

Socio-economic Monitoring by Caribbean Challenge MPA Managers

Report No. 11

Final Technical Report

Maria Pena, Katherine Blackman and Patrick McConney

CERMES, The University of the West Indies, Cave Hill Campus, Barbados



Centre for Resource Management and Environment Studies (CERMES)
University of the West Indies, Faculty of Pure and Applied Sciences
Cave Hill Campus Barbados
2013

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Citation

M. Pena, K. Blackman and P. McConney. 2013. Final Technical Report. Socio-economic Monitoring by Caribbean Challenge MPA Managers Project Report No. 11. 64 pp.

Disclaimer

This report was prepared by the Centre for Resource Management and Environmental Studies (CERMES) under a Coral Reef Conservation Grant from the National Fish and Wildlife Foundation (NFWF) for the project, Socio-economic Monitoring by Caribbean Challenge MPA Managers (Project no. 2011-0051-012). The views and conclusions contained in this document are those of the authors and should not be interpreted as representing the opinions or policies of the U.S. Government or the National Fish and Wildlife Foundation. Mention of trade names or commercial products does not constitute their endorsement by the U.S. Government or the National Fish and Wildlife Foundation.

Contact

Maria Pena
Centre for Resource Management and Environmental Studies
University of the West Indies, Cave Hill Campus, Barbados
Phone: (246) 417-4727 Fax: (246) 424-4204
Email: maria.pena@cavehill.uwi.edu
Web site: <http://www.cavehill.uwi.edu/cermes>

1 INTRODUCTION

1.1 Socio-economic Monitoring by Caribbean Challenge MPA Managers

Socio-economic monitoring for coastal management in the Caribbean (SocMon Caribbean) is a globally networked, regionally adapted, practical methodology of socio-economic monitoring for coastal management (Bunce et al. 2000, Bunce and Pomeroy 2003). Consultation with representatives of the MPA community associated with the Caribbean Challenge Initiative¹ indicated the need for capacity building in socio-economic monitoring for the development of an effective regional system of MPAs. This need for MPA capacity building in socio-economic assessment and monitoring has also been identified in various training needs and capacity assessments (Parsram 2007, Gombos et al. 2011). The Caribbean Challenge Initiative and regional training in SocMon provide a major opportunity for uptake of SocMon for achieving improved MPA management capacity and therefore conservation of coastal resources. With strengthened capacity for management through socio-economic monitoring, MPA managers, authorities and field staffs will also increase their capacity for adaptive management through learning-by-doing.

In September 2011, the Centre for Resource Management and Environmental Studies (CERMES) at the University of the West Indies, Cave Hill Campus began to implement a project to increase capacity for effective MPA management among Caribbean Challenge (CC) countries through the use of social and economic monitoring data in MPA decision-making at eight MPA sites in three CC countries (Figure 1):

Caribbean Challenge project country	MPA project sites
Grenada	Molinière/Beauséjour MPA (MBMPA) Woburn/Clarke's Court Bay MPA (WCCBMPA) Sandy Island/Oyster Bed MPA (SIOBMPA)
St. Vincent and the Grenadines	South Coast Marine Conservation Area (SCMCA) Tobago Cays Marine Park (TCMP)
St. Lucia	Pointe Sable Environmental Protection Area (PSEPA) Soufriere Marine Management Area (SMMA) Pitons Management Area (PMA)

The project was funded by a NOAA Coral Reef Conservation Grant from the National Fish and Wildlife Foundation (NFWF) – USD 63,186. See the summary proposal in Appendix 1. Originally one year in duration (September 2011 to 31 August 2012), the project benefited from a no-cost extension to February 2013.

The purpose of this final technical report is to bring closure to the project by briefly summarizing what was attempted, what was achieved, some of the challenges and what lessons were learned. These topics are all addressed in greater detail in the other project reports created as outputs throughout

¹ (<http://www.nature.org/ourinitiatives/regions/caribbean/caribbean-challenge.xml>)

implementation. Frequent reference is made to them. They can be found on the CERMES website (www.cavehill.uwi.edu/cermes) and the SocMon website (www.socmon.org).

