NATURAL RESOURCES SYSTEMS PROGRAMME
FINAL TECHNICAL REPORT[1]

DFID Project Number

R8317

Project Title

Institutional arrangements for coastal management in the Caribbean

Project Leader

Sarah McIntosh

Organisation

Caribbean Natural Resources Institute (CANARI)

NRSP Production System	**Date**
LWI	October 2005

Contents

APPENDIX 1:Table 4.3 Summary communications matrix to show evaluation and lessons drawn from each experiment

ANNEXES

Annex A: R8317 Project Report

Annex B: Coastal Management to Improve Livelihoods: A regional communication strategy for policy and institutional change

Annex C: Final Report of Experiment 1: Testing the uptake of policy messages at the national level

Annex D: Final Report of Experiment 2: Testing co-management tools and messages for training natural resource users and managers

Annex E: Final Report of Experiment 3: Testing the uptake and effectiveness of methods and tools for integrated and equitable coastal resource management

Annex F: Final Report of Experiment 3: Defining and promoting a research agenda for integrated and equitable natural resource management in the coastal zone.

Annex G: A Preliminary Research Agenda

Abbreviations and Acronyms

CaMPAM: Coastal and Marine Protected Areas Managers Network

CANARI: Caribbean Natural Resources Institute

CBO: Community-Based Organisation

CCA: Caribbean Conservation Association

CERMES: University of the West Indies' Centre for Resource Management and Environment Studies

COMARE Net: University of the West Indies Coastal Management Research Network

DFID: Department for International Development of the United Kingdom

MPA: Marine Protected Area

MRAG: Marine Resources Assessment Group Ltd.

NGO: Non-Governmental Organisation

NRSP: Natural Resource Systems Programme

UWI: University of the West Indies

UWIENV: University of the West Indies Environmental Research Network

1   Executive Summary

This uptake promotion project sought to identify, test and disseminate the strategies and pathways that would best ensure that the lessons, methods and tools gained from Suite 1[2] NRSP-funded projects and other complementary research projects were communicated effectively, with the overall purpose of influencing policies and practice in order to effectively implement integrated and equitable natural resource management in the coastal zone in the insular Caribbean.

Based on four research experiments, tackling different aspects of the research question and various target audiences, a range of messages, products and pathways were tested throughout the insular Caribbean The direct outputs of this project include:

- A Tool Box of products including:
    - The original Suite 1 products
    - Four Policy Briefs
    - Poster
    - Case study (slide presentation and posters)
    - PowerPoint presentations
    - MPA Training Module
    - Academic teaching materials (slide presentation, lecture notes and adapted case studies)
    - MPA Webpage
- Final reports of the four experiments
- A Communication Strategy entitled *Coastal Management to Improve Livelihoods: A regional communication strategy for policy and institutional change*
- A draft Research Agenda for future work on integrated and equitable natural resource management in the coastal zone in the insular Caribbean.

By engaging a wide range of stakeholders - including policy makers, management agencies and resource users - in dialogue about integrated and equitable coastal management that supports coastal livelihoods, the project has contributed to NRSP's purpose level objective of delivering new knowledge that enables poor people who are largely dependent on the natural resource base to improve their livelihoods. The project has also contributed significantly to regional understanding of how to disseminate and measure the uptake of key messages derived from research.

However, the project also concluded that achieving real and lasting improvement in the contribution of coastal management to livelihoods will require a coordinated and sustained effort from a wide range of partners, both in the area of uptake promotion and in terms of further research. Suggestions and guidelines for follow-up work are included in both the Communication Strategy (Annex B) and Research Agenda (Annex G) and summarised in Section 5 of the Project Report (Annex A).

---

[2] The Suite 1 projects are: Institutional and technical options for improving coastal livelihoods (CANARI, reference: R7559); Institutional arrangements for Caribbean Marine Protected Areas and opportunities for pro-poor management (MRAG, reference: R7976); and Requirements for developing successful co-management (CCA, reference: R8134).

2 Background

This project was designed to build on the outputs of a number of NRSP projects which had been implemented in the region over the preceding five years, and which all contributed to the development and promotion of improved resource-use strategies in coastal zone production systems. As the DFID-NRSP research strategy for renewable natural resources was nearing conclusion, the projects that had been implemented in the Caribbean were grouped under three categories, one of which ('Suite 1') included the projects that focused on institutional arrangements and decision-support tools (R7408, R7559, R7976 and R8134). These projects had produced:

- an approach to coastal planning described as "trade-off analysis" that incorporated various disciplines and facilitated the involvement of stakeholders in the decision making process (R7407);

- a number of case studies that illustrated participatory planning processes and that documented the development, promotion and impact of new institutional arrangements and new technologies in various parts of the region (R7408, R7559 and R8314);

- a review and characterisation of marine protected areas in the region, and their impacts on and relevance to poverty issues (R7976);

- guidelines for integrating poverty and livelihood issues in the planning and management of marine protected areas in the region (R7976);

- guidelines for the design, establishment and operation of co-management arrangements (R8134);

- preliminary directions towards pro-poor approaches to coastal management and development in non-MPA situations (R7559).

The contribution of these NRSP projects to the understanding of poverty issues in the coastal zone and to the identification of approaches to coastal management was important in filling a void in the literature on livelihoods, poverty and sustainability, where rural and forest-based livelihood strategies have received much more attention that coastal areas, and where work in the Caribbean has been limited.

The project offered an opportunity to contribute further to the understanding and promotion of the policies and institutions which most effectively facilitate the implementation of integrated and equitable natural resource management in the coastal zone by:

- developing new decision support tools that drew on the experience of the earlier NRSP projects;

- developing a comprehensive communication strategy for the promotion of these tools;

- engaging in a participatory and dynamic process, involving a wide range of organisations and institutions at the local, national and regional levels, in order to test the tools and strategy.

The project was implemented between July 2003 and September 2005. The Caribbean Natural Resources Institute (CANARI), the Caribbean Conservation Association (CCA) and the Marine Resources Assessment Group Ltd. of the United Kingdom (MRAG) have collaborated in its implementation. Other partners included the University of the West Indies' Centre for Resource Management and Environment Studies (CERMES) and the University of Puerto Rico's SeaGrant College Program.

# 3	Project Purpose

The project purpose as outlined in the original logframe was "Institutional arrangements and policies for implementation of integrated pro-poor natural resource (and pollution prevention) management in coastal zones developed and promoted". However, at the inception workshop that was held in San Juan, Puerto Rico in November 2003, it was agreed that the overall purpose of the project should be reframed as: "To change policies and practice in order to effectively implement integrated and equitable natural resource management in the coastal zone".

The project has therefore sought to:
- contribute to improved understanding by a wide range of stakeholders of the processes and institutions required to achieve integrated and equitable natural resource management in the coastal zone in the insular Caribbean.
- identify the products and pathways which contribute most effectively and efficiently to uptake by a wide range of target audiences of key messages related to integrated and equitable natural resource management in the coastal zone in the insular Caribbean.

