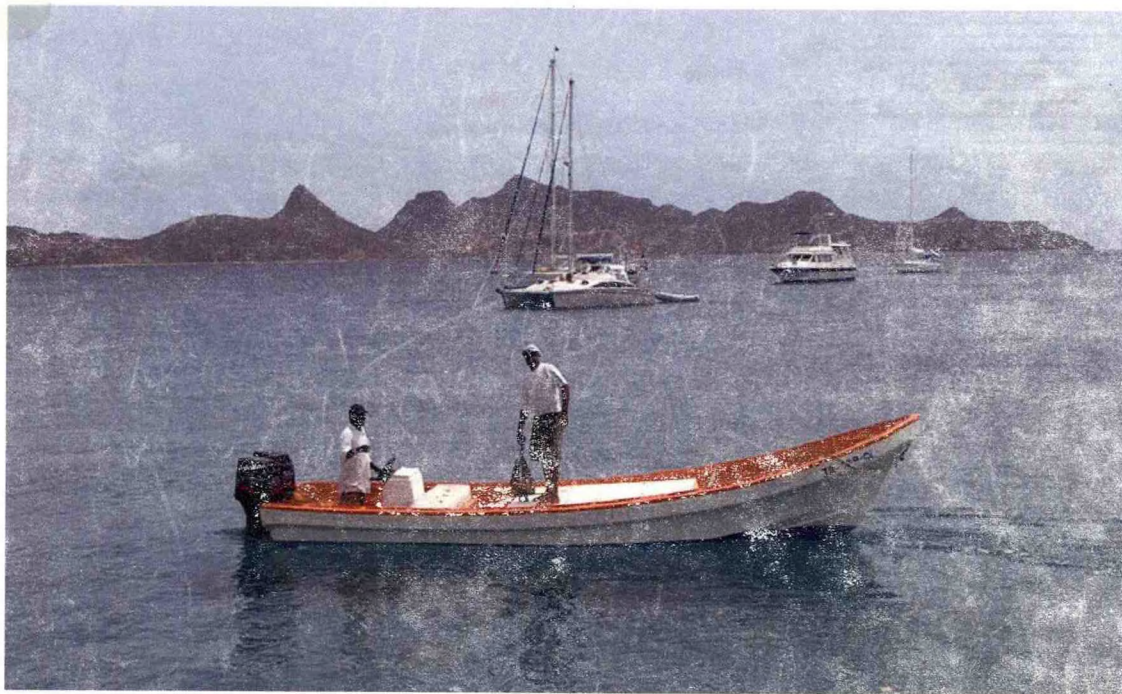


CERMES Regional Project on Enhancing Management Effectiveness at Three
Marine Protected Areas in St. Vincent and the Grenadines, Jamaica & Belize

QH
91.75
.S18
I53
2005

**Inception Training Workshop for Enhancing the
Management Effectiveness of the Tobago Cays
Marine Park, St. Vincent and the Grenadines
Union Island, 19-20 December 2005**

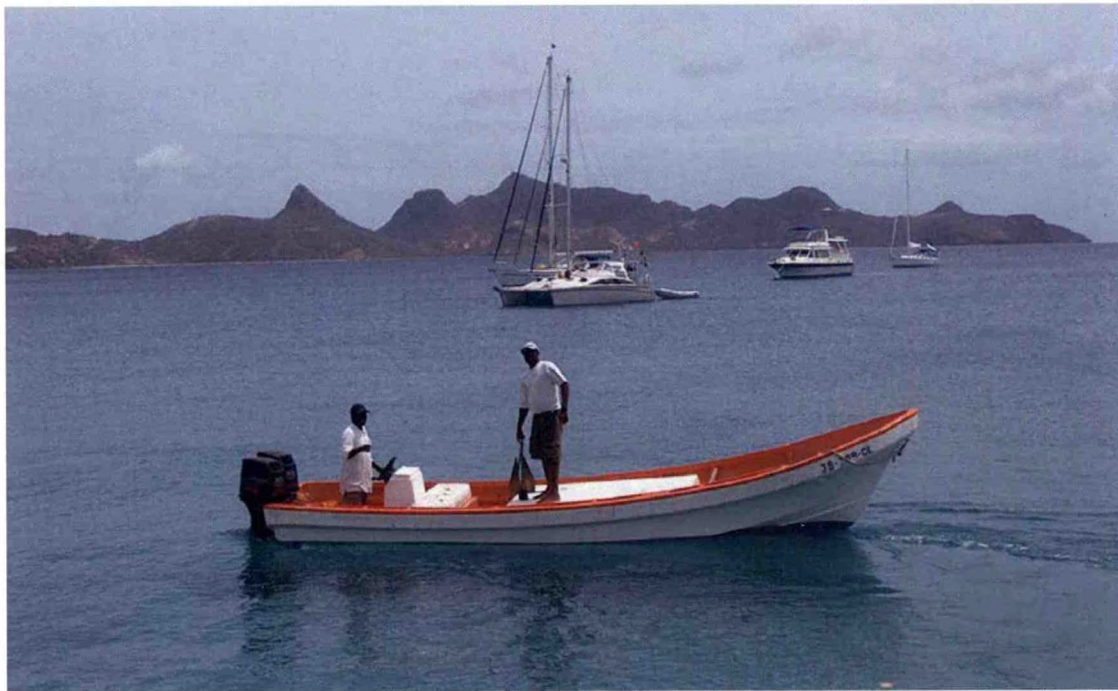


Centre for Resource Management and Environmental Studies (CERMES)
University of the West Indies, Faculty of Pure and Applied Sciences
Cave Hill Campus, Barbados

2005

CERMES Regional Project on Enhancing Management Effectiveness at Three Marine Protected Areas in St. Vincent and the Grenadines, Jamaica & Belize

Inception Training Workshop for Enhancing the Management Effectiveness of the Tobago Cays Marine Park, St. Vincent and the Grenadines
Union Island, 19-20 December 2005

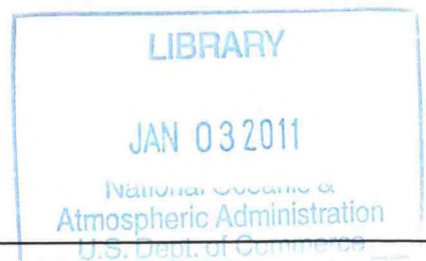


QH
91.75
.S18
I53
2005



Centre for Resource Management and Environmental Studies (CERMES)
University of the West Indies, Faculty of Pure and Applied Sciences
Cave Hill Campus, Barbados

