Institutions for Effective Management

Report

Introduction

The second week of the regional seminar *Participatory Resource Management Approaches for Managers and Decision-Makers*, which was held in Tobago, Republic of Trinidad and Tobago, from 22 through 26 January, had the theme of *Designing institutions for effective management*. The activity was a joint undertaking of the Caribbean Natural Resources Institute (CANARI) and the Marine Resources and Fisheries Department, Tobago House of Assembly. The seminar evolved out of a series of CANARI training courses, held roughly annually, which have explored the requirements for increased participation in the management of natural resources for sustainable development. This edition of the course sought to bring together active senior practitioners of participatory resource management for the purpose of developing, testing, and refining tools and methods for creating effective participatory resource management institutions.

Participants and Resource Persons

All participants in the first week of the seminar, which was held in Antigua in July 2000, returned for the second week with the exception of the participant from the Dominican Republic, who was unable to attend due to a schedule conflict. The breakdown of participants by country was as follows:

- \$ Anguilla (1)
- \$ Antigua and Barbuda (2)
- \$ Barbados (1)
- \$ Jamaica (5)
- \$ St. Lucia (3)
- \$ Trinidad and Tobago (3)
- \$ Turks and Caicos Islands (1)

Resource persons included three members of CANARI's staff and five persons, from the University of East Anglia, the University of the West Indies, and the Tobago Department of Fisheries and Marine Resources, who presented a case study on research they had carried out on stakeholder approaches to decision-making. A representative of the Natural Resources Systems Programme also joined the workshop for the week as an active participant. A list of participants and resource persons is attached at Appendix 1.

Funding

The seminar was funded through fees charged to individual participants. Sponsors covering these fees included:

- \$ Natural Resources Systems Programme, United Kingdom
- \$ Environmental Foundation of Jamaica
- \$ U.K. Department of International Development, Overseas Territories Unit
- \$ CANARI, through programme grants from the U.K. Department for International Development and the European Union.

Contributions to participant travel and accommodation costs were made by all the above agencies, as well as the Trees for Tomorrow Project of the Government of Jamaica and the Canadian International Development Agency, the Turks and Caicos Coastal Resources Management Project, and the Trinidad and Tobago Institute of Marine Affairs.

Objectives

The overall purpose of the seminar, as defined by the participants at the start of the first week, was:

To understand the requirements for designing institutional arrangements for natural resource management involving stakeholders that function effectively, and that result in effective management (understanding that 'effective' is a relative term that must be defined through negotiation among stakeholders).

At the conclusion of the first week, participants felt that they had made significant progress on understanding the requirements for designing effectively functioning institutional arrangements for participatory resource management, but needed to concentrate further on the requirements for effective management. This therefore became the theme for the second week of the seminar.

During the first session, participants reviewed the objectives for each day as suggested by CANARI in the agenda (see Appendix 2), and accepted them, in some cases with amendments. The amended objectives were used as the basis for evaluating each day's achievements.

Process and Content

The second week of the seminar employed a conceptual framework (Appendix 3) as the basis for its discussions throughout the week. The group regularly returned to the framework during the seminar, and modified it as their understanding of the issues evolved. In other respects, the process was similar to that employed during the first week. The seminar made extensive use of case studies from participants' work and small group exercises, thereby making practical contributions to the problems facing participants in the implementation of participatory resource management arrangements. Each day, different participants took on the roles of moderator, evaluator, and rapporteur. Reports of the evaluator and rapporteur were given on the following morning.

The first day began formally with an opening presentation from the Honourable Carlisle Dick, Secretary of Agriculture, Land and Marketing, Tobago House of Assembly, read by Mr. Gerard Keans-Dumas, Chief Technical Officer. Following introductions, each participant gave an update to the group on their experiences in participatory resource management since the first week of the seminar. Four participants presented more detailed case studies, which were used as the basis for small group exercises throughout the week.

The second day dealt with stakeholder approaches to resource management, using the case study of the Buccoo Reef Marine Park. The day started with a presentation on the Park and its management challenges. The team from the University of East Anglia then described the research they had undertaken there on stakeholder trade-off analysis. After they briefly described the methods they had developed, participants worked in small groups to apply them to different case studies. Participants were each provided with a copy of the manual prepared by the research team, *A trade-off analysis for participatory coastal decision-making*. In the afternoon, the group toured Buccoo Reef Marine Park in a glass-bottom boat, where they heard from representatives of some of the main stakeholder groups.

The following session dealt with the issue of monitoring management effectiveness. Participants grappled with the requirements for effective monitoring and evaluation and in small groups sought to develop plans for monitoring the achievement of management objectives, based on the case of the Soufriere Marine Management Area.

On the fourth day, participants examined issues of constraints, risks, and uncertainties, and how they could affect the achievement of management objectives. In plenary and small groups, participants sought to identify the constraints, risks, and uncertainties in some of the case studies that had been presented, and to design measures for addressing them.

On the final day of the seminar, participants revisited the conceptual framework and in small groups tested it on the case studies and reworked it in a variety of ways.

A more detailed description of the seminar's discussions and activities is included in Appendix 4.

Evaluation

The workshop ended with a group evaluation. The group felt that the seminar objectives would be most effectively met when skills and methods learned were applied to their work. They considered the conceptual framework to be a useful tool in understanding and analysing participatory resource management arrangements. Of the week's activities, the group found the sessions on the concepts of risk, uncertainty, and constraints to be most useful. They felt that the sessions on monitoring were particularly challenging and could have benefitted from additional time to develop tools.