The project has only partially achieved its purpose. Because of the short time frame available and the complexity of the issues being addressed, it has not resulted in significant changes in policies and practice. But it has validated the changes that need to be made in the region with respect to both policy and practice, as defined by Suite 1 projects, it has tested and identified a number of products and pathways that are now available for future use in uptake promotion, and it has developed a platform for implementation, with a comprehensive Communication Strategy, a draft Research Agenda and the participation and commitment of key institutional actors in the region.

# 4	Outputs

As indicated in the project logframe, the project had three main categories of outputs, which are reported on below:

## 4.1	Decision support tools for livelihood sensitive (pro-poor) integrated coastal management arising from projects in NRSP/LWI Suite 1 defined, refined and designed.

The project inception workshop in Puerto Rico in November 2003 (see Annex A, Appendix I for full report), which brought together a small group of regional stakeholders from a range of disciplines and sectors, determined that the project should comprise **four uptake promotion experiments** (as opposed to project sites, because it was clear that the time frame would not allow for any field validation of Suite 1 project results, as originally expected in the RD1), all of which would contribute to new or repackaged **decision support tools** and the formulation of a comprehensive **communication strategy** for the dissemination of these tools (see Section 5 below for more detailed outline of the experiments).

The inception workshop also identified an initial toolbox of products, from both Suite 1 and complementary regional research, which would provide the basis for extraction of key messages and design of new products and pathways (see Annex A, Appendix I, *Appendix E References*).

## 4.2	Communication strategy and specific mechanisms for promotion of decision support tools and other products defined and implemented

Two communication specialists were contracted to produce:

- an inception communication plan following the inception workshop which served as the basis for the design of the individual experiment communication plans (see Annex A, Appendix II).

- a revised communication plan following the mid-term review

- A final communication strategy, which is a major output of the project, and is appended to the FTR at Annex B).

Table 4.2 below outlines the toolbox of products on coastal management and livelihoods produced under this project, together with a list of the target audiences and recommended uptake pathways, based on the research findings.

Table 4.2

Product	Available From[i]	Target audiences	Recommended uptake pathways
Training module on marine protected areas and sustainable coastal livelihoods	CANARI	MPA managers and management partners	Training programmes such as UNEP's MPA Training of Trainers course
Graphic and interactive case study on Negril	CANARI	Coastal community residents

Organisations providing technical assistance to MPA and coastal community management

Community development organisations and agencies | Seminars, community events |

Case studies, guidelines and other written materials on MPAs and livelihoods	MRAG, CANARI, CCA, CERMES, others	Coastal area managers, planners, researchers, and management consultants; trainers and educators University faculty Graduate students (reference material) Managers of training institutions, coastal resource users, tourism and government representatives, NGOs, coastal and fisheries management authorities, CBOs	Website dissemination (CANARI webpage on MPAs and coastal communities, MRAG, CCA, and CERMES) Face-to-face meetings (lectures/worksho ps/focus group meetings)
Two 2-page briefing papers, one on the respective roles of various government agencies in coastal zone management and the other on the linkages between integrated coastal zone management and livelihoods	CANARI	Policy-makers, chief technical officers in public sector agencies, private corporations, journalists, NGOs, community members	Hard copy distribution to target groups. Can be distributed both at point of meeting or sent in advance
Diagram on role of public sector in CZM	CANARI	Policy-makers, chief technical officers in public sector agencies	Hard copy distribution to target groups, preferably at point of meeting and especially during presentation when additional explanation could be given
PowerPoint presentation on the linkage between coastal resources management, coastal livelihoods and the role of public sector agencies	CANARI	Chief technical officers in public sector agencies	Group meeting of chief technical officers from various agencies
Guidelines for coastal resource co-management publication	Hard copies and CD-ROM from CCA and CERMES	University faculty Graduate students (reference material)	Face-to-face meetings (lectures/worksho ps/focus group meetings)

Co-management power point slide presentation and hand out	Downloadable from CCA and CERMES websites	resource users, tourism and government representatives, NGOs, coastal and fisheries management authorities, CBOs	COMARE Net Field visits Website dissemination (CCA, CERMES and MRAG)
Video case study on Mankote Mangrove, St. Lucia	CANARI		
Summary of lessons learnt from case studies	Downloadable from CCA and CERMES websites	University faculty Graduate students (reference material) Managers of training institutions, coastal resource users, tourism and government representatives, NGOs, coastal and fisheries management authorities, CBOs	Face-to-face meetings (lectures/worksho ps/focus group meetings) Website dissemination (CCA, CERMES and MRAG) Internet (COMARE Net)
Co-management guidelines lecture notes	Downloadable from CCA and CERMES websites		
PowerPoint presentation "Linking coastal management, sustainable livelihoods and poverty reduction: a research agenda for the Caribbean" adapted to suit the needs and interests of the specific target audience	CANARI	Civil society "brokers" and change agents, funding agencies, management agencies, and private sector companies, currently or potentially involved in research	Presentation at specially arranged meetings or at relevant workshops and seminars which are of a size that facilitates interactive discussion
Policy brief on "Linking coastal management, sustainable livelihoods and poverty reduction: a research agenda for the Caribbean"	CANARI	Researchers, research institutions, funding agencies, management agencies and private sector companies currently or potentially involved in research	Hand distribution at workshops, seminars and presentations at academic meetings, preferably in conjunction with the PowerPoint presentation (see above)

Poster on "Linking coastal management, sustainable livelihoods and poverty reduction: a research agenda for the Caribbean"	CANARI	Civil society "brokers" and change agents, researchers, research institutions, funding agencies, private sector companies, and management agencies currently or potentially involved in research	Hand distribution to agencies and organisations where display of poster will provide cost-effective access to multiple target audiences

As the table indicates, the toolbox meets the original logframe expectation of repackaging Suite 1 products in at least five different formats to address the needs of at least six different target audiences. The experiment reports at Annexes C-F provide detailed information on selection of target audiences and the rationale for the products and pathways used.

The logframe also identified as an indicator the "adoption" of uptake products by at least 10 target organisations from at least 10 target audiences. The achievement of this goal is moot as target audiences were identified in all experiments who were willing to adopt or apply messages but the project as a whole has shown that higher levels of uptake – as evidenced by a change in attitude or practice – may exceed the relatively short time frame of the experiments and project as a whole.

With respect to this output, the project succeeded in creating favourable conditions for the future implementation of the Communications strategy, as the participating institutions have all begun to integrate the recommendations of the strategy into their own planning and programming, and as they are all already involved in activities that make use of the mechanisms and other products identified.

4.3 Communications strategy, promotion mechanisms and support tools tested and validated

4.3.1 Objectives of communication experiments

The inception communications strategy, promotion mechanisms and support tools were tested and validated via four experiments:

Experiment 1: Testing the uptake of policy messages at the national level (led by CANARI)

Aim: To identify and test the ways in which policy messages related to equitable and integrated natural resource management in the coastal zone could best be communicated to those who play a significant role in policy formulation and implementation at the national level in the Caribbean region.

Experiment 2: Testing co-management tools and messages for training natural resource users and managers (led by CCA in associated with CERMES)

Aim: To identify the ways in which tools and messages can effectively be made available to the teaching staff of tertiary education and training institutions, as well as ways in which these people and institutions can be informed of the benefits to be derived from the inclusion of such tools and messages within their curricula and programmes. This involved the implementation of a communications plan for uptake using the messages, products and pathways identified at the experiment's inception workshop.