2005



CONTENTS

1	INTRODUCTION.....	1
2	MANAGEMENT GOALS AND OBJECTIVES.....	1
2.1	TCMP GOAL	1
2.2	TCMP OBJECTIVES.....	1
3	INDICATORS	2
3.1	BIO-PHYSICAL INDICATORS	2
3.2	SOCIO-ECONOMIC INDICATORS.....	2
3.3	GOVERNANCE INDICATORS	3
4	EVALUATING EFFECTIVENESS.....	3
4.1	BIO-PHYSICAL INDICATORS	3
4.1.1	<i>Reef Check and terrestrial survey.....</i>	<i>3</i>
4.1.2	<i>Water quality</i>	<i>4</i>
4.2	SOCIO-ECONOMIC INDICATORS.....	5
4.3	GOVERNANCE INDICATORS	5
4.4	AUDIENCES	6
4.5	EVALUATION TEAM	6
5	CONCLUSION.....	7
6	REFERENCES.....	7
7	APPENDICES	8
	APPENDIX 1: PROJECT ANNOUNCEMENT.....	8
	APPENDIX 2: PROGRAMME	10
	APPENDIX 3: PARTICIPANTS	12
	APPENDIX 4: WORKSHEET 1 — FORM TO USE IN TRACKING THE STEPS OF AN EVALUATION	13
	APPENDIX 5: WORKSHEET 2 — FORM ON WHICH TO LIST YOUR GOALS, OBJECTIVES AND INDICATORS	15
	APPENDIX 6: WORKSHEET 3 — INDICATOR PRIORITIZATION.....	16
	APPENDIX 7: WORKSHEET 4 — HUMAN RESOURCE NEEDS.....	18
	APPENDIX 8: WORKSHEET 5 — EQUIPMENT NEEDS.....	20
	APPENDIX 9: WORKSHEET 6 — BUDGET NEEDS	22
	APPENDIX 10: WORKSHEET 7 — IDENTIFYING TARGET AUDIENCES.....	24
	APPENDIX 11: WORKSHEET 8 — AUDIENCE ANALYSIS	25
	APPENDIX 12: WORKSHEET 9 — EVALUATION TEAM IDENTIFICATION	25

Citation

CERMES. 2005. Report of the Inception Training Workshop for Enhancing the Management Effectiveness of the Tobago Cays Marine Park, St. Vincent and the Grenadines. Union Island 19-20 December 2005. CERMES Regional Project on Enhancing Management Effectiveness at Three Marine Protected Areas in St. Vincent and the Grenadines, Jamaica and Belize. Report No.1. 25pp.

Disclaimer

This report was prepared by the Centre for Resource Management and Environmental Studies (CERMES) under Coral Reef Conservation Grant NA05NOS4631049 from the National Oceanic and Atmospheric Administration (NOAA), U.S. Department of Commerce. The statements, findings, conclusions and recommendations are those of the author(s) and do not necessarily reflect the views of NOAA or the U.S. Department of Commerce.

Contact

Dr. Patrick McConney
Senior Lecturer, CERMES
UWI Cave Hill Campus
St. Michael, Barbados

Tel: 246-417-4725
Fax: 246-424-4204
Email: pmcconney@caribsurf.com
Web site: www.cavehill.uwi.edu/cermes

1 INTRODUCTION

The context and background to the project, as appears in the announcement (Appendix 1), was outlined by Patrick McConney, the CERMES project manager. The workshop programme (Appendix 2) was agreed to by participants (Appendix 3) who came from Union Island, Mayreau and mainland St. Vincent. They were drawn from diverse governmental and non-governmental organisations, all of which had previously been identified as stakeholders in the management of the Tobago Cays Marine Park (TCMP). All of the participants had attended workshops or meetings dealing with various aspects of TCMP management, but none of these addressed marine protected area (MPA) management effectiveness as its focus. Each participant received a copy of the guidebook *'How is your MPA doing?'* (Pomeroy et al. 2004) and its worksheets. The workshop was held in the meeting room of Sustainable Grenadines in Clifton on Union Island.

2 MANAGEMENT GOALS AND OBJECTIVES

Bob Pomeroy, the lead author of the guidebook and the project's method trainer and adviser, introduced the marine protected area management effectiveness (MPA-ME) methodology. He described how the methodology had evolved and had been applied in other locations around the world. Due to the limited time available, the worksheet handouts were used only as guides for discussion and decision-making in the workshop. Some forms were partly filled out afterwards. Worksheet 1 (Appendix 4) provided a checklist of the steps. A key point was that evaluation must be based on the goals and objectives of the particular MPA (Worksheet 2 in Appendix 5).

Participants set about determining applicable goals and objectives for the TCMP. Normally these would be stated in the area's management plan. However, no approved operational goals and objectives were written or actively used in managing the TCMP. A recent review (Byrne 2005) indicated that this major deficiency needs to be urgently addressed, perhaps by drawing upon recommended goals and objectives from the various studies of the area done over the last decade. To devise the list below, workshop participants drew upon the park legislation, a few available documents (e.g. MEDO 2003) and their consensus on what should now be done in the park.

2.1 TCMP goal

To protect, conserve and sustainably utilise the natural resources of the Tobago Cays for future use.

2.2 TCMP objectives

- Working with other relevant agencies using the media to promote the marine park as a tourist resort and attraction
- Ensuring that the park is managed along commercial lines
- Protect the biodiversity of the park
- To conserve the marine resources
- Public awareness and stakeholder participation
- Public education
- To protect sustainable livelihoods

A management plan is apparently being drafted through other projects by the Board of the TCMP. It is uncertain when this plan would be finalised or become operational, but it may occur

during the MPA-ME project. A discussion ensued on the usefulness of this MPA-ME project given that different goals and objectives may soon be officially approved. Participants concluded that their list was likely to be fairly similar to any developed in a more formal exercise during which greater refinement would be expected. They also concluded that the experience of doing the evaluation would assist in developing realistic formal goals and objectives, and that they would be in a better position after the project to participate in the management process, whatever the official aims might be. The CERMES project manager said that many benefits could be obtained from collaboration and learning together, referring in particular to improving prospects for successful co-management of the TCMP.