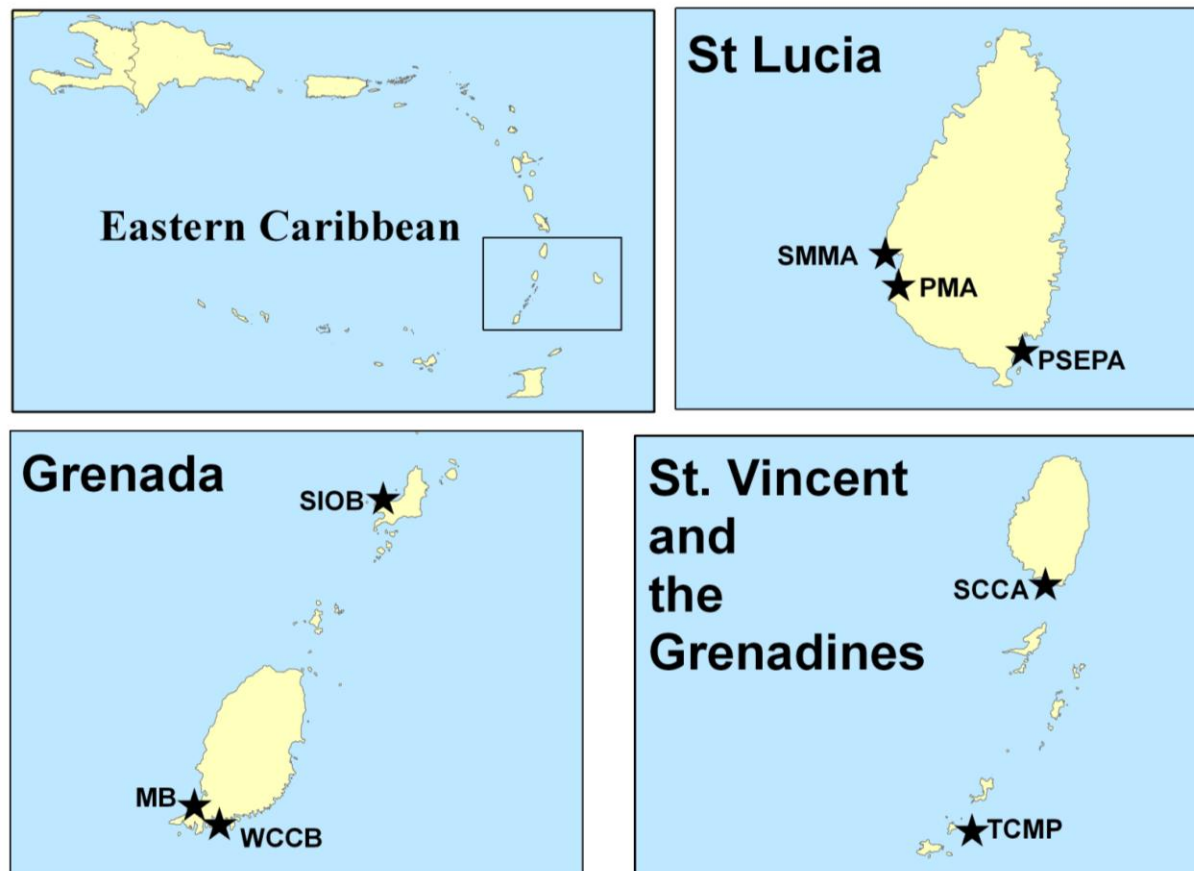


Figure 1 Study site locations

2 GOAL AND OBJECTIVES

The goal of this project was to build capacity for improved and effective MPA management among Caribbean Challenge countries by promoting the use of social and economic data in MPA management.

The specific objectives were:

1. Training approximately 40 MPA managers/staff, from three Caribbean Challenge countries, in the practical use of SocMon Caribbean methods via three country-specific workshops
2. Initiation of eight site assessment and monitoring programs for coastal management in each of the countries receiving the training via a small grant of USD 2,500
3. Documentation of training and monitoring initiation processes, to make them available to a worldwide audience and CERMES communications for replication, with improvement, in future rounds of SocMon activity
4. Submission of compatible data to the Reef Base Socio-Economic global database and CaMPAM database

3 METHODS

The project used the Global Socio-economic Monitoring Initiative for Coastal Management (SocMon) methodology set out in the Global Coral Reef Monitoring Network (GCRMN) Socio-economic Manual for Coral Reef Management by Bunce et. al. (2000) and the Socio-economic Monitoring Guidelines for Coastal Managers in the Caribbean (SocMon Caribbean) by Bunce and Pomeroy (2003).

3.1 Site selection

The intention of the original project proposal was to build capacity for socio-economic monitoring at all eight countries at the time associated with the Caribbean Challenge Initiative with initiation of eight site assessments or monitoring programmes. However due to funding constraints, the geographic scope of the project was amended and reduced to three countries (Grenada, St. Vincent and the Grenadines and St. Lucia), but retaining the original number of site assessment and monitoring programs in order to build critical mass in small countries. The scope of work was amended to implementation of three 5-day country-specific SocMon Caribbean training workshops in each of the three targeted countries instead of one 7-day regional workshop as originally proposed. The reason for implementing the shorter country-specific workshops as opposed to the extended regional workshop was based on past successes with shorter training workshops and Caribbean working culture. The amendment was approved in August 2011 (see NFWF Interim Programmatic Report).

The choice of study site locations for the project was based on expressions of interest received in the pre-proposal phase; past CERMES experience with, and partnerships developed, in each of the countries selected; as well as for cost-effectiveness. The project was announced across the region by distribution of a one-page promotional flyer to fisheries and MPA stakeholders at various CERMES MPA projects meetings (Appendix 2).

3.2 Workshop preparation: Site preparation and local workshop organization

Participating MPA authorities, selected as site monitoring partners at all sites, were given ownership of the project at this stage of preparation for in-country five-day training workshops. In preparation for the training workshops, CERMES requested information on the following:

- Preferred workshop dates
- Names and contact information of five nominees from each participating MPA. Selection of stakeholders to receive SocMon training was left entirely up to the discretion of the MPA authorities within some general guidelines. CERMES indicated that the training was aimed at MPA managers and field staff. Any other suitable persons could be nominated to make up the required number of participants, i.e. persons from organizations considered to be close 'partners' and who MPA authorities would rely upon to assist or advise the monitoring, decision-making or adaptive management.
- Advice on Ministries that should be informed about the implementation of the project and participation by the relevant MPAs.

- Suggestions on an appropriate local demonstration study site to be used during training. Input regarding logistical challenges or risk of unnecessary duplication was required. Each demonstration site would be used also as a project site (i.e. SCMCA, WCCB and PSEPA).
- Suggestions on a suitable venue for hosting the training workshop. Easy access to the demonstration site was given as a criterion for selection.

Once workshop training dates, local workshop organizers and SocMon lead individual contacts were confirmed and identified for all sites, local workshop organizers distributed project announcement letters to key government ministries and local organizations; as well as training workshop press releases and media invitations provided by CERMES (Appendix 3). Workshop organizers distributed the draft workshop agenda, outline and project announcement provided by CERMES to workshop participants. Each local organizer was asked to acquire quotes for accommodation, catering, rental fees etc. for SocMon training workshops and was asked to submit them to CERMES for processing and disbursement of funds for further site-specific logistical preparations. The aim was to further contribute to ownership by the partners.

Each site monitoring partner provided a preliminary site description of the demonstration study area chosen for training. This site-specific information was incorporated into the training workshop presentations and discussions (Pena and Blackman 2011; Pena and Blackman 2012a; Pena and Blackman 2012b).

3.3 Workshop preparation: Training material preparation

Slide presentations providing an overview of this project and detailed training information on the SocMon Caribbean methodology were revised and/or prepared. Workshop packages were prepared for participants at each site comprising *inter alia*, the Caribbean Challenge SocMon project announcement; workshop outline and agenda; hard and electronic copies of primary course books; handouts of the project overview slide show, relevant demonstration study site slide shows, generic SocMon slide show, survey question examples, coding and data tables, SocMon case studies slide shows; preparatory activities and site monitoring plan worksheets; and workshop evaluation form. All workshop training materials were uploaded to the project webpage on the CERMES website (http://www.cavehill.uwi.edu/cermes/cc_socmon.html).