Experiment 3: Testing the uptake and effectiveness of methods and tools for integrated and equitable coastal resource management

Aim: To test the effectiveness of methods and tools available for integrated and equitable coastal resource management on a single targeted group of coastal resource managers associated with marine protected areas (MPAs) throughout the Caribbean region and their partners.

Experiment 4: Defining and promoting a research agenda on integrated and equitable natural resource management in the coastal zone

Aim: Identify, test and document the ways by which a specific research agenda can be developed and incorporated into the priorities, programmes and activities of research institutions, with a focus on integrated and equitable coastal resource management, and with a particular attention to policy, institutional arrangements, governance, and approaches to poverty reduction.

4.3.2 Summary of main findings

Appendix 1, Table 4.3 provides a summary of the main findings from each experiment in communication. In addition to identifying the target audience, product and pathway, a short description of the methods used to monitor and evaluate the results of the experiment are given, with a summary of the main lessons learned and other observations that support the findings of the research. Due to the short time-frame of the project, it has not yet been possible to fully evaluate the results of each experiment. The results presented here should therefore be considered preliminary and incomplete.

Detailed reports of the implementation and evaluation of these experiments are appended at Annexes C-F.

4.3.3 Conclusions and recommendations from communication experiments

While dissemination can be achieved within a reasonably short time frame, the changes in practices, attitudes, behaviours and policies that confirm uptake of messages and tools often take many months or years to occur. Because of the short project time frame and limited resources available, the testing of some products and pathways can be considered incomplete. More work is needed on assessing uptake, especially tools and approaches, over the medium and long term.

The project has enabled many lessons to be learned about the products, pathways and uptake of various messages targeted to a wide range of stakeholders, but these are necessarily preliminary and incomplete. The following general recommendations have been compiled from each communication experiment.

- Products cannot simply be offered, they need to be disseminated in strategic ways and with appropriate follow-up. This implies partnerships with those agencies and organisations with greatest access to the main target audiences for the products.

- Because the target audience is often highly diverse, there is a need for a similar diversity of products and pathways to reach them. Strategies that are effective for reaching some segments of the audience may completely miss other. For the same reason, messages need to be conveyed in a variety of ways and through a range of channels. The differing viewpoints and frames of reference of audiences also need to be taken into account.

- In general, products should not be limited to tangible materials. Guided discussions,

semi-formal presentations and field trips can be more effective in communicating many concepts because they allow people to draw on their own context and experience and provide space for interactive discussion.

- Uptake of tools and approaches appears highest when stakeholders can immediately apply them. This suggests that strategies to disseminate tools and approaches should include their application to real issues that the target audience is dealing with.

- Reinforcement of messages helps assure uptake. Strategies should therefore make provision for follow-up after a communication activity.

- Uptake can be improved by promoting a range of products with similar messages, for example a PowerPoint presentation with associated printed material or CD.

- Uptake is facilitated by discussion that challenges stakeholders' preconceived ideas, and bringing diverse groups of stakeholders together contributes to this process. People tend to remember and be influenced by the outcomes of difficult debates and arguments.

- In general, face-to-face meetings proved the most effective means of promoting the uptake of products, whereas distribution of products and obtaining feedback, particularly via email was not very effective.

- In addition to the above, the main conclusion from experiment 4 was that there remains a critical need to promote a research agenda that links coastal management, sustainable livelihoods and poverty reduction in the Caribbean region, but this promotion requires a long-term effort and significant resources in order to be effective. This study has confirmed or revealed that there are significant obstacles to the uptake of the messages that this experiment intended to disseminate.

- The best pathways are often those that are based on normal and regular activities of the intended target audience

4.4   New research agenda drafted

A further output of the project, which was not envisioned in the logframe, is a **research agenda** which is appended at Annex G.   This draws both on the findings of Suite 1 projects and on presentations made and debated at a seminar on "*Improving Coastal Livelihoods: Lessons Learned from Experience and Priorities for Future Research*" which have allowed for the identification of a number of key themes that should provide an additional focus for, and help guide the design of, future research.

5   Research Activities

A brief overview of the focus of each of the four experiments and their main research activities is given in the table below. The research activities and findings are described in more detail in Annex A, Sections 2.1-2.4:

Experiment leader and focus	Main Research Activities

CANARI: To identify and test the ways in which policy messages related to equitable and integrated natural resource management in the coastal zone can best be communicated to those who play a significant role in policy formulation and implementation at a national level in the Caribbean region, using Trinidad as the research base.	• Baseline analysis of the institutional framework for natural resource management in the coastal zone; • National inception workshop in June 2004 with senior representatives from various government agencies, academic institutions, non-governmental organisations (NGOs) and private consulting companies to validate the baseline and design the communication strategy; • Development and dissemination of two 2-page briefing papers entitled *Integrated Coastal Zone Management: Benefiting People?* and *Trinidad's Coastal Zone: Whose Responsibility?* • Development of a diagram mapping the state agencies involved in coastal zone planning and management in relation to major terrestrial and marine activities • Meeting with the Minister of Public Utilities and the Environment, both to sensitize her to the messages and to explore the possibility of her acting as an intermediary in organising a larger meeting with her other Cabinet colleagues with responsibilities for aspects of coastal zone planning and management; • Discussions and meetings with environmental journalists; • Arrangement of a field trip for Chief Technical Officers (CTOs) in various ministries and agencies to a coastal community in north-east Trinidad; • PowerPoint presentation entitled "*The linkage between land-based activities, coastal resources management and coastal livelihoods, and the role of public agencies – Trinidad*" to a multi-sectoral audience comprising CTOs, representatives of the private sector (oil and gas industry), and community based organisations; • PowerPoint presentation entitled "Influencing coastal zone management policy in Trinidad: challenges and opportunities" at the regional seminar Improving Coastal Livelihoods: lessons learned from experiences and priorities for research in Soufriere, St. Lucia in July 2005.
CCA/CERMES To identify the ways in which tools and messages can effectively and efficiently be made available to the personnel of tertiary education and training institutions, particularly the teaching staff;	• Inception workshop at the Cave Hill Campus in July 2004 with lecturers and persons in information services • Production and delivery of an enhanced slide presentation of the co-management guidelines (e.g. use of Caribbean photographs, breakdown of complex concepts, , together with lecture notes focusing on the concepts and conditions for successful co-management; • Drafting of summaries of lessons learned from the six coastal co-management case studies produced under R8134. • Production of a CD with co-management guidelines, case studies with summaries and comparative analysis