3 INDICATORS

Following the methodological steps presented by Bob Pomeroy, the participants used the goals and objectives to identify overlapping goals and objectives in the guidebook, and their associated indicators. It was an iterative process of determining what seemed to fit best without trying at that point to narrow down the indicators. The latter prioritisation was the next step (Appendix 6, Worksheet 3). This resulted in the selection of 13 indicators that were least difficult and most appropriate for measurement. The indicators and some reasons for selecting them are below.

3.1 Bio-physical indicators

1. Focal species abundance
2. Water quality

Participants realised that they did not have the capacity to undertake several of the scientific bio-physical assessments, and that other organisations or projects (e.g. TNC and OPAAL) may be covering some of these. Although they acknowledged that it was not ideally suited, they decided that Reef Check was the most practical methodology for evaluating some aspects of focal species abundance. The park rangers and others were recently Reef Check trained and were keen to implement the surveys. Later it was decided to add terrestrial focal species abundance surveys on the cays which are also part of the park.

Water quality was selected with much discussion on its relevance and the degree of sampling sophistication that was appropriate. It was pointed out that discharges from vessels (e.g. sewage, garbage, fuel) were most likely to cause the water quality in the park to be worse than the surrounding sea, and that this difference may not be significant or persistent. However, given the importance of the Cays as an international nautical tourism destination, it was felt that the park ought to be able to make some informed statements about water quality even if it was not a very important issue for the TCMP. Expert advice, available from the Fisheries Division, was needed.

3.2 Socio-economic indicators

1. Local values and beliefs about marine resources
2. Level of understanding of human impacts on resources
3. Material style of life
4. Household income distribution by source

Evaluations related to livelihoods and environmental awareness were the main socio-economic concerns. One participant was an interviewer in surveys recently completed by CERMES, and several other participants were familiar with social survey methods. They agreed that the focus

should be on water taxi operators and other TCMP users in comparison to the general population. This will overlap with TNC and OPAAL activities and some coordination would be necessary.

3.3 Governance indicators

1. Existence of a decision-making and management body
2. Existence and adoption of a management plan
3. Availability and allocation of MPA administrative resources
4. Degree of interaction between managers and stakeholders
5. Level of stakeholder participation and satisfaction in management
6. Clearly defined enforcement procedures
7. Enforcement coverage

Participants were most apprehensive about governance and hence they selected more indicators. These were clustered around management organisation and interactions, and enforcement. Much of the measurement will rely on gaining access to park documents, and this will test the transparency of the TCMP management. Although no confidential information will be required, the participants thought it useful to ask a senior government official, the Chief Fisheries Officer, to serve as 'gatekeeper' to ensure that access to park information was not a problem.

The remainder of the workshop was devoted to planning activities to evaluate effectiveness using the three sets of indicators presented above. Details are below and in the worksheet appendices.

4 EVALUATING EFFECTIVENESS

For the three types of indicators participants considered:

- Human resource needs (Appendix 7, Worksheet 4)
- Equipment needs (Appendix 8, Worksheet 5)
- Budget needs (Appendix 9, Worksheet 6)
- Work schedule (no appendix or worksheet)

The points discussed were recorded on a flip chart. Most were later entered on the appropriate worksheets in the appendices, but some details (budget and work schedule) are presented below.

4.1 Bio-physical indicators

4.1.1 Reef Check and terrestrial survey

It was suggested that the TCMP needed 6 snorkel and scuba divers to do 4 transects. Transects should be permanently marked and their coordinates recorded for future monitoring. Monitoring all 4 can be done over 2 days. The team leader (Olando Harvey) needs to consult and coordinate with the Fisheries Division (especially Sophie Punnett) as the Reef Check national focal point to choose the sites and ensure that they are integrated into the national monitoring scheme. Training should not be necessary, but other resource persons were identified along with the team of mostly rangers (Appendix 7). Meritha Small will handle logistics and data management. All team members are volunteers (making an in-kind contribution), and the 2-day operation should be done twice in the evaluation period of Feb-Sep 2006. Catering includes food, water, ice, cooler and de-briefing refreshments. Scuba rental is at a discounted, not tourist, rate.

For the surveys on the cays, Fr. Mark DaSilva should be assisted by 2 people from the Forestry Department to do the survey in one 2-day trip. Transportation costs, accommodation for 2 people for 2 days and other costs should not exceed EC\$1,000. The budget for both indicators is below.

Expenditure description	Cost (EC\$)
Transect installation	260
Fuel and oil (\$250/monitoring event)	500
SCUBA rental (US\$50 rental x 4 people x 2 days =~\$1,040/monitoring event)	2,080
Catering (\$320/monitoring event)	640
Miscellaneous (\$100/monitoring event)	200
Terrestrial survey transportation, accommodation and field work	1,000
Total	4,680

This is the proposed work plan schedule:

Activity description	F	M	A	M	J	J	A	S
Survey design, re-locate transects, Fish Div approvals, logistics	X	X						
Marine and terrestrial surveys after Easter; data compilation			X					
Reporting communications combined with other projects				X				
Marine surveys again; data compilation						X		
Reporting communications combined with other projects							X	
Preparation of presentations and/or posters for GCFI meeting								X

4.1.2 Water quality

Water quality analyses must be done through the Fisheries Division. Dr. Barnabe, their proposed trainer and analyst, is a key resource person for all aspects of this evaluation, perhaps with input from the Standards Bureau and environmental health officials. She will need to advise on the appropriate parameters for analysis, methods and the associated logistics, including acquisition of specialised equipment at start-up and consumable analytical supplies throughout. Training will be required for field staff. Participants felt that sampling once per month would be adequate, but appreciated that any budget or work schedule would be provisional due to lack of technical information among those present at the workshop. High equipment or supply costs may make this activity unaffordable.

Expenditure description	Cost (EC\$)
Train 2 rangers in field techniques (transport, accommodation)	unknown
Equipment capital costs, GPS unit	unknown
Samples transport to Kingstown once per month (SVG Air or Barracuda)	unknown
Recurrent supplies like chemicals	unknown
Boat trip costs, recurrent	unknown
Total	

A possible timeline, subject to change on receipt of expert advice, is shown below.