Follow-up

Participants were keen to maintain the links with one another that were developed through the seminar, as well as to develop mechanisms to permit further collaboration. It was agreed that the group would continue to use the seminar e-mail list to share documents and information, and to explore the possibility, through CANARI and other organizations, of forming an e-group or a web-based information-sharing mechanism. Participants also raised the possibility of extending the seminar to a third session, which would intensively apply the learnings of the first two to the work of one of the participants.

Appendix 1

Participatory Resource Management Approaches for Managers and Decision-Makers

Week 2: Designing Participatory Institutions for Effective Management

Participants and Resource Persons

Dr. Neil Adger
School of Environmental Sciences
University of East Anglia
Norwich NR4 7TJ
UNITED KINGDOM
Telephone: +44 1603 593732
Fax: +44 1603 250588
E-mail: N.Adger@uea.ac.uk

Mr. Noel Bennett
Rural Sociologist
Forestry Department
173 Constant Spring Road
Kingston 8
JAMAICA
Telephone: 876 905-1270
Fax: 876 931-2856
E-mail: nbennett@forestry.gov.jm

Dr. Katrina Brown
Overseas Development Group
School of Development Studies
University of East Anglia
Norwich NR4 7TJ
UNITED KINGDOM
Telephone: +44 1603 457880
Fax: +44 1603 505262
E-mail: k.brown@uea.ac.uk

Ms. Judith Garland Campbell
Project Manager
Coastal Resource Management Project
Dept of Environment & Coastal Resources
Ministry of Natural Resources
Sam Harvey's Building
Providenciales
TURKS AND CAICOS ISLANDS
Telephone: 649 941-5122
Fax: 649 946-4793
E-mail: crmpgarland@tcway.tc

Mr. Neemedass Chandool
Ag. Assistant Conservator of Forests
Forestry Division
Long Circular Road
St. James, P.O. Bag 30
TRINIDAD AND TOBAGO
Telephone: 868 622-5214
Fax: 868 628-5503
E-mail: nchand@zdnetwork.com

Ms. Ijahnya Christian
Executive Director
Anguilla National Trust
P.O. Box 1234
The Valley
ANGUILLA
Telephone: 264 497-5297
Fax: 264 497-5571
E-mail: axanat@anguillanet.com

Ms. Gillian Cooper
Associate Director
CANARI
Cnr. Hillside Avenue and Ragbir Street
St. Augustine
TRINIDAD AND TOBAGO
Telephone: 868 645-8237
E-mail: cooperstubbs@tstt.net.tt

Mr. Hugh Dixon
Executive Director
Southern Trelawny Environmental Agency
#3 Grant's Office Complex
Albert Town P.O.
Trelawny
JAMAICA
Telephone: 876 610-0818
Fax: 876 610-0819
E-mail: dixon@cwjamaica.com
stea@cwjamaica.com

Dr. Marie-Louise Felix
Department of Fisheries
Ministry of Agriculture, Forestry and Fisheries
Government Buildings, Pointe Seraphine
Castries
ST. LUCIA
Telephone: 758 452-3983
Fax: 758 452-3853
E-mail: aquaculture@slumaffe.org
deptfish@slumaffe.org

Mr. Derrick Gayle
Projects Officer
Environmental Foundation of Jamaica
Seymour Park, Unit 27
2 Seymour Avenue
Kingston 10
JAMAICA
Telephone: 876 978-8652/6925/8518
Fax: 876 927-8126
E-mail: gayleforce2000@yahoo.com
efj.ja@cwjamaica.com

Ms. Tighe Geoghegan
Associate Director
Caribbean Natural Resources Institute
P.O. Box 644
Christiansted, St. Croix
U.S. Virgin Islands 00821
Telephone: 340 773-9854
Fax: 340 773-5770
E-mail: tighe@islands.vi
canari@islands.vi

Ms. Carla Gordon
Director, National Parks and Protected
Areas Unit
Natural Resources Conservation Authority
10 Caledonia Avenue
Kingston 5
JAMAICA
Telephone: 876 754-7543/44/47/48/49/50
Fax: 876 754-7595
E-mail: cgordon@nrca.org

Mr. Carl Hanson
Project Manager
Negril Coral Reef Preservation Society
P.O. Box 2725
Negril, Westmoreland
JAMAICA
Telephone: 876-957-3735
Fax: 876-957-4626
E-mail: coralreef@cwjamaica.com

Mr. McRonnie Henry
Chief Forestry Officer
Ministry of Agriculture, Fisheries, Land and
Housing
Temple & Nevis Streets
St. John's
ANTIGUA AND BARBUDA
Telephone: 268 462-1213
Fax: 268 462-6104
E-mail: mcronnie1@hotmail.com

Mr. Philmore James
Senior Fisheries Officer
Fisheries Division
Upstairs Grant's Wholesale
Perry Bay
St. John's
ANTIGUA AND BARBUDA
Telephone: 268 462-1372 (international)
462-6106 (local)
Fax: 268-462-1372
E-mail: abirole@hotmail.com
fisheries@candw.ag

Mr. Vijay Krishnarayan
Associate Director
Caribbean Natural Resources Institute
Trinity Heights Townhouses, Apt. D
Barcant Avenue
Maraval
TRINIDAD AND TOBAGO
Telephone: 868 628-8826
E-mail: vijay@trinidad.net

Ms. Lori Lee Lum
Community Education Officer
Institute of Marine Affairs
P.O. Box 3160
Carenage Post Office
TRINIDAD AND TOBAGO
Telephone: 868 634-4292
Fax: 868 634-4433
E-mail: lleelum@ima.gov.tt