CERMES encouraged workshop organizers to supply secondary sources of data (such as maps, planning documents, research documents of interest to the area, censuses etc.) relevant to study areas for use during the workshop.

3.4 Training workshops

Three in-country, practically oriented five-day SocMon methodology training workshops were held at the sites during the period October 2011 – February 2012. Both the project manager and assistant SocMon trainer, Ms. Katherine Blackman, delivered the training. Dr. Patrick McConney, Technical Advisor to the project, joined in the St. Lucia training (Pena and Blackman 2011; Pena and Blackman 2012a; Pena and Blackman 2012b). During the workshop, participants were divided into at least two

groups for practical work on the demonstration site. Participants were required to present the results of their demonstration site SocMon using PowerPoint presentations at the end of the workshop.

At the end of the workshop, participants were asked to nominate persons from among themselves to comprise a SocMon team of about five to seven individuals. These persons would be involved in the SocMon assessment for their study area.

Throughout the workshop, participants were encouraged to record video of the process using Flip video recorders. The SocMon trainers took additional video throughout the workshop.

3.5 Site monitoring and reporting

On conclusion of the training workshops, 40% (US\$ 1,000) of US\$ 2,500 small grant funds were disbursed during the period February to October 2012 to the relevant organizations responsible for financial administration of the project in each of three SocMon sites for implementation of the site monitoring plan. The first tranche of the sub-grants was disbursed upon approval by CERMES of site monitoring plans. Transfers of remaining sub-grants funds were made during the period October 2012 and January 2013. Final tranches were disbursed on receipt of interim progress and financial reports from each site.

All sites were provided with the opportunity to design and draft their preferred data collection instruments. CERMES provided considerable technical advice and assistance in the drafting and finalization of household surveys and key informant interviews. SocMon teams were provided with guidance documents to assist with the development of these instruments.

The fieldwork component of site monitoring was organized and conducted by SocMon teams. At some sites, SocMon teams required additional fieldwork assistance provided by local individuals, and in one instance (SCMCA, St. Vincent), by CERMES. During the site monitoring, assessment of project progress and site requirements was made via e-communication between Maria Pena and each SocMon team leader. Site visits to assist with data analysis, reporting, validation preparation and to attend validation meetings were made by Maria Pena and Katherine Blackman in October 2012 and from January to February 2013. Each site was required to submit a final monitoring report. Reports were submitted to the project manager for review (Cazaubon et al. 2013; Daniel 2013; Harvey 2013; Harvey et al. 2013; Jeffrey et al. 2013; Lockhart et al. 2013; Pascal et al. 2013).

3.6 Information sharing and validation

Project information was shared from implementation of the project via project announcement at CERMES project meetings in the region, e-newsletters (CERMES and SocMonitor) and the CaMPAM listserv. The *CERMES Connections* is a bi-monthly electronic bulletin about interdisciplinary research, teaching and outreach at the Centre for Resource Management and Environmental Studies at the University of the West Indies, Cave Hill Campus, Barbados. It has a wide readership. The *SocMonitor* is a quarterly e-bulletin about the Global Socio-economic Monitoring Initiative. The newsletter is produced jointly by CERMES and NOAA's Coral Reef Conservation Program to share information on socio-economic monitoring conducted globally through the SocMon/SEM-Pasifika initiatives.

Web pages to support the project were prepared and were updated throughout the duration of the project for the CERMES website (http://www.cavehill.uwi.edu/cermes/cc_socmon.html). Site monitoring plans were shared with all sites via the project webpages to keep sites informed about the type of SocMon studies being conducted at each MPA as well as to encourage some sites to proceed with their plans for monitoring in a similar way to other sites.

Project promotion and updates were provided in regional CERMES project meetings on MPAs throughout the duration of the project, as well as at regional and international fora including the 64th and 65th Gulf and Caribbean and Fisheries Institute (GCFI) in 2011 and 2012, respectively, and at the International Ocean Institute (IOI), Dalhousie University, Nova Scotia, Canada.

All sites were encouraged to provide feedback to stakeholders and all other persons who took part in the SocMon site projects through validation meetings. Validation occurred after the data analysis phase and before final report production.

3.7 Evaluation of the Caribbean Challenge SocMon project

Caribbean Challenge SocMon teams were asked to complete an evaluation survey to provide CERMES with feedback on site experiences with the project and suggestions for improving future SocMon projects (Appendix 4). Surveys were emailed to SocMon team members for completion once final site monitoring reports were submitted. Only SocMon team members who had been engaged in the entire SocMon process were asked to complete the survey.

4 RESULTS

4.1 Site selection

Sites responded well to the pre-proposal with letters of interest received from Fisheries Divisions and departments of all proposed project countries and some of the individual MPAs. Participants responded well to the detailed information requests, and this allowed the CERMES team to design a successful project proposal as well as efficiently design project stages subsequent to project approval.

Inclusion of multiple MPA sites per country ensured greater uptake, higher impact and equitable coverage of SocMon training and assessment/monitoring. There is now the potential for the development of local and even transboundary SocMon networks (in the case of Grenada and St. Vincent and the Grenadines).

4.2 Workshop preparation: Site preparation and local workshop organization

In-country workshop organization and support was commendable. The provision by CERMES of the draft workshop agenda and advice was effective in acquiring timely responses from each project site during the planning process. Email communication during this stage was also effective although phone conversations with SocMon workshop organizers were necessary at times for confirmation of details.

Workshop organizers satisfactorily identified workshop participants for targetted stakeholder involvement in training. Stakeholder representatives from government departments and NGO and community organizations and key residents participated in the training workshops.

4.3 Training workshops

The three in-country SocMon training workshops were successfully conducted with 32 MPA stakeholders trained in SocMon methodology. This is just below the project objective of training aimed at approximately 40 MPA management stakeholders (Pena and Blackman 2011; Pena and Blackman 2012a and b). Although the aim was to train five people from each participating MPA and their closest partners, some MPAs were unable to spare additional MPA staff for the duration of the training due to capacity needed for MPA operation during the absence of those staff attending the workshop. Additionally, some invited partners were unable to attend due to other commitments.