Activity description	F	M	A	M	J	J	A	S
Needs analysis, design, equipment ordering	X							
Training in field techniques		X						
Sampling starts			X					
Sampling continues				X				
Sampling continues					X			
Sampling continues; plan sustainability of monitoring						X		
Sampling continues; reporting communications							X	
Project sponsored sampling ends								X
Preparation of presentations and/or posters for GCFI meeting								X

4.2 Socio-economic indicators

The 4 socio-economic indicators and 1 governance indicator (G12) may be addressed by a single survey instrument to be administered in Union Island and Mayreau. Patrick McConney, Robert Pomeroy, and Alexcia Cooke can assist with survey design and training. Ann Harvey (team leader) will have 3 interviewers (Nicole, Lucine, Fr. Mark) and a data analyst (Meritha Small). A collaborator may be Kim Baldwin of CERMES whose PhD research interests may be similar.

There should be 2 respondent categories for comparison (TCMP users and general population). If there are about 50 water taxi operators, the sample should be around 20 of them. If Union Island has a population of just under 2,000 of which about half are adults, then a sample of around 5% (40 adults) is appropriate. Other TCMP users include about 10 scuba diving enterprises and coastal cruisers, and a sample of about 3 that are Union Island based is sufficient if they are similar. If the 3 interviewers do about 70 interviews in total, averaging 5-10 questionnaires a day, the task should be completed in 3-5 days including delays. Data editing and analysis should be allocated an additional 2 days. Estimated costs are:

Expenditure description	Cost (EC\$)
Interviewer EC\$10/questionnaire stipend includes transport, snacks etc.	700
Data analysis stipend	200
Stationery and supplies	500
Miscellaneous	100
Total	1,500

The suggested work schedule is:

Activity description	F	M	A	M	J	J	A	S
Survey design and training	X							
Survey and analysis		X						
Reporting communications			X					
Preparation of presentations and/or posters for GCFI meeting								X

4.3 Governance indicators

Apart from adding G12 to the socio-economic survey questions, the remainder (G2, G3, G6, G9, G14, G15) may be investigated using official documents and semi-structured interviews with

TCMP staff. Need an ‘outside’ and ‘inside’ team of 2 people. Inside is Meritha Small, and outside is Yvette Bentick (team leader) facilitated by a Kingstown government ‘gatekeeper’ (Raymond Ryan) with assistance from Fr. Mark DaSilva. Estimated costs are:

Expenditure description	Cost (EC\$)
Day-trip to Kingstown to access documents	490
Phone card to communicate with Kingstown	20
Airfare for Kingstown trip	180
Hotel and meals for Kingstown trip	250
Transport within Kingstown	40
Copying (approx. 150 pages)	75
Miscellaneous	75
Total	1,130

A timeline for work is:

Activity description	F	M	A	M	J	J	A	S
Design content analysis; locate documents in the Grenadines;	X							
Arrange Kingstown trip for documents not in Grenadines	X							
Kingstown trip for data gathering; analysis of data		X						
Reporting communications			X					
Preparation of presentations and/or posters for GCFI meeting								X

4.4 Audiences

The main target audiences for outputs are:

1. TCMP Board of management
2. Dept. of Grenadines Affairs, PMO
3. Fisheries Division
4. Stakeholder NGOs
5. Public of Southern Grenadines

See Worksheets 7 and 8 (Appendices 10 and 11) for details. Reports, summaries, presentations and use of the mass media were all ways in which results can be disseminated. A budget for communications is required, but this was not discussed in detail.

4.5 Evaluation team

The evaluation team was assembled as the workshop progressed. Members are identified in Worksheet 4 (Appendix 7) but also see the form at Appendix 12 (Worksheet 9). The 3 team leaders are all Grenadines people and the group insisted that project leadership must be with the TCMP office in Union Island. A deciding point for the latter was the assurance that the TCMP office had an accounting system that allowed project funds to be received and spent efficiently in small amounts. Having the TCMP office assume leadership was also seen as a test of management effectiveness. Meritha Small of the TCMP office will be the main contact with Roseman Adams as local NGO back-up, and communications will be copied to Raymond Ryan at Fisheries Division for information.

5 CONCLUSION

Informally, participants assessed the workshop as having been useful despite their reservations at the start. An optional formal evaluation sheet was provided for those who wished to submit it later. Administrative setup of the project will take place in January 2006, leaving an evaluation period of February – September 2006 prior to the meeting at the Gulf and Caribbean Fisheries Institute (GCFI) in Belize in November 2006. After this phase, emphasis will be on documenting lessons learned and setting up the follow-up grants for adaptive management.

Patrick McConney thanked those attending for their very active participation and Alexcia Cooke for the assistance with local logistics. He noted that the summary workshop report would be circulated early in January during which month the inception training workshops in Jamaica and Belize were scheduled to take place. Participants were reminded that, outside of this project, CERMES could assist in providing information on MPA management, facilitate subscriptions to email lists and groups, and otherwise support efforts to manage the TCMP through its outreach initiatives. The workshop concluded on this positive note.

6 REFERENCES

- Byrne, J. 2005. Tobago Cays Marine Park: Analysis of existing management plans. Report of The Nature Conservancy.
- MEDO. 2003. A Management Proposal for the Tobago Cay Marine Park, St. Vincent and the Grenadines. Report of the Mayreau Environmental Development Organisation. September 2003.
- Pomeroy, R. S., J. E. Parks, and L. M. Watson. 2004. How Is Your MPA Doing? A guidebook of natural and social indicators for evaluating marine protected area management effectiveness. The World Conservation Union (IUCN). Gland, Switzerland. 230 pp.

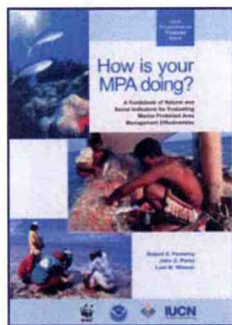
7 APPENDICES

Appendix 1: Project announcement

The Centre for Resource Management and Environmental Studies (CERMES) of the University of the West Indies (UWI) Cave Hill Campus is implementing a project to evaluate marine protected area (MPA) management effectiveness, and to learn lessons from this process, at three MPA sites in the Caribbean:

- Belize — Sapodilla Cayes Marine Reserve (other Belize MPAs already have similar projects planned)
- Jamaica — Negril Marine Park (currently doing a socioeconomic study which this should complement)
- St. Vincent and the Grenadines — Tobago Cays Marine Park (currently rearranging its management)

Why a project about MPA management effectiveness?