Dr. Patrick McConney
Chief Fisheries Officer
Fisheries Division
Ministry of Agriculture and Rural
Development
Princess Alice Highway
Bridgetown
BARBADOS
Telephone: 246 426-3745
Fax: 246 436-9068
E-mail: patrickm@caribsurf.com
fishbarbados@caribsurf.com

Dr. Chris Mees
MRAG Ltd.
47 Princes Gate
London SW7 2QA
UNITED KINGDOM
Telephone: +44 171 5949883
Fax: +44 171 8237916
E-mail: c.mees@ic.ac.uk

Dr. Arthur Potts
Director
Marine Resources and Fisheries
Division of Agriculture, Land and Marketing
Tobago House of Assembly
P.O. Box 516, THL Building
Milford Road, Scarborough
TRINIDAD & TOBAGO
Telephone: 868 639-1382/4354
Fax: 868 639-1382
E-mail: artpotts@hotmail.com
acpotts@tsstt.net.tt

Ms. Keisha Sandy
Fisheries Officer
Marine Resources and Fisheries
Division of Agriculture, Land and Marketing
P.O. Box 516, THL Building
Milford Road, Scarborough
TRINIDAD & TOBAGO
Telephone: 868 639-1382/4354
Fax: 868 639-1382
E-mail: keisha_s@hotmail.com

Mr. Allan Smith
Research Scientist
Caribbean Natural Resources Institute
New Dock Road
Vieux Fort
ST. LUCIA
Telephone: 758 454-6060
Fax: 758 454-5188
E-mail: smitha@candw.lc

Ms. Emma Tompkins
Overseas Development Group
School of Development Studies
University of East Anglia
Norwich NR4 7TJ
UNITED KINGDOM
Telephone: +44 1603 457880
Fax: +44 1603 505262
E-mail: e.tompkins@uea.ac.uk

Mr. Ananias Verneuil
Forest Officer IV
Department of Forestry
Ministry of Agriculture, Forestry
and Fisheries
Castries
ST. LUCIA
Telephone: 758 450-2078
Fax: 758-450-2287
E-mail: verneuila@candw.lc

Mr. Kai Wulf
Soufriere Marine Management Area
P.O. Box 305, 3 Bay Street
Soufriere
ST. LUCIA
Telephone: 758 459-5500
Fax: 758 459-7799
E-mail: wulf@candw.lc
admin@smma.org.lc
Website: www.smma.org.lc

Appendix 2

Participatory Resource Management Approaches for Managers and Decision-Makers

Week 2: Designing Participatory Institutions for Effective Management

Preliminary Agenda

Monday, January 22

Introduction of conceptual framework

Objectives:

- \$ to agree on a conceptual framework for analysing the design and functioning of resource management institutions
- \$ to further develop the collective understanding of resource management institutions through the review of participant experiences

9:00 - 9:30 Opening and welcome

9:30 - 10:00 Brief updates from participants on their activities

10:00 - 10:30 Break

10:30 - 11:00 Review and confirmation of seminar objectives
Workshop arrangements and logistics

11:00 - 12:30 Conceptual framework: presentation and discussion

12:30 - 2:00 Lunch

2:00 - 3:00 Participant case studies (20 minutes each) and discussion

3:00 - 3:15 Break

3:15 - 4:30 Participant case studies and discussion

Tuesday, January 23

Participatory methods for setting objectives

Objective:

- \$ to review and refine methods for involving stakeholders in the definition of management objectives

8:30 - 9:00 Report and evaluation of Day 1

9:00 - 9:45 Balancing stakeholder interests and conservation requirements: plenary discussion

9:45 - 10:00 Break

10:00 - 11:30 Presentation of case study from the Buccoo Reef Marine Park and discussion

11:30 - 5:00 Field trip to Buccoo Reef Marine Park and lunch

Wednesday, January 24

Assessing management effectiveness

Objectives:

- \$ to review approaches to performance monitoring through case studies and analysis
- \$ to identify the characteristics of effective performance monitoring

9:00 - 9:30 Report and evaluation of Day 2

9:30 - 10:30 Introduction to performance monitoring (presentation and discussion)

10:30 - 11:00 Break

11:00 - 11:30 Case study: Soufriere Marine Management Area

11:30 - 1:00 Testing of methods for performance monitoring (small group exercises)

1:00 - 2:00 Lunch

2:00 - 3:30 Continued testing and small group presentations

3:30 - 3:45 Break

3:45 - 4:30 Identification of requirements for and characteristics of effective performance monitoring (small groups and plenary)

Thursday, January 25

Achieving effective management

Objectives:

- \$ to understand the factors, both within and external from an institution, that can affect its ability to achieve effective management
- \$ to identify the measures required to address such factors and achieve management objectives

9:00 - 9:30 Report and evaluation of Day 3

9:30 - 10:30 Introductory presentation, case study, and discussion

10:30 - 11:00 Break

11:00 - 12:30 Analysis of factors affecting management effectiveness in selected case studies (small groups)

12:30 - 1:30 Lunch

1:30 - 3:00 Small group presentations and discussion

- 3:00 - 3:15 Break
- 3:15 - 4:30 Identification of measures for addressing factors affecting management (small groups)
- 4:30 - 5:00 Small group presentations and conclusions

Friday, January 26

Conclusions and evaluation

Objectives:

- \$ to review the conclusions, outputs, and products of the seminar
- \$ to evaluate the seminar's effectiveness in meeting its objectives
- \$ to provide recommendations for future CANARI seminars and training activities