The study area field trip, SocMon preparatory activities and site monitoring plan worksheets components of training were particularly useful to participants. The field trip allowed participants to view the study area from a socio-economic perspective providing them with the opportunity to identify social, economic, environmental, cultural and political issues relevant to the area.

The thorough SocMon preparatory activities worksheets demonstrated the necessary components and information required for the development of monitoring plans for each study area. Such information included – goals and objectives for monitoring; stakeholder identification based on the relevant study area activity or issue of relevance; locations of these stakeholders and key informants; identification of the SocMon leader and team for site monitoring; methods of data collection and means of visually presenting the data according to monitoring objectives; work plan schedule; critical research resources required; monitoring budget based on US\$2,500 grant; and key SocMon variables and identification of relevant secondary sources of information chosen according to the monitoring objectives to be focused on in questionnaires. Participants were better able to understand the process of socio-economic monitoring with these hands-on exercises and made comments to the effect to the trainers.

While working through the preparatory activities worksheets for the demonstration site, groups were encouraged to share information such as goals and objectives for monitoring with the rest of the workshop participants for peer review.

Group presentations based on the demonstration study site were quite well done (Appendix 5) and provided participants with the experience of presenting site results using Power Point presentations.

The drafting of a feasible site monitoring plan for each of the MPAs involved in the project was scheduled during the training workshop, however, complete drafting of this plan was not accomplished for any of the sites. Planning for site monitoring continued subsequent to the workshop and was conducted by each SocMon team with assistance from CERMES. All sites experienced delays in drafting the site monitoring plan due to numerous reasons including inability of the team to meet due to prior work commitments (across all sites), loss of team members due to job changes (PSEPA and PMA, St. Lucia) etc.

In general workshop training was well received by participants at all project sites. The workshop evaluation survey provided at the end of each workshop was completed by the majority of workshop participants. The majority of participants at each site either “strongly agreed” or “agreed” that:

- The workshop goal had been achieved.
- The first objective of the workshop, introduction to SocMon Caribbean methods, had been achieved.

- The workshop was well organised and facilitated.
- They would recommend a similar workshop to colleagues.
- Their abilities as a MPA professionals or stakeholders had been improved as a result of the workshop.
- They enjoyed participating in the workshop (Pena and Blackman 2011; Pena and Blackman 2012 a and b)

Across all sites, participant responses regarding things most liked about the workshop included:

- The methodology for presentation, materials used and their quality.
- Openness, networking, sharing and simplicity.
- The field trip component of the training and willingness of facilitators to assist.
- The data collection and analysis components including preparation of the questionnaire.
- Practical approach to learning-by-doing; group work activities gave the opportunity to share ideas
- Good organization of the workshop; fully participatory; easily understood at level.
- Catering (breaks and lunches) during the workshop.
- The working relationship/interaction among participants and, between the facilitators and participants.
- The knowledge and helpfulness of the facilitators during the training process.
- The small group setting.
- The diverse group of participants.
- The training materials provided.
- The interview session and video clips (Pena and Blackman 2011; Pena and Blackman 2012 a and b).

Things least liked about the workshops included:

- The workshop pace; not enough time allocated for this workshop.
- The location of the workshop (commuting).
- Brevity of field trip visits; it limited interaction with interviewees, site, etc..
- Poor attendance by persons who were invited.
- The location of the workshop (commuting).
- The daily workshop duration (8:30 am to 5:00pm) was a little too long (Pena and Blackman 2011; Pena and Blackman 2012 a and b).

Recommended changes to the workshops included:

- More time in the field and a longer period for the workshop.
- Shorter workshop period: 3-day workshop.
- Greater participation; participation of additional key stakeholders.
- Participation of more countries in the project to learn from each other (Pena and Blackman 2011; Pena and Blackman 2012 a and b).

Site-specific training workshop reports were completed within two weeks subsequent to the workshops and circulated to all workshop participants by email (Pena and Blackman 2011, Pena and Blackman 2012a and b). All workshop reports were uploaded to the CERMES website.

Short videos have been produced by Katherine Blackman from video clips taken by participants and workshop facilitators. The videos serve to record the SocMon process for each site and are available on

the project webpage on the CERMES website. This is the first time the SocMon process has been recorded in the region.

4.4 Site monitoring and reporting

Seven site assessment/monitoring programmes² were initiated across the three Caribbean Challenge countries. The MPA site assessments and monitoring were varied and focused on differing socio-economic aspects of MPAs (Table 1). See Appendix 6 for listing of goals and objectives by site.

Table 1 Site monitoring goals by MPA

CC country	MPA	SocMon site monitoring goals
Grenada	Molinière/Beauséjour	Determining current and potential alternative livelihood options and opportunities for MPA communities
	Woburn/Clarke's Court Bay	Identifying perceptions of changes and impacts that will accompany the introduction of management planning
	Sandy Island/Oyster Bed	Collecting data on impacts, attitudes and perceptions trends of communities within and surrounding MPAs
St. Vincent	South Coast Marine Conservation Area	Collecting socio-economic data to inform management planning
	Tobago Cays Marine Park	Developing core indicators to assist with decision-making and effective management of MPAs
St. Lucia	PSEPA	Determining MPA awareness
	SMMA/PMA	Collecting data to guide strategies to mitigate the impacts of planned development on MPAs

Progress towards initiating site monitoring was reasonable overall but the field work component was delayed considerably at sites in spite of continuous follow-up from CERMES. This was especially so for the South Coast Marine Conservation Area in St. Vincent and the Sandy Island/Oyster Bed marine protected area in Carriacou. With respect to the South Coast Marine Conservation Area, the SocMon team was awaiting the appointment of a consultant to be engaged in the development of a management plan for the area which was expected to occur December 2011. The intention was for the team to be guided by the consultant regarding the type of socio-economic data required for incorporation in and development of the management plan for the marine park (the SCMCA will be upgraded to marine park status). However, there were numerous delays in the selection process of the consultant as well as other delays associated with the management planning project in general. At the SIOBMPA, scheduling issues among the SocMon team, work commitments and preparations for the appointment of a MPA manager contributed to the slow start.