MPAs are important ecological, economic, social and cultural assets for Caribbean countries and beyond, partly due to their significance to tourism earnings in the region. Despite many projects and proposals, and good intentions, management authorities and small field staffs have struggled with very inadequate capacity to manage most MPAs in the region. This situation needs to be remedied immediately.

A recent guidebook entitled "*How is your MPA doing?*" sets out new methods for evaluating how a marine park is being managed. Bio-physical, socio-economic and governance indicators of MPA management are assessed using existing information, natural and social science surveys, and various other means of data collection.

What will actually be done from October 2005 to March 2007?

The summary specific objectives for this project funded by a NOAA Coral Reef Conservation Grant are:

1. To conduct participatory management effectiveness research and evaluations by training at least 30 people across three MPA sites.
2. To improve MPAs in the region by monitoring outcomes documented in lessons learned combined with training and communication materials for coursework, research, management and coastal policy.

The project has four main components:

1. Inception site-specific training workshops in MPA management effectiveness and evaluation
2. Participatory management effectiveness research and evaluations at the three MPA locations
3. A terminal joint workshop on lessons learned and the consequent adaptation of management
4. Production of training materials based on experiences of the process and on lessons learned

What are likely to be the main benefits from this project?

The goal is to promote and institutionalise improved and adaptive coastal management practices and policies in the Caribbean through use of applied research and interdisciplinary training. The project will contribute towards building capacity in MPA management effectiveness evaluation in the Caribbean. Project participants will assess MPA management effectiveness under three main headings:

- ◆ Bio-physical ... status of the resources, fish populations, water quality, environmental conditions, etc.
- ◆ Socio-economic ... value of the area to various users, culture, livelihoods, sources of income, etc.
- ◆ Governance ... achieving goals and objectives, capacity for management, stakeholder groups, etc.

Knowing the strengths and weaknesses of management in the past facilitates making improvements. Integration with the university's communications network, teaching and research programmes, curriculum development and other initiatives will add value to the project and its regional impact through sharing lessons learned and disseminating output products. Participatory and community-based approaches will facilitate stakeholder involvement and adaptive management to ensure that the best practices are institutionalized based upon the lessons learned and the skills acquired during the project or afterwards.

Appendix 2: Programme

When: Monday 19th – Tuesday 20th December 2005

Where: Sustainable Grenadines office, Union Island

Why: Workshop goals and objectives ...

The **goal** of this workshop is for marine protected area (MPA) managers and key stakeholders in the Tobago Cays Marine Park (TCMP) to learn how to conduct an evaluation of management effectiveness for the MPA using the methods in the WCPA/WWF "*How Is Your MPA Doing?*" guidebook. There are **three objectives** associated with this inception training workshop:

1. To select the most appropriate biophysical, socioeconomic and governance indicators with which to assess the management effectiveness of the TCMP
2. To understand the process, expected outputs, and resource needs to complete an evaluation
3. To develop a feasible work plan and timeline for the evaluation based on the Guidebook.

Day One: Monday 19 December 2005

<i>Time</i>	<i>Agenda Items</i>
08:30	<u>Registration and document distribution</u>
08:45	<u>Welcome and Introduction</u> <ul style="list-style-type: none"> ▪ Welcome to participants and trainer ▪ Review workshop goals and objectives ▪ Workshop logistics, questions & answers
09:00	<u>Session One: Introduction to the guidebook</u> <ul style="list-style-type: none"> ▪ Overview of the MPA Management Effectiveness Initiative ▪ Introduction to the indicators and evaluation process
09:30	Break
10:00	<u>Session Two: Match your MPA aims against those in the guidebook</u> <ul style="list-style-type: none"> ▪ Overview of part 1; introduce and complete steps 1-1(a) through (e)
11:00	<u>Session Three: Select a relevant set of possible indicators</u> <ul style="list-style-type: none"> ▪ Introduce and complete steps 1-2(a) and (b)
12:00	Lunch
13:00	<u>Session Four: Review and prioritize which indicators you will measure</u> <ul style="list-style-type: none"> ▪ Introduce and complete steps 1-3(a) through (d)
14:00	<u>Session Five: Identify how the selected indicators relate to one another</u> <ul style="list-style-type: none"> ▪ Introduce and complete steps 1-4
15:00	Break
15:30	<u>Session Six: Assess Resource Needs for Conducting the Evaluation</u> <ul style="list-style-type: none"> ▪ Overview of Part 2; Introduce and complete steps 2-1(a) through (d)

<i>Time</i>	<i>Agenda Items</i>
16:30	<u>Session Seven: Determine the Audience(s) for the Results</u> <ul style="list-style-type: none"> ▪ Introduce and complete steps 2-2(a) and (b)
17:00	<u>Session Eight: Determine Who Should Participate in the Evaluation</u> <ul style="list-style-type: none"> ▪ Introduce and complete steps 2-3(a) through (d)
17:30	Day wrap-up
1800	Social event: public presentation on the project and TCMP co-management research

Day Two: Tuesday 20 December 2005

<i>Time</i>	<i>Agenda Items</i>
08:00	<ul style="list-style-type: none"> ▪ Review of previous day's activities
08:30	<u>Session Nine: Indicator selection, prioritization and assigning the resources</u> <ul style="list-style-type: none"> ▪ Participants briefly present results of: (a) MPA goals & objectives matched; (b) indicators selected and prioritized; (c) target audience(s); and (d) expected evaluation participants
09:30	Break
10:00	<u>Session Ten: Develop an Evaluation Timeline and Work plan</u> <ul style="list-style-type: none"> ▪ Introduction to Steps 2-4(a) through (c) ▪ Implementation of work: (1) biophysical indicators; (2) socioeconomic indicators; (3) governance indicators; (4) training materials and outreach communication
12:00	Lunch
13:00	<u>Session Twelve: Collecting and Analyzing the Data; Using the Results</u> <ul style="list-style-type: none"> ▪ Overview of Parts 3 (Steps 3-1 through 3-5) and 4 (Steps 4-1 & 4-2)
14:30	<u>Session Thirteen: Next Steps</u> <ul style="list-style-type: none"> ▪ Short-term: finalizing implementing and work plans ▪ Long-term: follow-up technical assistance and funds
15:00	Break
15:30	<u>Session Fourteen: Workshop Evaluation and Close</u> <ul style="list-style-type: none"> ▪ Review progress against workshop goal and objectives, participant expectations ▪ Closing remarks
16:00	Departures