To highlight the ways in which these people and institutions can be informed of the benefits to be derived from the inclusion of such tools and messages within their curricula and programmes.	for distribution at meetings and workshops. • Use of the Suite 1 and new products in three CERMES graduate courses; • A series of informal workshops with Cave Hill faculty and staff to test materials and elicit feedback. • Internet promotion and dissemination of products via CCA and CERMES websites with linked promotion of CANARI and MRAG websites; • Use of the DFID-funded UWI Coastal Management Research Network (COMARE Net) to distribute the original products from Suite 1; • Meetings with relevant faculty at UWI Mona and St Augustine at which products were distributed and potential uses discussed; • Use of guidelines and enhanced slide presentation in graduate course at UWI Mona and Co-management workshop in Belize; • Use by a lecturer from the Bluefields campus of the Universidad de las Regiones Autonomas de la Costa Caribe Nicaraguense (URACCAN), Nicaragua of the slide presentation handout at an outreach workshop on co-management and responsible fisheries. • PowerPoint presentation on **Coastal resource co-management** at the regional seminar *Improving Coastal Livelihoods: lessons learned from experiences and priorities for research* in Soufriere, St. Lucia in July 2005.
CANARI To test the uptake and effectiveness of methods and tools for integrated and equitable coastal resource management, targeting one representative group of coastal area managers: managers of MPAs throughout the Caribbean and their partners, including organisations and programmes providing technical support to MPA	An inception seminar entitled *Finding Common Ground: A Seminar for Marine Protected Area Managers and Fishing Communities* held in Negril, Jamaica in June 2004 with a representative sample of the experiment's target audiences, including MPA managers, resource users and co-management partners, community representatives and technical advisors; • Development of a 4-page Policy Brief entitled *Marine Protected Areas and Sustainable Livelihoods* followed by promotion on the Coastal and Marine Protected Area Managers network (CaMPAM) and dissemination both by mail and electronically (via CaMPAM and CANARI's webpage); • Testing of the Internet as a pathway for information via the creation on CANARI's website of a webpage entitled *MPAs and Coastal Communities* which included pdf downloads of relevant Suite 1 and other project documents; • Development and delivery in April 2005 of a one-day training module entitled *MPAs and Sustainable Coastal Livelihoods* intended primarily for MPA management staff

management.	*Livelihoods* intended primarily for MPA management staff but on this occasion delivered to a broader audience including local conservation NGOs, fishers and tourism sector interests;
	• Development of a case study of the Negril Marine Park and coastal livelihoods based on existing materials and designed to be delivered in multiple complementary formats including:
	o Large posters (2 of 7 completed)
	o Field trip (not possible within project timeframe)
	o Structured panel discussion (not possible within project timeframe)
	o PowerPoint presentation of the case study's main lessons (completed)
	• Delivery of the PowerPoint presentation and display of two posters from the case study at the regional seminar *Improving Coastal Livelihoods: lessons learned from experiences and priorities for research* in Soufriere, St. Lucia in July 2005.
CANARI To identify, test and document the ways by which a specific research agenda can be developed and incorporated into the priorities, programmes and activities of research institutions, with a focus on integrated and equitable coastal resource management, and with a particular attention to policy, institutional arrangements, governance, and approaches to poverty reduction	• A brief baseline study of recent and current research in integrated and equitable natural resource management in the coastal zone, and a compilation and analysis of the main messages arising from Suite 1 projects.
	• A bibliography of Suite 1 project products.
	• A scientific meeting held in Trinidad in July 2004, attended by 12 participants including the two communications specialists, representatives of CCA, CANARI and the University of the West Indies (Cave Hill, Mona and St Augustine Campuses).
	• A 4-page Policy Brief entitled Linking coastal management, sustainable livelihoods and poverty reduction: a research agenda for the Caribbean and dissemination by mail and at a number of regional workshops and seminars.
	• A poster on the theme of Linking coastal management, sustainable livelihoods and poverty reduction: a research agenda for the Caribbean and dissemination by mail and at a number of regional workshops and seminars.
	• A basic PowerPoint presentation on Linking coastal management, sustainable livelihoods and poverty reduction: a research agenda for the Caribbean which and tailored to suit the needs and interests of individual target audiences.
	• Co-sponsorship of and participation in a seminar on "*Improving Coastal Livelihoods: Lessons Learned from Experience and Priorities for Future Research*" held in Soufriere, Saint Lucia in July 2005 on the occasion of the 10th Anniversary of the Soufriere Marine Management Area (SMMA) with the following objectives:

	- to share, compare and analyse experiences and lessons learned in research and development work on coastal livelihoods and coastal resource management in the eastern Caribbean, including Trinidad and Tobago; - to share information on current research and results obtained; - to identify and define opportunities and priorities for future research. • Production of a draft research agenda for future work.

6 Environmental assessment

6.1 What significant environmental impacts resulted from the research activities (both positive and negative)?

The research activities did not have direct environmental impacts, either negative or positive. In the medium to long term, it is expected that these research activities will have significant positive impacts, thanks to the involvement of a wide range of regional, national and local actors in the research process. The research activities have enhanced their capacities and increased their ability to address environmental issues in the context of coastal development and management..

6.2 What will be the potentially significant environmental impacts (both positive and negative) of widespread dissemination and application of research findings?

While positive impacts on both the coastal environment and coastal livelihoods would be an anticipated outcome of uptake, as a result of the short project time frame uptake has been primarily attitudinal rather than at the level of changed practices or policies. The long-term impact of uptake of the research messages would be an improvement in integrated and equitable coastal management which in turn would lead to improvements in both the coastal environment and coastal livelihoods.

6.3 Has there been evidence during the project's life of what is described in Section 6.2 and how were these impacts detected and monitored?

Uptake has been primarily at the level of openness to the messages rather than implementation of new strategies. Project impacts were measured at the level of each experiment's monitoring and evaluation plan which formed part of the Experiment communication plans, which are appended at Annex A, Appendix 1.

6.4 What follow up action, if any, is recommended?

The main recommendations for follow-up action are contained in the Communications

Strategy, which is presented in Annex B, and in the Research Agenda, which is appended at Annex G. In both instances, the recommended action is the timely and effective implementation of these plans.

7 Contribution of Outputs

7.1 NRSP Purpose and Production System Output

Since the project was primarily an uptake promotion project, its focus was on delivering new knowledge on how to effectively disseminate the research findings in such a way that they influence policy and practice, rather than on generating new research on coastal management and livelihoods. As a result of the communications research, by September 2006, the findings of the earlier Suite 1 project had been disseminated to at least 400 decision-makers from government, the private sector and civil society in a wide variety of sectors which affect poor people in the coastal zone (e.g. Physical Planning, Tourism, Energy, Environment, Fisheries, Community Development) in at least 10 islands of the Caribbean.

The findings of the communication research, in the form of the communication strategy, have also been widely disseminated both to researchers and information specialists working in the area of coastal management (e.g. UNEP, Institute of Marine Affairs, University of the West Indies, information officers in relevant government Ministries).

The experiment evaluations indicate that many of the target audiences were open to the messages, products and pathways used in the research experiments. Evidence of uptake in terms of incorporation in national project plans or changed policies or institutional arrangements, and therefore of the direct impacts on the poor, was considered unlikely within the project timeframe since such changes typically require both attitudinal and legislative changes which may take many months or even years. A number of regionally-specific factors also militate against full uptake, notably:

- Low baseline understanding by many target audiences within the region of the concept of integrated coastal management that supports livelihoods;

- Inadequate institutional frameworks for inter-sectoral dialogue or policy development with multi-sectoral input;

- A development focus which continue to emphasise "big development" issues rather than local livelihoods concerns.