- 9:00 - 9:30 Report and evaluation of Day 4
- 9:30 - 10:30 Review and refinement of conceptual framework
- 10:30 - 11:00 Break
- 11:00 - 11:30 Review of seminar outputs and products
- 11:30 - 12:30 Overall seminar evaluation and formal closure
- 12:30 - 1:30 Lunch
- 1:30 - 3:00 Focus group on impact of CANARI training activities

Appendix 3

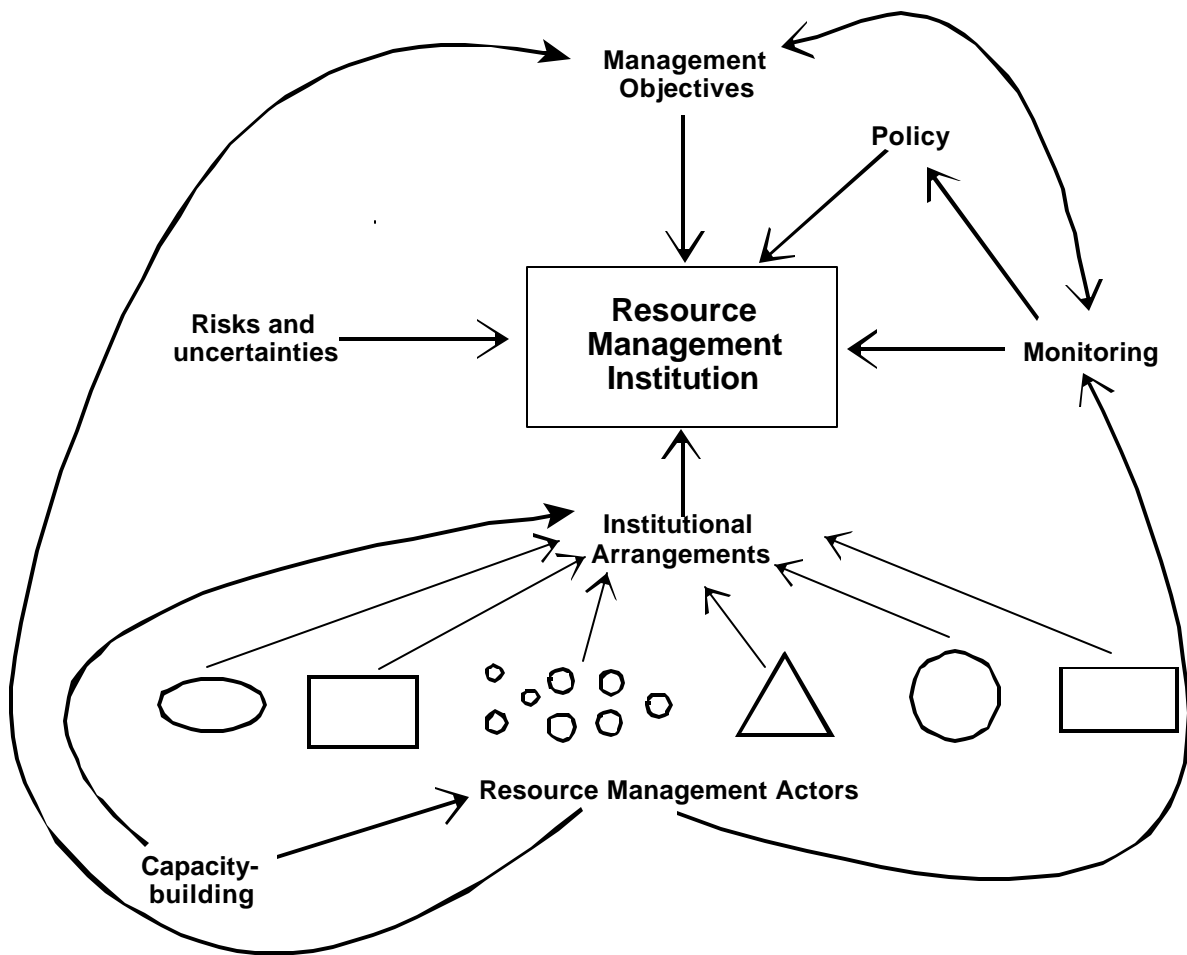
Participatory Resource Management Approaches for Managers and Decision-Makers

Week 2: Designing Institutions for Effective Management

Draft Conceptual Framework

Factors influencing institutional design

- \$ Management objectives
- \$ Policy environment
- \$ Management actors and their relationships
- \$ Communication flows
- \$ External factors/events
- \$ Monitoring, evaluation, and feedback



Appendix 4

Participatory Resource Management Approaches for Managers and Decision-Makers

Week 2: Designing Institutions for Effective Management

Synopsis of Discussions and Conclusions

Day 1

Following the formal opening of the seminar by the representative of the Tobago House of Assembly and participant introductions, participants briefly updated their colleagues on their work in participatory resource management since their last meeting in Antigua in July 2000. This session illustrated the increasing breadth and complexity of PRM initiatives in the region. Some of the activities participants have been involved in include:

- \$ a five year planning initiative to integrate participatory planning and management aspects into the development of the proposed Cockpit Country National Park in Jamaica;
- \$ stakeholder consultations to develop a zoning plan, with particular attention to the identification of nursery areas, for the Negril Marine Park in Jamaica;
- \$ a series of consultative meetings between government and landowners, business owners, and other stakeholders in the Portland Bight Environmental Protection Area in Jamaica;
- \$ a process involving stakeholders and led by the Forestry Department to develop a management plan for a palm species used in the production of brooms in St. Lucia;
- \$ stakeholder consultations on the development of a management plan for one of Antigua's marine protected areas;
- \$ the development of a new institutional arrangement for the Soufriere Marine Management Area, which involves all major management partners, both governmental and non-governmental, in a formal management partnership;
- \$ collaboration between the St. Lucia Fisheries Department and a coastal community on a project to develop a turtle watching ecotourism initiative.