Appendix 3: Participants

Name	Organisation	Contact phone
Augustus Mitchell	Businessman	- na -
Patrick McConney	CERMES, UWI	246-417-4725
Jeremiah Jones	Community Development	784-495-5494
Olivia Bentick	Community Development	784-485-8114
Raymond Ryan	Fisheries Division	784-456-1178
Lucine Edwards	Fisheries Division	784-456-2738
Marlon Mills-Browne	Friends of the Tobago Cays	784-457-4444
Glenroy Adams	Grenadines Dive	784-458-8138
Mark Da Silva	Mayreau Environmental Development Organisation (MEDO)	mayreau@caribsurf.com
Olando Harvey	St. George's University student	- na -
Alexcia Cooke	Sustainable Grenadines Project	784-485-8778 or 79
Meritha Small	Tobago Cays Marine Park	784-485-8191 or 784-593-4744
Vibert Dublin	Tobago Cays Marine Park	784-485-8191
Jack Daudin	Union Island Association for Ecological Preservation (UIAP)	784-458-8335
Mathew Harvey	Union Island Eco-tourism Movement (UIEM)	784-495-4817
Roseman Adams	Union Island Environmental Attackers (UIEM)	784-526-4500
Nicole Delpeche	Union Island Tourist Board	784-458-8350
Ann Harvey	Union Island Tourist Board	784-430-5468
Robert Pomeroy	University of Connecticut	860 405-9215

Not all participants attended all workshop sessions. Some visited only for a short period.

Appendix 4: Worksheet 1 — Form to use in tracking the steps of an evaluation

Part 1: Selecting Your Indicators

1-1	Identify your MPA goals and objectives		
	1-1a	Locate the management plan and other relevant information relating to your MPA	<input type="checkbox"/>
	1-1b	Review the documents and identify the goals and objectives (see Box 4, The Goals and Objectives of an MPA)	<input type="checkbox"/>
	1-1c	List the goals and objectives of your MPA on the worksheet provided (Worksheet 2)	<input type="checkbox"/>
	1-1d	Identify the goals and associated objectives of your MPA that overlap with those listed in the summary tables of goals and objectives (see Figures 2, 3 and 4 in Section 2)	<input type="checkbox"/>
	1-1e	List the overlapping goals and objectives on the worksheet (using the numbers and names in the summary tables)	<input type="checkbox"/>
1-2	Match relevant indicators to your MPA goals and objectives		
	1-2a	Identify the indicators that match your list of goals and objectives (see Figures 2, 3 and 4 in Section 2)	<input type="checkbox"/>
	1-2b	List the relevant indicators on the worksheet (using the numbers and names in the summary tables)	<input type="checkbox"/>
1-3	Review and prioritize the indicators identified		
	1-3a	Review each indicator identified from the description in Appendix 1	<input type="checkbox"/>
	1-3b	Determine the feasibility of measuring the indicators identified	<input type="checkbox"/>
	1-3c	If it is not feasible to measure all indicators, prioritize them	<input type="checkbox"/>
	1-3d	Complete the list of selected indicators	<input type="checkbox"/>
1-4	Identify how the selected indicators relate to one another		<input type="checkbox"/>

Part 2: Planning your evaluation

2-1	Assess resource needs for measuring your indicators		
	2-1a	Determine the estimated human resources needed to measure and analyze the selected indicators	<input type="checkbox"/>
	2-1b	Determine the equipment needed to measure and analyze the selected indicators	<input type="checkbox"/>
	2-1c	Estimate the budget that will be needed for the evaluation	<input type="checkbox"/>
	2-1d	Analyze the available human resources, equipment and budget; if not sufficient, develop a plan to secure funds. Secure additional resources as necessary.	<input type="checkbox"/>
2-2	Determine the audience(s) who will receive the evaluation results		
	2-2a	Identify the target audience(s)	<input type="checkbox"/>
	2-2b	Determine and prioritize the primary audience(s)	<input type="checkbox"/>
2-3	Identify who should participate in the evaluation		
	2-3a	Determine the level of expertise that is needed to conduct the evaluation	<input type="checkbox"/>
	2-3b	Determine which staff or non-staff will conduct the evaluation	<input type="checkbox"/>
	2-3c	Determine how and when to involve the stakeholders	<input type="checkbox"/>

	2-3d	Create the evaluation team and determine the people responsible for each task	<input type="checkbox"/>
2-4	<i>Develop a timeline and a workplan for the evaluation</i>		
	2-4a	Determine the amount of time needed for each activity	<input type="checkbox"/>
	2-4b	Determine when the data need to be collected	<input type="checkbox"/>
	2-4c	Develop an evaluation workplan	<input type="checkbox"/>

Part 3: Conducting your evaluation

(The checklist may be open at this step for many months while the chosen indicators are evaluated, surveys carried out, and reports completed in accordance with the evaluation techniques suggested in Section 2)

3-1	<i>Implement your evaluation workplan</i>		<input type="checkbox"/>
3-2	<i>Collect data</i>		
	3-2a	Study and understand the data collection methods	<input type="checkbox"/>
	3-2b	Familiarize yourself with the best practices and principles for collecting data in the field	<input type="checkbox"/>
	3-2c	Determine the sampling approach	<input type="checkbox"/>
	3-2d	Ensure everything is in place for data collection	<input type="checkbox"/>
3-3	<i>Manage collected data</i>		
	3-3a	Determine who will be the 'data manager'	<input type="checkbox"/>
	3-3b	Determine how collected data will be submitted to the data manager	<input type="checkbox"/>
	3-3c	Code the data	<input type="checkbox"/>
	3-3d	Develop a system for storing and entering the data	<input type="checkbox"/>
	3-3e	Collate and review the data set	<input type="checkbox"/>
	3-3f	Determine how to make the data available for analysis and sharing	<input type="checkbox"/>
3-4	<i>Analyze collected data</i>		
	3-4a	Review the questions being asked by the evaluation	<input type="checkbox"/>
	3-4b	Complete a preliminary analysis	<input type="checkbox"/>
	3-4c	Determine and prepare analysis	<input type="checkbox"/>
	3-4d	Capture and prepare results	<input type="checkbox"/>
3-5	<i>Encourage peer review and independent evaluation of results</i>		<input type="checkbox"/>

Part 4: Communicating results and adapting management

4-1	<i>Share results with target audiences</i>		
	4-1a	Determine which format to use to provide evaluation results and to reach the target audience most effectively	<input type="checkbox"/>
	4-1b	Develop a strategy and a timeline for delivery of results	<input type="checkbox"/>
	4-1c	Tell your story! Communicate your findings to the stakeholders	<input type="checkbox"/>
4-2	<i>Use results to adapt management strategies</i>		<input type="checkbox"/>

(This step should never be closed since adaptive management is an open-ended tool).