The project has consequently identified many areas in which data on and the understanding of the relationship between coastal management and livelihoods, and the strategies and policies which are most beneficial to the poor, are inadequate or lacking and on which further Caribbean research is needed (see Annex G: Research Agenda).

7.2   Impact of outputs

By September 2006, findings from Suite 1 about institutional arrangements and policies for implementation of integrated pro-poor natural resource management in coastal zones had been packaged in a wide variety of formats (resulting in the toolbox identified in Section 1 above) and promoted to the audiences identified in 7.1 above.   However, for the reasons outlined in 7.1 above, the project timeframe made uptake in terms of incorporation in national project plans or changed policies or institutional arrangements difficult to achieve or assess within the project timeframe.

By September 2005, findings from the project were being used, or were expected to be used within the following twelve months,:
- Within the research and teaching programmes of the three campuses of the University of the West Indies (UWI) and at Sea Grant, Puerto Rico;
- Within the UNEP MPA Training of Trainers Course;
- To inform the design of additional research on institutional arrangements for coastal management by CANARI and its regional project partners, CERMES and CCA, as well as by the UWI Sustainable Economic Development Unit which implemented R8325;
- Within the public awareness and education programmes of at least two Caribbean Marine Protected Areas;
- In discussions with both civil society and government agencies, at both the national and regional level, about how the Mauritius Strategy for Small Island States can best be implemented and what research is needed to inform this.

7.3   Uptake Promotion

Since this was essentially an uptake promotion project, the uptake promotion strategies used are fully outlined in the Experiment Reports at Annex C-F. The key lessons learned are synthesised in the Communication Strategy at Annex B which concludes that achieving real and lasting improvement in the contribution of coastal management to livelihoods will require a coordinated and sustained effort from a wide range of partners. There are key roles for governments, regional organisations, NGOs, community organisations, the private sector, universities, research and training institutions, and donor agencies, which are outlined in the table below, which is extracted from the Communication Strategy (Annex B, Section 7, Table 7)

Potential partners	Main roles
Governments, particularly ministries, departments, and agencies involved in coastal management issues, community development, poverty programmes, and education	▪ Adopt and promote the strategy's tools and approaches ▪ Disseminate the strategy's products through official channels, media and distribution lists ▪ Incorporate the strategy's messages in public statements, speeches and documents ▪ Provide forums for stakeholders to discuss and further develop the strategy's messages and tools
Regional organisations involved in coastal resource management, sustainable development, and	▪ Incorporate the strategy's messages in regional policies and agreements ▪ Provide governments and other actors with information

capacity building	• needed to develop policies and institutions in support of the strategy's aims
	• Support key messages through programmes and projects
	• Disseminate tools and approaches through publications, conferences and training activities
	• Support the development and dissemination of new communication products to reach key target audiences
	• Provide forums for stakeholders to discuss and further develop the strategy's messages and tools
	• Encourage donor agencies and international partners to contribute to and support the strategy's aims
NGOs working in the fields of conservation, natural resource management, poverty reduction, and education	• Support the strategy's messages in programmes and projects
	• Encourage governments to support the strategy's aims
	• Provide governments and other actors with information needed to develop policies and institutions in support of those aims
	• Develop and disseminate new communication materials to reach key target audiences
	• Channel the strategy's messages through media contacts and policy influencers
	• Provide forums for stakeholders to discuss and further develop the strategy's messages and tools
Community organisations	• Advocate for policies and practices that support the strategy's aims
	• Channel the strategy's messages through local opinion leaders and politicians
	• Encourage and build the capacity of local stakeholders to adopt the strategy's tools and approaches
	• Test and refine messages and tools to suit local contexts and needs
Private sector	• Support the strategy's messages in research and corporate social responsibility programmes, projects and public relations campaigns
	• Encourage politicians and other private sector interests to support the strategy's aims
	• Assist in further development of tools and approaches through research
Universities, particularly faculties dealing with natural resource management and social sciences	• Incorporate the training materials included in the strategy's tool box in relevant curricula and short courses
	• Develop new training materials to suit the needs of specific courses and programmes
	• Incorporate the strategy's messages into the design of undergraduate and graduate programmes and courses
Research and training institutions	• Conduct research on issues related to integrated coastal management and livelihood improvement
	• Provide training in the use of the strategy's tools and

	approaches
	▪ Build partnerships between themselves and other management actors (government, civil society and coastal communities, private sector) as well as between disciplines within the institutions
	▪ Ensure the dissemination of research results in a form and manner that make them usable and useful
Donors and technical assistance agencies	▪ Support the implementation and further development of this strategy
	▪ Integrate coastal issues into programmes, plans and funding portfolios, and assist in creating linkages between coastal management and national development planning, including poverty reduction strategies

8   Publications and other communication materials

8.1   Books and book chapters

8.2   Journal articles

8.2.1   Peer reviewed and published

8.2.2   Pending publication (in press)

8.2.3   Drafted

8.3   Institutional Report Series

8.4   Symposium, conference and workshop papers and posters

CANARI. **2005.** *Proceedings of a seminar on Coastal Zone Management. Influencing coastal zone management policy in Trinidad: Challenges and Opportunities, Soufriere, St. Lucia, October, 2005.* Laventille: CANARI.

CANARI. **2005.** *Proceedings of a seminar on the Linkage between land-based activities, coastal resources management and coastal livelihoods, and the rold of public agencies, Toco, July 2005.*   Laventille: CANARI

CANARI. **2005.** *Proceedings of a seminar on MPA's and Coastal livelihoods: Lessons from Negril Marine Park, Negril, Jamaica, July, 2005.* Laventille: CANARI

CANARI. **2005.** *Proceedings of a seminar on Linking coastal management, sustainable livelihoods and poverty reduction: A research agenda for the caribbean, Trinidad, July, 2004.* Laventille: CANARI

8.5   Newsletter articles

8.6   Academic theses

8.7   Extension leaflets, brochures, policy briefs and posters

CANARI. **2005.** *Integrated Coastal Zone Management.* R8317 Briefing paper. Laventille: CANARI, 2pp.

CANARI. **2005.** *Marine Protected Areas and Sustainable Livelihoods.* CANARI Policy Brief No. 5. Laventille: CANARI, 4pp.

CANARI. **2005.** *Trinidad's Coastal Zone: Whose responsibility?* R8317 Briefing Paper. Laventille: CANARI, 2pp.

CANARI. **2005.** *Linking coastal management, sustainable livelihoods and poverty reduction: a research agenda for the Caribbean* CANARI Policy Brief No. 6. Laventille: CANARI, 4pp.

8.8   Manuals and guidelines

CANARI. **2005.** *Training module on Marine Protected Areas and Sustainable Coastal Livelihoods: Module Outline* Laventille: CANARI 9pp.