The participants then revisited and confirmed the *purpose* of the seminar, which was defined during week 1 as to address the problem of how to develop sustainable institutional arrangements for natural resource management that a) function effectively and b) result in effective management, understanding that ~~effective~~ is a relative terms defined by negotiation among stakeholders.

Participants generally accepted the objectives suggested by CANARI in the agenda (see Appendix 2), but made the following changes:

- \$ objective for Tuesday: To review and refine methods for involving stakeholders in the process of developing and defining objectives and institutions;
- \$ first objective for Wednesday: To review approaches to performance monitoring and evaluation through case studies, analysis, and other means;
- \$ new objective for Friday: To develop and maintain linkages among PRM practitioners.

The draft conceptual framework for the seminar, which was prepared by CANARI, was then presented and discussed. This was the first of several sessions over the course of the week during which the framework was developed and refined.

In the afternoon, four participants made detailed presentations on work they were involved in, for use as case studies over the course of the week.

Dunn's River Falls, Jamaica. The Environmental Foundation of Jamaica (EFJ) has taken on the challenge of coordinating the development and implementation of a management plan and multi-stakeholder management arrangement for this nationally important site and its related watershed. It is however constrained by its mandate, which allows it to work only through non-governmental and community-based organizations. One option being considered is to support the development of a new NGO with the specific mission to facilitate the preparation and implementation of the site's management plan. In the discussion that followed the presentation, participants noted that the planning process was being affected, in a possibly unfavourable way, by the constraints under which EFJ operates.

Fisherfolk participation in fisheries management planning, Barbados. In the development of the national three-year fisheries management plan for 2001-2003, Barbados has been attempting a new approach whereby the planning process was started with and to some extent driven by the fishing industry. The establishment of the Barbados Union of Fisherfolk Organisations (BARNUFO) in 1999 made such an approach feasible by providing a basis for industry coordination. A series of consultations with fisherfolk identified key issues and actions to be addressed in the management plan. The process was generally considered to have been an effective one, but communication problems and inadequate information sharing exist at all levels (within the local fisherfolk organizations, between the local organizations and BARNUFO, and between the industry and government).

Local Forest Management Committee pilot project, Jamaica. The Forest Act of Jamaica allows the establishment of Local Forest Management Committees (LFMCs) to guide management of forest reserves. As part of the CIDA-funded Trees for Tomorrow Project, the Forestry Department is developing pilot LFMCs in priority watersheds. The first of these is the Buff Bay/Pencar watershed, where LFMCs for each sub-watershed were established in September 2000. All groups and organizations with a stake in the management of the watershed are welcome in the committees, and the initial response from stakeholders has been excellent. The first main task of the LFMCs will be to provide input into the watershed management plan that Forestry is preparing. A research project is being carried out by the Forestry Department and CANARI to study the process of the pilot project.

National institutions for natural resource management, Anguilla. As an Overseas Territory of the United Kingdom and a member of various regional groupings, Anguilla's natural resource management policies and processes are subject to a wide range of influences, both local and external. Although a small territory, Anguilla nonetheless also has a complex government structure, with a number of agencies having roles in environmental matters, some of them overlapping. The Anguilla National Trust is taking on the challenge of both defining its own place in the institutional maze and leading its diverse stakeholders through a process of developing a more rational and effective national institutional landscape for natural resource management.

Day 2

The morning session focused on the experience of a research project, 'Evaluating the trade-offs between users of marine protected areas in the Caribbean,' which was based on a case study of the Buccoo Reef Marine Park, Tobago. The Park's management programmes and challenges were described by Fisheries Officer Keisha Sandy. Members of the research team from the University of East Anglia then made presentations on the premise, activities, and lessons of the research project, and briefly reviewed the approaches that were developed and tested. Because of time constraints, the presentations were hasty, but participants were all provided with copies of the manual coming out of the project, and were encouraged to test the approaches in their own situations and report to the research team on their experiences. Participants then broke into groups to briefly apply these approaches to the four case studies presented the previous day. The final discussion of the morning examined the role of external researchers in participatory planning processes and the complexities of implementing collaborative research projects between local resource management agencies and research institutions.

In the afternoon, the group visited the Buccoo Reef Marine Park in a glass-bottom boat, and had an opportunity to learn more about the uses of the Park, conflicts among users, the Park management's efforts to mitigate the impacts of heavy use, and the role of stakeholders in planning and management.

Day 3

The day began with a discussion on balancing stakeholder interests and conservation requirements in the setting of management objectives. Referring to the conceptual framework, participants pondered on the process or motivation that brings a group of disparate stakeholders together in the definition of management objectives. While there was no clear consensus, the prevalent opinion was that stakeholders are most often brought together by a shared interest in sustaining or enhancing benefits from the resource base.

The example of the Soufriere Marine Management Area (SMMA) was used to illustrate a process of participatory objective setting. In that case, the lack of a shared vision among stakeholders was identified as the major factor in an institutional crisis that had occurred several years before. A collective visioning process was therefore undertaken that led smoothly to the participatory definition of objectives and a new institutional design.