Appendix 5: Worksheet 2 — Form on which to list your goals, objectives and indicators

GOALS RELATED TO YOUR MPA	To protect, conserve and sustainably utilise the natural resources of the Tobago Cays for future use.		
OVERLAPPING GOALS FROM SUMMARY TABLES (Figures 2, 3 and 4 in Section 2)	OBJECTIVES RELATED TO YOUR MPA	OVERLAPPING OBJECTIVES FROM SUMMARY TABLES (Figures 2, 3 and 4 in Section 2)	RELEVANT INDICATORS FROM SUMMARY TABLES (Figures 2, 3 and 4 in Section 2)
Biophysical Goal 2 = Biological diversity protected	<ul style="list-style-type: none"> Protect the biodiversity of the park To conserve the marine resources 	2B = Ecosystem functions maintained 2E = Unnatural threats and human impacts eliminated or minimised inside and/or outside the MPA	B1, B9 B4, B8, B10
Socio-economic Goal 2 = Livelihoods enhanced or maintained	<ul style="list-style-type: none"> To protect sustainable livelihoods 	2A = Economic status and relative wealth of coastal residents and/or resource users improved	S7, S9
Socio-economic Goal 6 = Environmental awareness and knowledge enhanced	<ul style="list-style-type: none"> Working with other relevant agencies using the media to promote the marine park as a tourist resort and attraction Public education 	6A = Respect for and/or understanding of local knowledge enhanced 6B = Public's understanding of environmental and social 'sustainability' improved 6C = Level of scientific knowledge held by public increased	S2 S2, S3 S2
Governance Goal 1 = Effective management structures and strategies maintained	<ul style="list-style-type: none"> Ensuring that the park is managed along commercial lines All other objectives 	1A = Management planning implemented and process effective	G2, G3
Governance Goal 2 = Effective legal structures and strategies for management maintained	<ul style="list-style-type: none"> All objectives 	2E = Enforceability of arrangements ensured	G5, G13, G14
Governance Goal 3 = Effective stakeholder participation and representation maintained	<ul style="list-style-type: none"> Public awareness and stakeholder participation 	3A = Representativeness, equity and efficacy of collaborative management systems ensured 3C = Community organising and participation enhanced	G12 G8, G9
Governance Goal 4 = Management plan compliance by resource users enhanced	<ul style="list-style-type: none"> All objectives 	4A = Surveillance and monitoring of coastal areas improved 4D = User participation in surveillance, monitoring and enforcement increased	G6, G14, G15 G13

Appendix 6: Worksheet 3 — Indicator prioritization

Relevant indicators identified (taken from worksheet 2)	Difficulty rating (1-5)	Known technical capacity gaps	Known requirement or equipment gaps	Feasibility (0-4)	Priority (hi/med/lo)	Selected
Biophysical						
1) B1 Focal species abundance	3					B1
2) B4 Composition and structure of the community	4					
3) B8 Water quality	3					B8
4) B9 Area showing signs of recovery	3					
5) B10 Area under reduced human use/impacts	3					
Socioeconomic						
1) S2 Local values and beliefs about marine resources	3					S2
2) S3 Level of understanding of human impacts on resources	3					S3
3) S7 Material style of life	2					S7
4) S9 Household income distribution by source	3					S9
Governance						

Relevant indicators identified (taken from worksheet 2)	Difficulty rating (1-5)	Known technical capacity gaps	Known requirement or equipment gaps	Feasibility (0-4)	Priority (hi/med/lo)	Selected
1) G2 Existence of a decision-making and management body	2					G2
2) G3 Existence and adoption of a management plan	2					G3
3) G5 Existence and adequacy of enabling legislation	2					
4) G6 Availability and allocation of MPA administrative resources	2					G6
5) G8 Existence and activity level of community organisations	3					
6) G9 Degree of interaction between managers and stakeholders	2					G9
7) G10 Proportion of stakeholders trained in sustainable use	3					
8) G12 Level of stakeholder participation, and satisfaction in management process and activities	3					G12
9) G13 Level of stakeholder involvement in surveillance, monitoring, & enforcement	2					
10) G14 Clearly defined enforcement procedures	2					G14
11) G15 Enforcement coverage	2					G15

total # identified = 20

total # selected = 13

Appendix 7: Worksheet 4 — Human resource needs

<i>Relevant indicators identified (taken from worksheet 3)</i>	<i>Stated human resource requirements</i>	<i>Human resource gaps</i>	<i>Team member</i>	<i>Outside assistance needs</i>	<i>Indicators to measure concurrently</i>	<i>Selected</i>
Biophysical						
1a) B1 Focal species abundance (marionne)	Leader trained in ReefCheck, 6 divers, data and logistics manager, boat handler	Some training and help in survey design	Olando Harvey [1] Meritha Small [2] Samuel Debique Matthew Harvey Hyron Joseph Albert Hanson Jason Alexander	Resource persons Casper Smith and Sophie Punnett Optional others Kurt Cordice, Kim Baldwin		
1b) B1 Focal species abundance (on cays)	Field naturalist and co-workers	Not identified	Mark DaSilva 2 foresters (not named)	Not identified		
2) B8 Water quality	1 adviser and analyst, 2 field samplers	Training by and involvement of the Fisheries Division critical	Dr. Barnabe of FD, 2 TCMP rangers as water samplers	None if Barnabe is available		
Socioeconomic						
1) S2 Local values and beliefs about marine resources	Survey designer and trainer, team leader, 2 Union Island interviewers, 1 Mayreau interviewer, data analyst	Need assistance in survey design, interviewer training, perhaps data analysis	Team leader = Ann Harvey Interviewers = 2 on Union Island (Nicole, Lucine); 1 on Mayreau (Fr. Mark) Data analyst = Meritha Small	Survey designing and training = Patrick McConney, Bob Pomeroy, Alexcia Cooke Collaborator = Kim Baldwin	All and G12 Governance indicator	
2) S3 Level of understanding of human impacts on resources						
3) S7 Material style of life						
4) S9 Household income distribution by source						
Governance						