8.9   Media presentations (videos, web sites, TV, radio, interviews etc)

8.10   Reports and data records

8.10.1   Project technical reports including project internal workshop papers and proceedings

CANARI, 2004. *Report on Communication Plan for Experiment 1: Integrated Coastal Zone Management: Testing the uptake of policy messages at the national level.* R8317 Project Report. Laventille, Trinidad & Tobago: CANARI 21pp

CANARI, 2004. *Communication Plan: Inception draft. Institutional Arrangements for Coastal Management in the Caribbean.* R8317 Project Report. .Laventille, Trinidad & Tobago: CANARI 10pp

CANARI, 2005 *Final Project Report. Report of the Regional Project on Institutional Arrangements for Coastal Management in the Caribbean (R8317).* R8317 Project Report. Laventille, Trinidad & Tobago: CANARI 53pp

CANARI, 2005. *Coastal Manageent to Improve Livelihoods: A regional communication strategy for policy and Institutional change* R8317 Project Report. Laventille, Trinidad & Tobago: CANARI 30pp

Geoghegan, T, 2005 *Final Report of Experiment3: Testing the uptake and effectiveness of methods and tools for integrated and equitable coastal resource management.. Report of the Regional Project on Institutional Arrangements for Coastal Management in the Caribbean (R8317).* R8317 Project Report. Laventille, Trinidad & Tobago: CANARI 57pp

Lum Lock, A. 2005. *Final Report of Experiment 1: Testing the uptake of policy messages at the national level. Report of the Regional Project on Institutional Arrangements for Coastal Management in the Caribbean (R8317).* R8317 Project Report. .Laventille, Trinidad & Tobago: CANARI 35pp

McConney, P., and Parsram. K, 2005 *Final Report of Experiment 2: Testing co-management tools and messages for training natural resource users and managers. Report of the Regional Project on Institutional Arrangements for Coastal Management in the Caribbean (R8317)* R8317 Project report. Barbados: CCA 32pp

McIntosh, S., and Renard Y, 2005 *Final Report of Experiment 4: Defining and promoting a research genda on integrated and equitable natural resource management in the coastal zone.. Report of the Regional Project on Institutional Arrangements for Coastal Management in the Caribbean (R8317)* R8317 Project report. Trinidad and Tobago, CANARI 25pp

Parsram, K and McConney, P. 2004. *Barbados Case Study: The fisheries advisory committee, a summary of lessons learnt.* Barbados: Caribbean Conservation Association. 10pp.

Parsram, K and McConney, P. 2004. *Barbados Case Study: The sea egg fishery, a summary of lessons learnt.* Barbados: Caribbean Conservation Association. 10pp.

Parsram, K and McConney, P. 2004. *Belize Case Study: Fisheries advisory board in the context of integrated coastal management, a summary of lessons learnt.* Barbados: Caribbean Conservation Association. 10pp.

Parsram, K and McConney, P.   2004. *Belize Case Study: Marine protected areas co-managed by Friends of Nature, a summary of lessons learnt.* Barbados: Caribbean Conservation Association. 9pp.

Parsram, K and McConney, P. 2004. *Grenada Case Study: Legalisation of Beach Seine traditional rules at Gouyave, a summary of lessons learnt.* Barbados: Caribbean Conservation Association. 10pp.

Parsram, K and McConney, P. 2004. *Grenada Case Study: The lobster fishery at Sauteurs, a summary of lessons learnt.* Barbados: Caribbean Conservation Association. 10pp.

Parsram, K and McConney, P. 2004. *Lecture notes. Guidelines for coastal resource co-management in the Caribbean: communicating the concepts and conditions that favour success. Pro-poor policies and Institutional arrangements for coastal Manangement in the Caribbean.* Barbados: Caribbean Conservation Association. 50pp.

Renard, Y. 2005 *Institutional arrangements for coastal management in the Caribbean: A Preliminary research agenda* (draft) 9pp.

8.10.2   Literature reviews

8.10.3   Scoping studies

8.10.4   Datasets

8.10.5   Project web site, and/or other project related web addresses

www.canari.org

9   References cited in the report, sections 1-7

10   Project logframe (revised September 2004)

Narrative summary	Objectively verifiable indicators	Means of verification	Important assumptions
Goal			
NRSP-LW output 1: Improved resource-use strategies in coastal zone production systems developed and promoted	• By 2003, new approaches to integrated natural resource management, including prevention of pollution, which explicitly benefit the poor validated in two target areas • By 2005, these new approaches incorporated into strategies for the management of coastal resources and adopted by target institutions in one target region	Reviews by Programme Manager Reports of research team and collaborating /target institutions Appropriate dissemination products Local national and international statistical data Data collected and collated by the Programme Manager	Enabling environment exists Budgets and programmes of target institutions are sufficient and well managed
Purpose			
Institutional arrangements and policies for implementation of integrated pro-poor natural resource (and pollution prevention) management in coastal zones developed and promoted	By 2005, informed policies, structures, strategies or methods incorporated in the programmes of management institutions in at least five countries of the region, reflecting increased emphasis on the promotion of sustainable socio-economic benefits of coastal resources, especially for the poor By 2005, decision support tools for livelihood sensitive (pro-poor) integrated coastal management applied by management agencies in at least five locations, and used as teaching materials by at least three regional institutions	Electronic and print media reporting on environmental issues Project monitoring and evaluation reports National economic and social statistics Reports of collaborating target institutions End of project survey of a representative sample of target institutions	
Outputs			
1. Decision support tools for livelihood sensitive (pro-poor) integrated coastal management arising from projects in NRSP/LWI Suite 1 defined, refined and designed	Tool box synthesising cross-cutting lessons and tools developed in NRSP/LWI projects Suite 1	Printed, electronic and audio-visual products presenting decision-support tools (details as outlined in experiment CPs)	Validity and replicability of results obtained and products prepared in projects in NRSP/LWI Suite 1
	Involvement of collaborating organisations and key target institutions in development of tool box	Report of project inception workshop Reports of experiment inception workshops Communication plans for project & experiments Quarterly project reports	

		Final project workshop report	
NRSP	Observation site established at at least one location of Suite 1 projects		
	Established system to monitor and evaluate field experiments and observation sites, and feed outcomes into improved decision support tools	Indicators in experiment CPs	
2. Communications strategy and specific mechanisms for promotion of decision support tools and other products defined and implemented	Demand for uptake products and tools confirmed by at least 6 different target audiences (via their involvement in developing or endorsing the communications strategy)	Endorsements of communications strategy by representatives of target audiences	
	Suite 1 messages repackaged in at least five different formats to address the needs of different target audiences	Experiment CPs and progress reports	
		Project quarterly reports	
	At least 6 different target audiences reached by awareness raising by end of project	Experiment CPs and progress reports	
	Uptake products adopted by at least 10 target organisations from at least 3 different target audiences by end of project	Project quarterly reports	
		Experiment CPs and final reports	
		Project final report	
3. Communications strategy, promotion mechanisms and support tools tested and validated	Four experiments established by July 2004 to test and validate (i) the uptake of policy messages at the national level	Experiment CPs and workplans	Needs of target audiences are consistent with Suite 1 research outputs
		National policies reflect need for ICZM and linkages between ICZM and other sectors	
	(ii) co-management tools and messages for training natural resource users and managers	Incorporation by experiment target audiences of co-management tools and messages in curricula	
		Surveys of experiment participants	
	(iii) the uptake and effectiveness of methods and		

	tools for integrated and equitable coastal zone management		
	(iv) the definition and uptake of a research agenda on natural resource management in the coastal zone	Interviews with and surveys of experiment participants	
	Monitoring and evaluation framework developed for and applied in all four experiments as well as in the observation site	Experiment CPs, workplans and activity reports	
		Project quarterly reports	
	Monitoring systems incorporated into five target organisations that effectively monitor their own improved CZM programmes by end of project	End of project report	
	Results of experiments and observation site incorporated in revised tool box and in recommended follow-up communications strategy by end of project	End of project report and communications strategy	