Across all sites, competing regional projects, prior work commitments and delayed disbursement of sub-grant funds from the University of the West Indies resulted in late initiation of site monitoring. With respect to the latter, although requests for disbursement of grant tranches had been made immediately to the UWI Bursary by the project manager upon receipt of Letters of Agreement for the project

² The SMMA and PMA undertook a joint SocMon study since at that time, several similar socio-economic issues were coming to the fore with implications for both the SMMA and the PMA.

between CERMES and each MPA site (for disbursement of first tranche) and interim progress and financial reports (for disbursement of final tranche), lengthy delays in wire transfers were experienced and either resulted in further delays in site monitoring initiation or impeded project progress. Disbursement of sub-grant tranches (from request to actual transfer) to initiate site monitoring took on average 24 days, despite regular follow-up from CERMES. Disbursement of final tranches of the sub-grant improved, taking on average 5 days.

Despite encouragement from CERMES for fieldwork to be completed by mid-2012, sites were unable to meet this deadline. By June 2012, most sites had either not yet initiated monitoring or initiation was slow, despite the availability of technical assistance from CERMES. At this stage, none of the sites had indicated any need for assistance in initiating monitoring. CERMES applied in June 2012 to NFWF for a no-cost extension to the project and received it in the same month. CERMES then gave all project sites a deadline of the end of September 2012 to complete monitoring and reporting. By this time, even though site monitoring had been progressing steadily at most sites – MBMPA, WCCBMPA, TCMP, PSEPA and SMMA/PSEPA. Drafting of site reports had not yet started. The sites mentioned previously were in a good position however to present preliminary results at the 65th GCFI in Santa Marta, Colombia in November 2012.

Preferred methods for data collection were key informant interviews and household surveys. The SMMA and PMA were the only sites that made use of a focus group discussion to collect socio-economic information (Cazaubon et al. 2013; Daniel 2013; Harvey 2013; Harvey et al. 2013; Jeffrey et al. 2013; Lockhart et al. 2013; Pascal et al. 2013). See Table 2.

Table 2 Methods of data collection by site

MPA site	Data collection		
	KI interview	HH survey	Focus group
MBMPA	✓		
WCCBMPA	✓		
SIOBMPA		✓	
SCMCA	✓	✓	
TCMP		✓	
PSEPA	✓	✓	
SMMA/PMA		✓	✓

Generally, all of the sites encountered some problems with designing questions for their key informant interviews and surveys relevant to their monitoring objectives and required technical assistance from CERMES. The tendency was for questionnaires to be long with the inclusion at times of irrelevant questions although this issue had been addressed during training and follow-up advice.

A total of 57 variables were chosen for assessment among the sites, 24 key informant variables and 33 survey variables. Of these, 14 new key informant variables and 15 survey variables were developed. Revision of two original SocMon Caribbean key informant variables and five survey variables was recommended for collecting and measuring some of data required for the studies. Twelve key informant variables and 18 survey variables were shared among sites. Six newly developed variables were applicable as both key informant and survey variables and were used to collect similar data (Appendix 7).

Following the format used to present the SocMon variables in the SocMon Caribbean guidelines (Bunce *et al.* 2003), the development of new SocMon variables involved defining the variables by name, developing descriptions of the variable and how to collect the data, providing an explanation of how to analyze the data and discussion of how the information could be useful to MPA managers. For revision of original variables, variable names were not changed but instead descriptions, methods of data collection, explanations for data analysis and importance of the data to managers were modified. It is hoped that in the future the detailed information on the complete set of these variables (revised and newly designed) will be made available for sharing and uptake via the SocMon website (www.socmon.org), CERMES website (<http://cavehill.uwi.edu/cermes>) and or possibly as an addendum to the current SocMon Caribbean guidelines as MPA-specific SocMon Caribbean variables.

The project manager and assistant SocMon trainer had to make site visits to the SMMA/PMA, MBMPA, WCCBMPA and SCMCA in the latter part of October 2012 and in January and February 2013 to assist with data entry and analysis. The SCMCA required considerable assistance from CERMES during the data collection and data analysis phase. A former CERMES graduate student assisted the team with conducting household surveys for the site and data entry, while the assistant SocMon trainer analysed the data and prepared the team for validation of results.

Reporting was difficult for some sites such as the WCCBMPA and MBMPA, but this may be due to attrition of SocMon teams. Delays were experienced with submission of reports, regardless of numerous contact made by the project manager via email. In some cases the burden of report production fell upon one person. Assimilation and analysis of site results was weak at some sites and CERMES guidance was required. However, in the end, MPA authorities all produced reasonable to high-quality monitoring outputs.

4.5 Information sharing and validation

CERMES used group and individual e-communication to share project information among SocMon teams and determine status of SocMon research at the sites. Communication via phone with SocMon team leaders was also used by CERMES. SocMon teams tended to prefer direct communication with the project manager. In general, feedback from project sites was good and timely. However, at times, the ability to respond, and sometimes take action, depended upon the MPA authorities' level of attention to other matters.

The project information was shared at CERMES MPA project meetings in the region in 2011 and 2012. The project was announced and an update of activities was provided at the 64th Gulf and Caribbean Fisheries Institute, Puerto Morelos, Mexico, 31 October - 4 November, 2011. Maria Pena was an invited participant at the regional update meeting of the UNEP-CEP project – *Regional support for the Caribbean Challenge Initiative: Networking, consolidation and regional coordination of MPA management*, hosted by the Caribbean Marine Protected Areas Management (CaMPAM) Network and Forum. At this meeting Caribbean Challenge SocMon project information was shared with 13 Caribbean Challenge representatives and 16 UNEP-CEP project partners and related participants.