Relevant indicators identified (taken from worksheet 3)	Stated human resource requirements	Human resource gaps	Team member	Outside assistance needs	Indicators to measure concurrently	Selected
1) G2 Existence of a decision-making and management body	'Outside' and 'inside' field researchers, an assistant, gatekeeper to government documents	None identified	Outside = Yvette Bentick (team leader) Inside = Meritha Small Kingstown Gatekeeper = Raymond Ryan Assistance from Mark DaSilva	Chief Fisheries Officer (Ryan) as gatekeeper to government documents	Include G12 with socio-economic indicators	
2) G3 Existence and adoption of a management plan						
3) G6 Availability and allocation of MPA administrative resources						
4) G9 Degree of interaction between managers and stakeholders						
5) G12 Level of stakeholder participation and satisfaction in management process and activities						
6) G14 Clearly defined enforcement procedures						
7) G15 Enforcement coverage						

total # identified = 13

total # selected = 13

Appendix 8: Worksheet 5 — Equipment needs

<i>Relevant indicators identified (taken from worksheet 3)</i>	<i>Stated equipment requirements</i>	<i>Equipment available</i>	<i>Equipment to borrow or purchase</i>	<i>Team member</i>	<i>Outside technical assistance</i>
Biophysical					
1a) B1 Focal species abundance (marine)	ReefCheck survey gear, transect markers, boat, fuel, GPS, scuba and snorkel gear, office supplies, computer	ReefCheck survey gear, boat, computer	Fuel, GPS, scuba and snorkel gear, transect markers, office supplies		
1b) B1 Focal species abundance (on cays)	Not identified	Not identified	Not identified		
2) B8 Water quality	Water sampling equipment, sample transport, assorted field supplies, other	Perhaps none (uncertain what items are needed or available from FD)	Perhaps all (uncertain what items are needed or available from FD)		
Socioeconomic					
1) S2 Local values and beliefs about marine resources	Stationery, office supplies, computer, transportation	Computer, some boat transportation offered by Glenroy Adams	Stationery, office supplies, transportation		
2) S3 Level of understanding of human impacts on resources					
3) S7 Material style of life					
4) S9 Household income distribution by source					
Governance					

1) G2 Existence of a decision-making and management body	Stationery, computer supplies, phone, copier, interviewing items	Phone, copier	Stationery, computer supplies, transport, supplies, interviewing items	
2) G3 Existence and adoption of a management plan				
3) G6 Availability and allocation of MPA administrative resources				
4) G9 Degree of interaction between managers and stakeholders				
5) G12 Level of stakeholder participation. and satisfaction in management process and activities				
6) G14 Clearly defined enforcement procedures				
7) G15 Enforcement coverage				

total # identified =

total # selected =

Appendix 9: Worksheet 6 — Budget needs

Relevant indicators identified (taken from worksheet 3)	Cost of evaluation team's time	Consultant and training costs	Equipment and other capital costs	Other costs	Total cost	Funding source
Biophysical						
1a) B1 Focal species abundance (marine)					EC\$4,680	
1b) B1 Focal species abundance (on cays)						
2) B8 Water quality						
Socioeconomic					EC\$1,500	
1) S2 Local values and beliefs about marine resources						
2) S3 Level of understanding of human impacts on resources						
3) S7 Material style of life						
4) S9 Household income distribution by source						
Governance					EC\$1,130	

1) G2 Existence of a decision-making and management body								
2) G3 Existence and adoption of a management plan								
3) G6 Availability and allocation of MPA administrative resources								
4) G9 Degree of interaction between managers and stakeholders								
5) G12 Level of stakeholder participation, and satisfaction in management process and activities								
6) G14 Clearly defined enforcement procedures								
7) G15 Enforcement coverage								

total # identified =

total # selected =

Appendix 10: Worksheet 7 — Identifying target audiences

<i>Name of audience</i>	<i>Internal or external stakeholders?</i>	<i>Direct or indirect influence?</i>	<i>Primary or Secondary?</i>
(1) TCMP Board	Internal	Direct	Primary
(2) Dept. of Grenadines Affairs, PMO	Internal	Direct	Primary
(3) Fisheries Division	Internal	Direct	Primary
(4) Stakeholder NGOs e.g. Union Island Tourist Board, FOTC, water taxi association, SUSGREN, tour boats, MEDO and several others	Internal	Direct	Primary
(5) General public of Southern Grenadines	Internal	Direct	Primary
(6) Tourism ministry	Internal	Indirect	Secondary
(7) Member of Parliament for the area	Internal	Indirect	Secondary
(8) Regional organizations = OPAAL/OECS, TNC, UWI CERMES	External	Indirect	Secondary
(9) External = French mission, NOAA	External	Indirect	Secondary
(10)			

total # of primary audiences identified =

total # of secondary audiences identified =

Appendix 11: Worksheet 8 — Audience analysis

<i>Primary Target Audiences</i>	<i>What we know about them</i>	<i>What we want them to do and/or think</i>	<i>How we know we can reach them (to/with)</i>	<i>Key Message(s)</i>	<i>Outreach Opportunities</i>
TCMP Board	Permanent Secretary in PMO is key person	Become motivated to lead adaptive management	Detailed paper reports	Consider full results of the entire evaluation	Frequent opportunities for interaction available
Dept. of Grenadines Affairs, PMO	Not sure how they relate to Grenadines Directorate that is new	Endorse action for adaptive management	Summary paper reports	Reform policy, MPA governance as a priority	Frequent opportunities for interaction available
Fisheries Division	Chief Fisheries Officer is also key as Board member	Key player in adaptive management especially on technical topics	Detailed paper reports	Consider full results of the entire evaluation	Frequent opportunities for interaction available
Stakeholder NGOs	Dispersed and different but must be involved	Support management and keep pressure to get action	Presentations and small meetings to share reports Summary info leaflets	Be prepared to mobilise	Frequent opportunities for interaction available
General public of S. Grenadines	As for stakeholders and mainland SVG	Ensure compliance with management decisions and keep pressure to get action	Presentations and public meetings to share reports Mass communications	Be prepared to mobilise	Frequent opportunities for interaction available

Appendix 12: Worksheet 9 — Evaluation team identification

<i>Prioritized Indicator</i>	<i>Type/level of expertise needed</i>	<i>Staff or non-staff</i>	<i>Other participants</i>	<i>Internal or external</i>	<i>Primary roles and responsibilities of team members</i>