Activities	Milestones	Important assumptions
O 1. Decision support tools for livelihood sensitive (pro-poor) integrated coastal management arising from projects in NRSP/LWI Suite 1 defined, refined and designed		
1.1 Develop framework for the analysis and compilation of the products previously developed by each of R7408, R7559, R7976 and R8134 (September-October 2003)	**MS 1. a** Framework completed October 2003	All products from Suite 1 projects are available by the start of the project
1.2 Convene project workshop to develop work plans, communications strategy and tool box (Nov 2003))	**MS 1. b** Report and other outputs from workshop circulated December 2003	
1.3 Convene inception workshops for the four experiments (June-August 2004)	**MS 1.c** Experiment partners identified and workshop findings documented August 2004	Workplans for the uptake of specific products from R7559, R7976 and R8134 in place by project inception
1.4 Develop new products to match identified experiment target audience needs using results and products of R7408, R7559, R7976 and R8134 (September 2004-March 2005)	**MS 1.d** Initial "tool box" of Suite 1 and new products complete June 2005	

1.5 Observe institutional change and decision-making processes at selected observation site(s) in order to extract lessons on change processes and effective institutional arrangements (sites of projects R7408, R7559 and R8134) ((September 2003-June 2005)	**MS 1 e** Reports from observation site(s) presented at pre-FTR meeting and seminar on *Improving Coastal Livelihoods,* Saint Lucia, July 2005.	Institutions in observation sites remain interested in collaborating and contributing to monitoring and analysis
1.6 Use findings from field experiments and observation sites to promote revisions to institutional arrangements and recommend design of new decision support tools (September 2004-May 2005)	**MS 1 f** Recommended toolbox contents presented at at pre-FTR meeting and seminar on *Improving Coastal Livelihoods,* Saint Lucia, July 2005.	
1.7 Convene final workshop to prepare revised products (June 2005)	**MS 1 g** Pre-FTR report July 2005 **MS 1.h** Seminar report Improving Coastal Livelihoods September 2005 **MS 1.g** Four experiment reports completed September 2005. **MS 1.h** Final toolbox designed September 2005 **MS 1.i** Final communication strategy designed September 2005 **MS 1.j** Draft research agenda prepared September 2005	

11   Keywords

Caribbean, coastal, co-management, communication, livelihoods, marine protected areas, poverty reduction, resource management, research

Appendix 1: Table 4.3 Summary communications matrix to show evaluation and lessons drawn from each experiment

Target audience	Tool / Product	Pathway	Evaluation	Lesson learned / observations
Experiment 1: Testing the uptake of policy messages at the national level				
• Government Ministers	2-page briefing document	One-on-one breakfast meeting	Effectiveness not yet determined. Will be indicated by:	1-2 page policy briefs are preferable over 4-pages, with bulleted text, tables and examples from relevant case studies, ideally taken from the region.
	Diagram to illustrate role of Ministries and agencies in ICZM		(i) N° of invitees attending meeting (ii) Request for additional information (iii) Follow-up phone calls	Simple graphics are necessary and useful especially when time is limited during oral presentations.
• Permanent Secretaries	2-page briefing document	One-on-one breakfast meeting	Effectiveness not yet determined. Will be determine by:	PSs can play a pivotal role in information exchange, transfer and uptake within Ministries.
	Diagram to illustrate role of Ministries and agencies in ICZM		(i) N° of invitees attending meeting (ii) Request for additional information (iii) Follow-up phone calls	Internal power struggles sometimes exist within Ministries between PSs and their Ministers. It is best to approach Ministers directly and use them as pathways to PSs. A two-pronged approach can be used to increase effectiveness from both the Minister and PS.
• Environmental Journalists	Two 2-page briefing documents	One-on-one press briefing	Follow-up call to assess use of information in articles and columns: (i) Publication of a two-part article by independent journalist (ii) Articles have been published by CZM agency which incorporates policy messages similar to this project. Further communication to be determined after use of information to assess any feedback received from target audience of article.	A one-on-one meeting is useful to provide clarifications and explanation of key terms. However, environmental journalists do not always use the same language as 'technocrats'. Journalists are often on strict deadlines and prefer to meet under their own The journalist must be allowed to maintain the integrity of own writing style. Journalists appreciate and ask for reliable background evidence for messages.
• Energy Corporations	Two 2-page briefing	Formal communication	Meeting yet to be arranged and	Energy Corporations, through their HSE departments can be very

Appendix 1: Table 4.3 Summary communications matrix to show evaluation and lessons drawn from each experiment

Target audience	Tool / Product	Pathway	Evaluation	Lesson learned / observations
	documents	to officer	effectiveness of approach to be determined.	proactive over CZM initiatives and provide a significant opportunity to cultivate widespread consideration for the acceptance of new approaches to CZM if there is uptake.
• Chief Technical Officers	Two 2-page briefing documents	Field trip to coastal community which coincided with relevant local community event	Effectiveness to be determined which:	Targeting Directors to nominate suitable personnel to attend a planned field visits was more effective than approaching officers.
	Diagram to illustrate role of Ministries and agencies in ICZM	PowerPoint presentation	(i) Shows willingness to participate in or host project activity.	The audience showed a variety of awareness, understanding of or interest in CZM issues and their roles in ICZM.
			(ii) Request further information for materials.	A baseline survey would be useful to assess the potential audience level of awareness and understanding of the thematic area.
			Follow-up communication indicated one agency (water management) was planning to follow-up water quality assessment study.	If the audience is of mixed levels of awareness and understanding of CZM issues, separate briefs could be developed.
				No assumptions should be made of high levels of awareness, understanding and interest of CZM issues among public agencies with responsibility for CZM.
				By coinciding a field visit with a community event is cost effective and allows CTOs to have an opportunity to learn about community activities and potential, and to see the link between their responsibilities and these activities.
• CBOs / NGOs	Two 2-page briefing documents	Field trip to coastal community which coincided with relevant local community event	Effectiveness not yet determined but will:	By coinciding a field visit with a local community event dictates that the presentation must suit a range of different levels of understanding and interest at a single point in time. This can be a challenging exercise.
		PowerPoint presentation	(i) Follow-up communication to assess distribution and use of information	Bringing together both CTOs and community members allows both sets of audiences to be better understanding of the pressures and efforts which each face.
			(ii) Request further information for materials.	It may be necessary to suggest to communities the various ways in which material or information received by them could be used after receipt.