Moving from the setting of objectives to the monitoring of their achievement, the group sought to define monitoring and evaluation and determine its place within the conceptual framework. The consensus was captured as 'the collection and interpretation of data to determine if and how verifiable objectives have been achieved.' The distinction between monitoring and evaluation was discussed, with monitoring being seen as focused on process and evaluation as focused on impact.

Examples of the role of monitoring in management were given from the Negril Marine Park and from the global Reef Check programme, which is now being implemented in several countries of the region. The distinction between research, which may or may not provide information directly relevant to management, and monitoring of management objectives was made, and the need for managers to focus on management objectives was stressed.

In a small group exercise, participants used a draft research and monitoring framework prepared for the SMMA to develop workplans to monitor the achievement of the Area's main objectives.

In a return to the conceptual framework, participants saw a distinction between those stakeholders operating as part of the management institution and those who, either because of a lack of shared objectives, inadequate resources, or other reasons, remained outside the institution but continued to influence its functioning.

The final session of the day looked at the requirements for and the potential risks of participatory monitoring approaches:

Requirements:

- Ⓒ skills training
- Ⓒ testing of popular perceptions and traditional knowledge
- Ⓒ feedback loops from data collection to management action
- Ⓒ effective, non-technical, communication flows between and among stakeholders
- Ⓒ incentives and sharing of benefits
- Ⓒ trust and transparency.

Risks:

- Ⓒ deliberate falsification of knowledge
- Ⓒ inconsistent methods that can result in flawed data
- Ⓒ undervaluing of scientific information and data gathering
- Ⓒ inefficiency
- Ⓒ difficulties in enforcing management regulations against those involved in data collection
- Ⓒ capture or sabotage of the process by interest groups.

Day 4

The day began with a presentation on the concepts of uncertainties and risks, and their relation to the functioning of participatory institutions. The presentation was based on IDS Discussion Paper 372, "Exploring understandings of institutions and uncertainty: new directions in natural resource management" by L. Mehta, M. Leach, P. Newell, I. Scoones, K. Sivaramakrishnan, and S. Way. Four categories of uncertainties were described:

- Ⓒ ecological (the unpredictable and variable nature of ecosystems upon which management is imposed)
- Ⓒ livelihood (the unpredictable impacts on livelihoods, e.g. globalization or hurricanes)
- Ⓒ political (potential changes in the political directorate and policies)
- Ⓒ knowledge (the ownership of knowledge, unanswered scientific questions).

The distinction was made between uncertainties, which are unknown and unpredictable, and risks, which can be assessed based on laws of probability. A third category of "surprises" was also proposed.

Participants gave examples of each type of uncertainty, and these assisted considerably in the general understanding of the concepts. Constraints, in terms of resources, power imbalances, poor communication flows, regulatory frameworks, etc. were discussed as additional factors that can affect the functioning of resource management institutions. The concept of institutional flexibility as a means for dealing with risk and uncertainty was introduced and explored.

In plenary, participants revisited the case of the Buccoo Reef Marine Park, identified the major management issues (reef walking, interpretation/signage, moorings, awareness) and tried to identify the constraints, uncertainties, and risks associated with each.

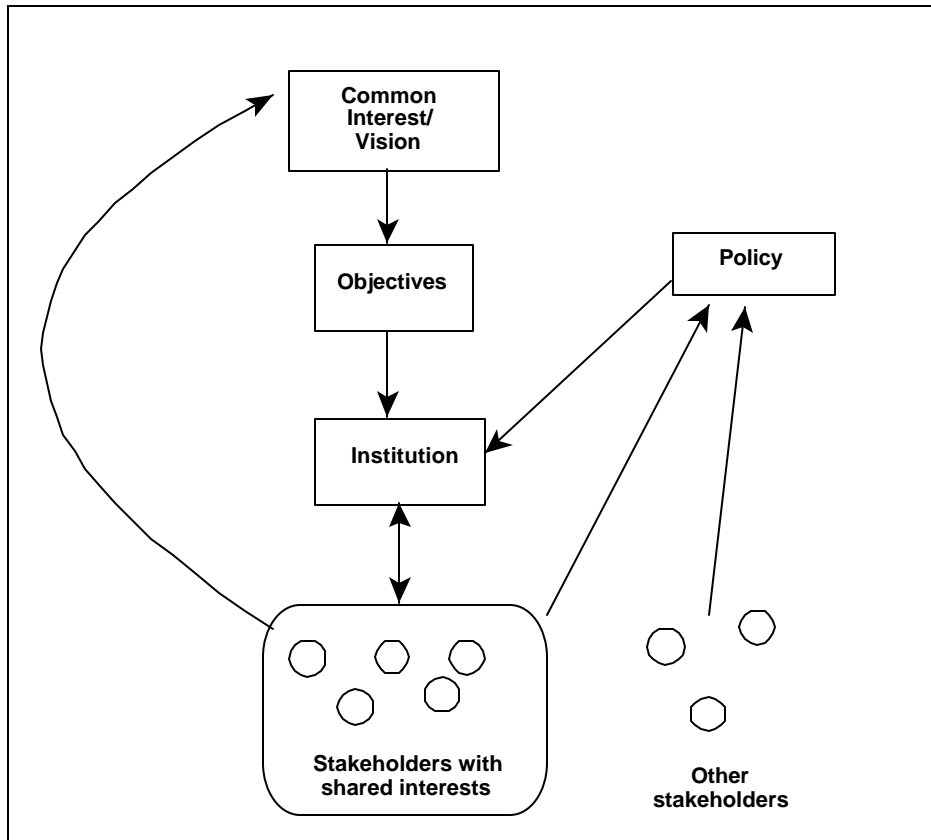
Participants then returned to their small groups to first try to identify the constraints and areas of risk and uncertainty that impacted on the operation of the selected case studies, and then to develop strategies to address these. The groups all gave particular attention to measures that could enhance the flexibility of the institution, and thus its ability to respond positively to constraints, uncertainties, and risks. Some of the measures that were proposed included:

- Ⓒ Openness to a broad cross section of stakeholders, as well as the freedom for stakeholders to enter and leave the management arrangement
- Ⓒ Continuous mobilization to maintain support in the face of political uncertainty and change
- Ⓒ Ongoing review and adjustment of policies and objectives to accommodate new stakeholder interests and needs

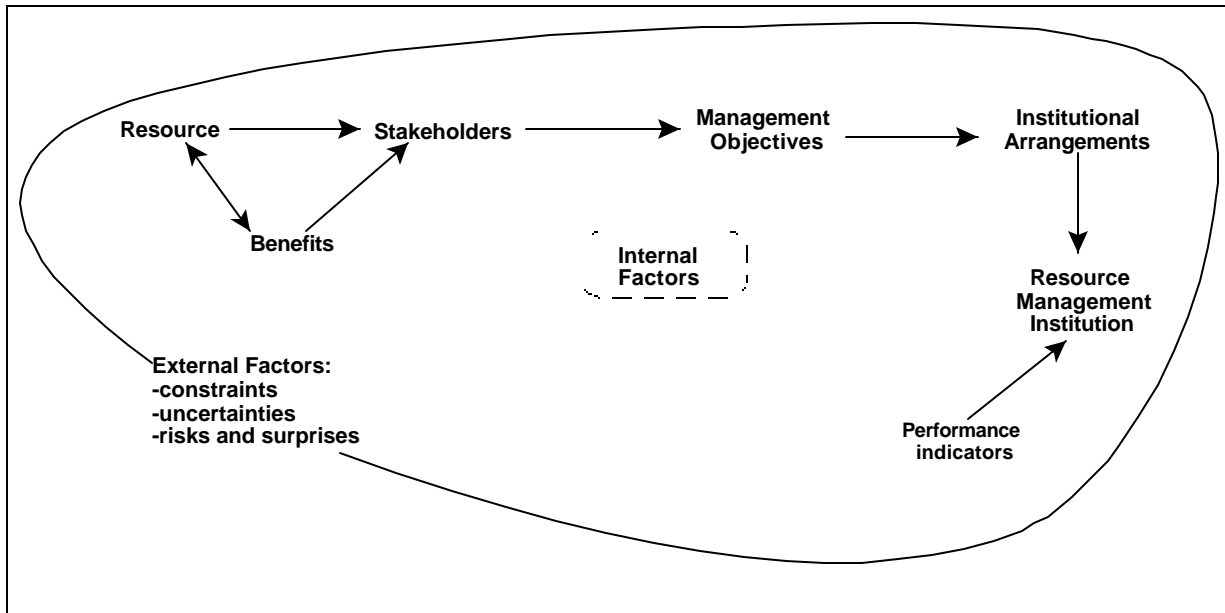
- C Incentives for alternative livelihood options as well as the potential for compensation for lost income
- C Built-in mechanisms to deal with conflict
- C Monitoring mechanisms to check that participants are fulfilling their roles and that there are no unnecessarily overlapping mandates and responsibilities.

Day 5

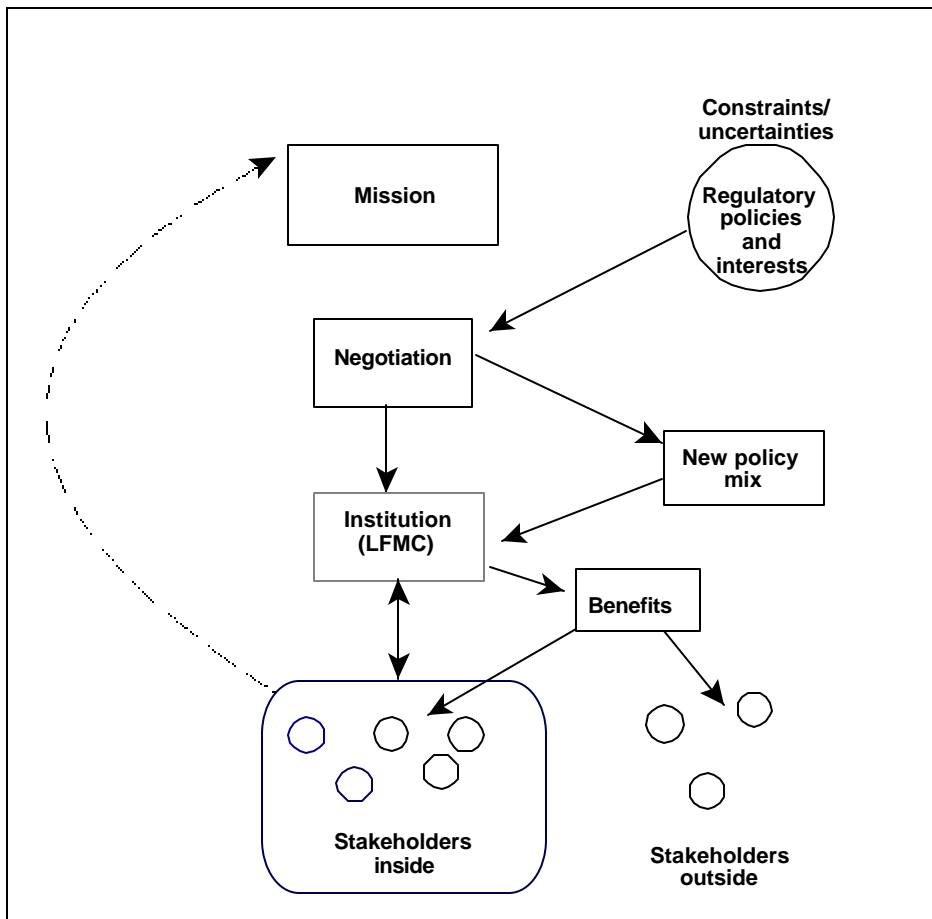
On the final day of the seminar, participants in small groups revisited the conceptual framework one more time, and developed alternative models based on their own understandings.