Caribbean Challenge project information was further shared with 17 participants of the 2012 Training Programme on Ocean Governance: Policy, Law and Management, hosted by International Ocean

Institute (IOI), Dalhousie University, Nova Scotia, Canada. Maria Pena conducted a half-day workshop session on Socio-economic Monitoring for Coastal Managers (SocMon) in which participants were introduced to the purpose and benefits of SocMon, the methodology, the implementation of SocMon globally, SocMon Caribbean projects and use of SocMon outputs *inter alia*. The training programme, 16 May-13 July 2012, attracted a wide and varied group of professionals from the Caribbean, Asia, Africa and Northern Europe.

The Caribbean Challenge SocMon project received wide coverage at the 65th Gulf and Caribbean Fisheries Institute (GCFI), 5-9 November 2012, Santa Marta, Colombia. Five oral presentations on preliminary site results were made during the MPA Science and Management session (CERMES 2013). Papers to be included in GCFI proceedings:

- Pena, M., P. McConney and K. Blackman. In press. Common socio-economic monitoring indicators for Caribbean Challenge MPAs
- Cazaubon, N., A. Dominique, M. Pena and K. Blackman. In press. Using socio-economic data to inform strategies to mitigate impacts of planned development within the Pitons Management Area (PMA) and Soufriere Marine Management Area (SMMA), St. Lucia
- Harvey, O., K. Williams and A. Nanton. In press. Developing a core set of indicators for decision-making and adaptive management at the Tobago Cays Marine Park, St. Vincent and the Grenadines.
- Jeffrey, C., F. Gibbs, S. Antoine, M. Mitchell, R. Baldeo, K. Blackman and M. Pena. In press. Assessing the feasibility of alternative livelihood options for communities surrounding the Molinière-Beauséjour Marine Protected Area, Grenada
- Pascal, S., M. Pena and K. Blackman. In press. Perceptions of changes and impacts accompanying the introduction of management planning to the Woburn/Clarke's Court Bay MPA, Grenada

Ms. Nadia Cazaubon (St. Lucia) and Mr. Coddington Jeffrey (Grenada) were able to present preliminary SocMon findings for their respective sites since they participated in a specially sponsored side session, at the final UNEP-CEP project meeting, *Regional support for the Caribbean Challenge Initiative: Networking, consolidation and regional coordination of MPA management*, at the GCFI meeting hosted by CaMPAM. Ms. Shawnaly Pascal (Grenada) was able to present preliminary results of the WCCBMPA SocMon due to sponsorship received from The Nature Conservancy. Mr. Orlando Harvey was unable to attend the GCFI due to a lack of funding but site results were presented by Maria Pena.

Validation meetings were held at all sites, except the WCCBMPA, after the primary data collected were analysed. These meetings were held in the communities in which the monitoring was conducted to gain feedback on the results obtained. Participant attendance was fairly high with on average 15 persons attending. Data collection was accurate as participants agreed with the information collected. Maria Pena and Katherine Blackman made site visits prior to validation meetings to assist with preparation and attended validation meetings hosted by the MBMPA, SIOBMPA, SCMCA and the TCMP in January and February 2013. They were unable to attend validation meetings hosted by the SMMA/PMA and PSEPA due to scheduling conflicts and work commitments. Validation of results at the PSEPA was unsuccessful. A meeting had been scheduled and advertised but no one attended. This was attributed to the culture

of the area where people generally do not attend such meetings in the community. The WCCBMPA was unable to plan a validation meeting within the project period.

Compatible data will be submitted to the Reef Base Socio-Economic global database at www.socmon.org as well as the CaMPAM database. Further sharing of Caribbean Challenge SocMon project data may be possible through a recent inter-disciplinary research initiative to compile, integrate, and analyze governance, biophysical, and social data from MPAs globally. This initiative is being led by the Socio-environmental Synthesis Centre (SESYNC) project, SESYNC project 3 on *Exploring relationships between marine resource governance, ecological conditions and human well-being in the Greater Caribbean*. Methods and approaches for this work are being piloted in the Greater Caribbean. CERMES is collaborating on this project and will share relevant SocMon Caribbean data with SYSNC.

Training and the SocMon process has been documented in the preparation of training materials, three country-specific training workshop reports, seven site monitoring reports, two workshop videos³, online photo gallery, a compendium of GCFI papers and oral presentations and a final technical project report. These resources are either available or will be available on the CERMES website upon submission of project outputs to NFWF. Some documents will also be uploaded to the SocMon website (www.socmon.org) for further sharing.

4.6 Evaluation of the Caribbean Challenge SocMon project

Nine SocMon team members across the seven sites completed the survey – three from the SCMCA, and one each from the TCMP, MBMPA, WCCBMPA, SIOBMPA, PSEPA and SMMA/PMA.

Just over half of the respondents (56%) rated the length of the SocMon training workshop as being just the right length whereas 44% thought it was too long. Of those who thought it was too long, half thought it should be seven days and the other half believe it should be 10 days to two weeks in duration (Figure 2).

³ Throughout the SocMon training workshops, participants were encouraged to record video of the process using Flip video recorders. The SocMon trainers took additional video throughout the workshop. Originally three videos of SocMon training, one per country workshop, were to be produced. Unfortunately, all video clips from the Grenada SocMon training workshop were lost.

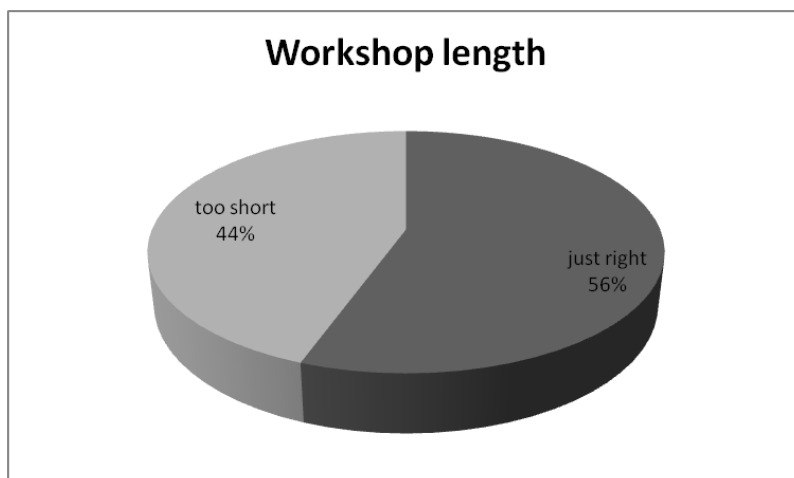


Figure 2 Rating of the length of the workshop

The majority of respondents (67%) thought that the content of the training workshop sufficiently prepared them to implement SocMon at their sites. Reasons for this included:

- The training provided a step-by-step pathway to the various activities involved in the SocMon process. Indeed, the fact that the SCMCA SocMon Team was able to generate six new survey and five new key informant variables to collect data and information on respondents' knowledge, attitude and skills, perceived resource conditions, threats, governance and type of community livelihoods, etc shows a relatively high level of uptake of the training provided and of the SocMon methodology.
- The practical sessions were most helpful for easy realization of the actual exercise/process and the additional materials were relevant to our context.
- The knowledge gained by working along with other entities and the presentations made have made us aware of the various problems which can develop if certain things are not in place.
- Through the training, I understood the approach to take as well as the methodology to employ when conducting my SocMon study.
- The workshop provides all components to execute an entire round of monitoring including hands-on experience in doing the scoping exercise, data collection, analysis and presentation of results.

Of the 33% of SocMon team members who felt workshop content did not sufficiently prepare them to implement SocMon at their sites, reasons provided for this included:

- Since the time was short there was some rushing to complete the agenda at a point when we needed to practice data analysis and coding.
- I was absent on the day that data analysis was covered so required assistance from CERMES to code the data and develop the tables.
- The workshop should include an administrative component e.g. financing, planning and organizing. There should also be a short introductory training of others [who are recruited to the SocMon team but were not part of the training].

All of SocMon team members surveyed thought that the delivery and reinforcement of the training workshop content using slide shows, group discussion, field trips and group work were effective means of content delivery.

Development of the site monitoring plan and data collection were the only components of the SocMon process that respondents rated as being particularly difficult (high rating). It should however be noted that a small proportion of respondents provided this rating. Data analysis and reporting were rated by the majority of respondents as having medium difficulty 80% and 62%, respectively. The majority of respondents thought that data collection (75%), survey and key informant interview design (63%) and development of the site monitoring plan (57%) were not difficult (Figure 3).

For the one individual who found the development of the site monitoring plan quite difficult, the challenge encountered was that “it took some time to internalize this planning process because it was new to me.” The fact that “persons were not always forthcoming but rather reluctant when it came to answering questions” was the challenge noted by the individual who thought this component of the SocMon process was very difficult.

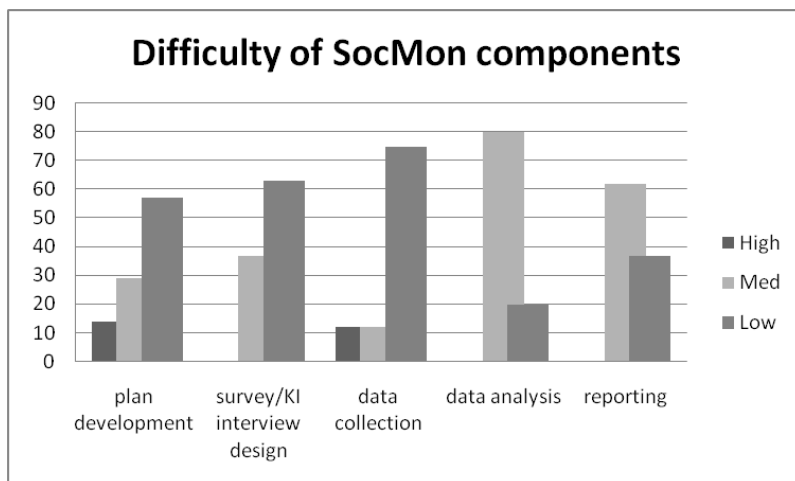


Figure 3 Difficulty of major SocMon components

All SocMon team members thought that the goals and objectives for assessment/monitoring at their sites was achieved.

CERMES technical assistance provided throughout the project was rated as very good and good by 78% and 22% of those persons surveyed.

The top three ways in which SocMon team members suggested that CERMES could improve support to sites during future SocMon projects were regularly scheduled Skype meetings with SocMon teams (89%); two to three-day site visits during planning for site initiation, data collection, analysis and reporting (67%); and more peer support, i.e. encouraging SocMon teams to communicate more with each other (67%). See Figure 4. Only one individual recommended an additional way by which CERMES support could be improved in the future – “earlier disbursement of funds. Funds should be based on the type of project undertaken and [should be] within a specific range.”

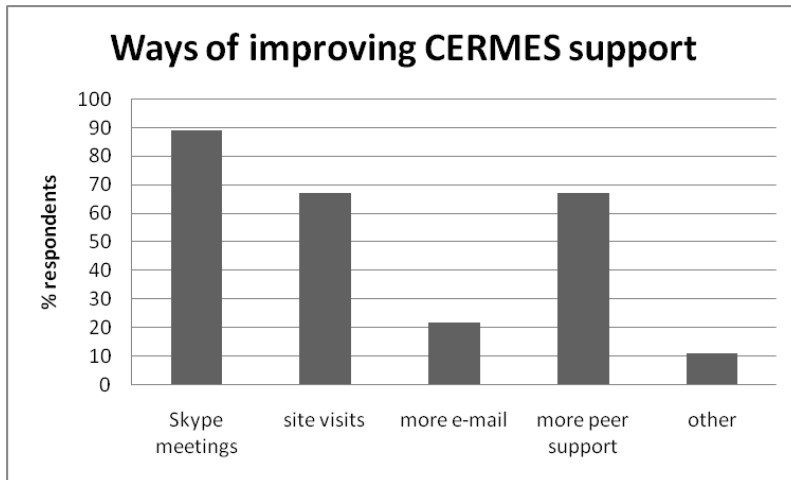


Figure 4 Ways in which CERMES support can be improved in future SocMon projects

The top two suggested means by which CERMES can ensure improvements and capacity building in the efficient production of site monitoring plans are by utilizing a series of Skype meetings during drafting (100%) and one to two-day CERMES site visits for drafting assistance (67%). Equal proportions of persons (67%) thought that two to three-day site visits by CERMES subsequent to data collection for provision of assistance and the use of basic linked spreadsheets that automatically generate charts would be ways in which data analysis could be made more efficient and by which capacity could be increased. Most persons thought that both the provision of a report template (78%) and organization of a two to three-day writeshop with the SocMon team would improve production of site monitoring reports.