Appendix 1: Table 4.3 Summary communications matrix to show evaluation and lessons drawn from each experiment

Target audience	Tool / Product	Pathway	Evaluation	Lesson learned / observations
Experiment 2: Testing co-management tools and messages for training natural resource users and managers				
• Lecturers and other Faculty Members	Guideline documents Videos, CD Guideline updates Summary lessons Case stuffy slides Lecture notes / quick reference guide Online course Self study module	Presentation at workshop Websites Email COMARE Net Face-to-face meetings	An evaluation of the experiment includes: (i) Number and extent of approvals to incorporate co-management materials received from heads of units. (ii) Number and use of messages reported in the terminal workshop compared to the inception.	Several lecturers expressed willingness to incorporate the teaching materials into their course, but not all were unable to do so within the project time frame. Students tended to respond better to practical exercises than to conceptual debates and discussion-orientated seminars, and lecturers have observed a general student decline in interest in the conceptual aspects of academic topics in favour or more job-orientated skills development. More widespread use of the products could be facilitated by packaging them as self-contained learning modules.
• Managers of training institutions	Online course Guidelines documents	Presentation at workshop Face-to-face meetings	(iii) Survey of 6 faculty members and 12 students to assess any changes in the accessibility of items included in the experiment.	The only pre-packaged products used extensively by lecturers, based on relevant case studies classroom exercises, were available on video or DVD materials.
• Librarians	Guidelines documents Videos, CD Case studies Self study module	COMARE Net Face-to-face meetings Presentations and distribution of products		The addition of small group exercises and games alongside the slide presentation was a useful toll when applied in an outreach context. Products need to be available electronically although opportunities for incorporation of the materials in an online course appear limited at present. Discussions at UWI highlighted the large amount of grey literature available from other projects and consultancies, which is often difficult to access and poorly promoted.
Experiment 3: Testing the uptake and effectiveness of methods and tools for integrated and equitable coastal resource management				
• Resource users and communities impacted by MPAs	Guided discussions and field visit based on	Seminar on MPAs and fishing communities	Follow-up semi-structured interviews with 5 participants and written survey	Follow-up interviews long after an activity yield valuable insights into uptake, but questions need to take account of limited recall on

Appendix 1: Table 4.3 Summary communications matrix to show evaluation and lessons drawn from each experiment

Target audience	Tool / Product	Pathway	Evaluation	Lesson learned / observations
	messages from Suite 1 projects		from 1 (6 out of 17 participants) to assess use of knowledge gained and changes in level of involvement in MPA management.	specifics. The seminar had value in bringing together people from different national, cultural and language barriers in order to learn from one another. Site visits that provide opportunities for direct engagement with resource users on their own grounds are valuable for allowing managers to hear their problems and concerns and try to work out solutions.
• MPA managers and management scientists and coastal area planners	Case studies and guidelines from R7559 and R8134 Policy brief based on MPA and fishers seminar CANARI webpage with links to materials from other research relevant to MPAs and coastal communities	Internet: webpage posted on CANARI website with links to sites of main partners	(i) Phone random sample of target audience from list serves used to announce the webpage; (ii) Tracking of website hits showed 550 hits to CANARI webpage and 303 downloads of Policy brief by 15 September 2005; (iii) No response has yet been given to follow-up email survey requesting feedback on how copies were distributed or used.	Although identified as a preferred pathway by limited sampling of target audience, internet may not be accessible to or actively used by the entire audience. Feedback forms on websites are not an effective way to monitor response. Need more research on how target groups in the region access information on the internet, although the site has been heavily visited, there is little evidence of use by its intended audience.
• MPA managers, co-management partners, and governmental agencies responsible for MPAs	Training materials based on relevant material from Suite 1 projects, supported by: R7559 case studies R7559 MPA Guidelines Policy brief based on MPA and fishers seminar Negril case study package (PowerPoint presentation, posters and handouts)	Training workshop	Semi-structured interviews with 4 participants and written survey from 1 participant (5 out of 17 participants) 5 months after workshop.	Discussion format was excellent at involving and getting participation of diverse group of stakeholders. Value of centering discussions around locations, problems and contexts that people know and share. A single day may be too short to communicate complex concepts and bring out full range of participant experience.

Appendix 1: Table 4.3 Summary communications matrix to show evaluation and lessons drawn from each experiment

Target audience	Tool / Product	Pathway	Evaluation	Lesson learned / observations
• Organisations providing technical support to MPA management or advocating for improved coastal area management	Negril case study package	Study tour of Negril Marine Park and community	Requests for feedback on case study posters, hand-outs and PowerPoint presentation were sent out to all 32 participants at the seminar on sustainable coastal livelihoods, where they were presented in July 2005. Only 4 responses were received. Due to the lack of time, it was not possible to follow up with additional telephone interviews. However informal inquiries were also made with several participants.	Well-designed visual displays may make case studies more accessible to audiences by bringing the issues to life in ways that written case studies cannot. Adding a 'human' dimension to the study with oral histories, photographs and press releases leads people to understand management issues in different and more personal ways. Unlike video presentations, this format allows viewers to absorb the information at their own pace. Multiple media can serve to highlight issues in different ways reinforcing main lessons.

Experiment 4: Defining and promoting a research agenda on integrated and equitable natural resource management in the coastal zone

Target audience	Tool / Product	Pathway	Evaluation	Lesson learned / observations
• Civil society "brokers"	PowerPoint presentation Policy Brief on research gaps and priorities	Presentation at regional workshop	Pre-workshop baseline survey among workshop participants compared against survey of uptake	The project's timeframe did not allow for a detailed and rigorous assessment of the pathways used and the product developed. The interviews and discussions with recipients of the products in various project activities revealed that:
• All stakeholders involved in research of 2 selected locations	Community-led participatory consultation	PowerPoint presentation Video Case studies	External observation of consultations	PowerPoint presentation is an effective way to communicate these type of messages since it not only allow for the tailoring of the presentation to the particular audience, but facilitates interactive communication with the audience, with leads to greater retention of the messages and the stimulation of requests to partner with CANARI on identified research needs.
• Research units within University of West Indies (UWI)	PowerPoint presentation Poster	Presentation at UWI faculty	Interviews with key informants in UWI system	
• Funding agencies	Poster (inter-active, well designed)	Presentations at events and for distribution to agencies	A questionnaire on pathways preferences through telephone interviews.	The poster and the Policy Brief are not very effective as primary pathways, but are useful products to reinforce a message already introduced, either through a PowerPoint presentation or through a more informal discussion with the target audience.
• Large-scale private sector resource user	All Suite 1 products	Mentoring and one-to-one communication	Telephone interviews with random sample of 10-20% of each target audience and observations on behavioural change, documented in report/case study.	Unless the Policy Brief addresses a burning current issue, it is scanned briefly and then filed for future reference when a relevant issue arises.
• Local communities	Mobile exhibit	Exhibition	Interviews with key informants in target communities.	

Appendix 1: Table 4.3 Summary communications matrix to show evaluation and lessons drawn from each experiment

Target audience	Tool / Product	Pathway	Evaluation	Lesson learned / observations
• Research units, faculty, students, governmental agencies, funding agencies, NGO brokers and regional agencies	Policy Brief	Printed Documents	Interviews with key informants in UWI system to assess uptake.	Interviewees expressed a preference for a short Policy Brief with tables and case study boxes.
	Poster			Posters can become discussion points when prominently displayed even when the recipient has not fully absorbed the images.