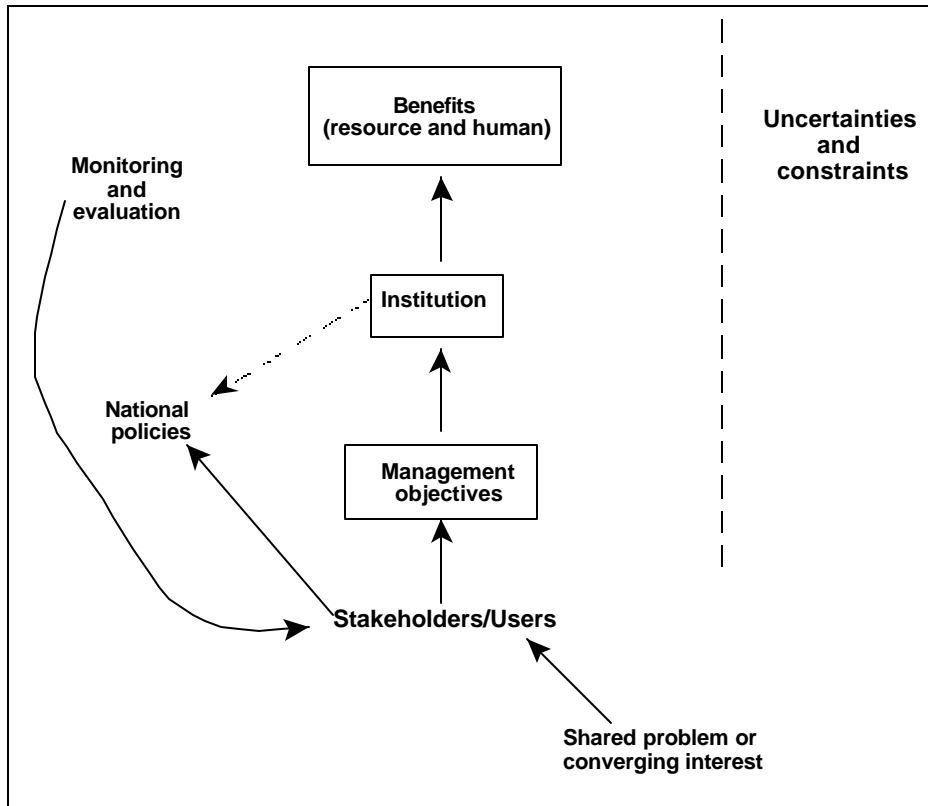
Group 1



Group 2



Group 3



Group 4

In plenary, the group identified the following key lessons learned during the week and through the development of the conceptual framework:

- There is no single model for PRM, but there is a flexible framework, which is based on practical experience that can be applied to a wide range of cases;
- PRM approaches are workable, and are becoming increasingly relevant and necessary;
- There is still very limited practice and experience, and the framework needs more testing;
- The seminar has broadened participants' understanding of the concept of an institution and of the holistic nature of resource management systems;
- There is more to learn about field methods and their conceptual constructs, and this may be an area of future research for CANARI and its collaborators.

In a discussion on follow-up actions, participants expressed a desire for continued interaction and collaboration and a number of suggestions were made to achieve that. The group finally agreed on a step-by-step approach, beginning with continued and increased sharing of information through e-mail and networks. Further options could include the establishment of a PRM website for the region, which could share information provided by the seminar participants and other practitioners, and the possibility of formalizing the collaboration of the group through an e-group, a formal network, or even an association. There was also interest expressed in following up the seminar with a *learning by doing@workshop*, at which the entire group would address issues related to one participant's work.

In evaluating the week, participants addressed four issues:

1. Achievement of the seminar's purpose: Participants felt the test of achievement would be revealed in their application of what they had learned to their own work.

2. Achievement of objectives: Participants felt that they had not fully achieved the objectives related to Day 3, particularly in terms of tools for participatory monitoring. On the other hand, they felt the objectives of Day 4 were fully achieved, and the concepts of uncertainty, constraints, and flexibility were very relevant and useful.

3. Process. While participants were generally satisfied with the process employed, some felt it would have benefitted from greater focus on concrete methods, and the meeting of objectives. More rigid frameworks for each session were suggested.

4. Logistics. Participants were quite happy with the logistical arrangements, and pleased that the schedule had occasionally been adjusted to meet interests and needs. It was suggested to CANARI that time be scheduled in, in addition to field trips, for participants to see the countries in which activities were held.

As the final activity of the seminar, participants were asked to serve as a focus group to assist CANARI in evaluating the impact of its training activities over the first five years of its strategic plan. This activity is being reported on separately.