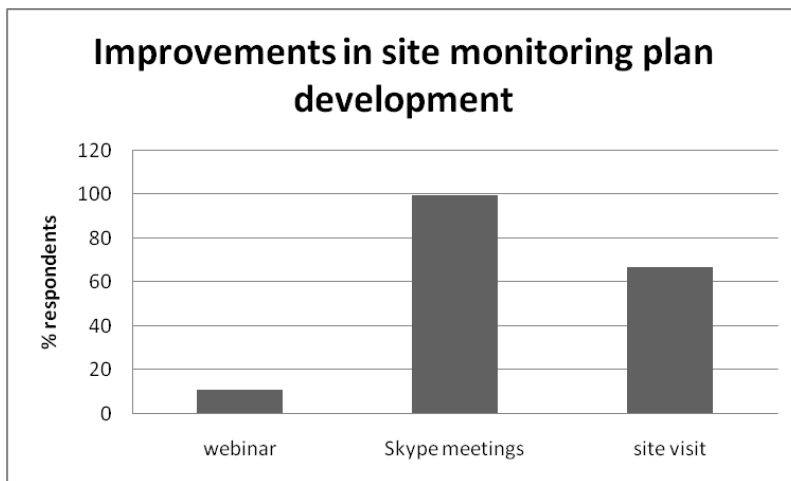
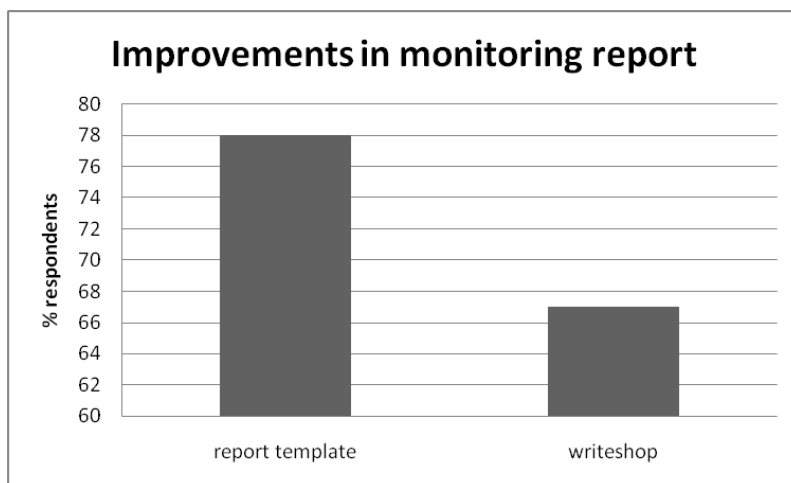
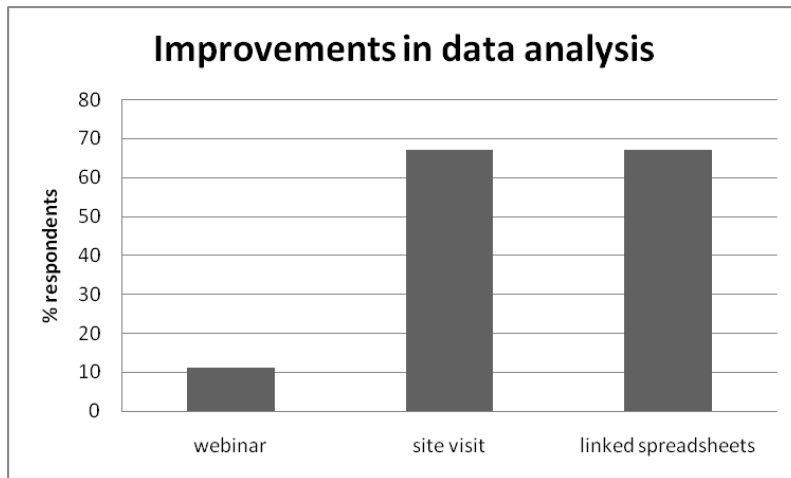


Figure 5 Ways in which CERMES could improve and build capacity in developing site monitoring plans



SocMon team members provided a number of things they liked most about the Caribbean Challenge SocMon project. These are listed below:

- Participating in the training; learning the stages of the SocMon process (site monitoring plan development; collecting the data and preparing for and facilitating the validation meeting which allows an insight into the community dynamics; assisting in report preparation; and serving as team leader [which provided the] opportunity to network with and identify key stakeholders.
- The involvement in the data collection provided the opportunity to gain useful information which would positively influence the execution of work at my level.
- This project provided the bottom-up approach and gave communities the opportunity to help shape the way forward for the SCMCA planning.
- It addresses a serious challenge within the main “tourist belt” of St. Vincent which any government should not treat lightly, given the importance of tourism to the economy and the environment for quality living.
- Working with a team which comprises members from several agencies brought some new insights and made the process more productive.
- It is very important for the development of my country

- It was good for my personal development
- It is very applicable to many other research projects
- The sharing of ideas
- Enhancement of management skills
- Preparing the survey and collaborating with a consultant to train enumerators
- Participation and interest generated during/after the focus group discussion
- Working with Maria and Katie!!
- Presenting preliminary results at 65th GCFI
- The data collected that were relevant to MPA management
- This project was used as promotion for the MPA. Created much awareness.
- The enormous support and assistance given by the CERMES staff
- The training workshop
- The budget was sufficient to accomplish the tasks
- Experience in conducting and analysing of data

The things people liked least about the project included:

- Limited support from Heads of Departments (HODs) of the various participating agencies in the SCMCA SocMon
- The undue delays in getting the team to plan and accomplish the various tasks within set timelines
- Our inability to achieve the 100-mark [sample population size] for [the] household survey
- We had difficulty for the team to meet more regularly for project completion in a timely manner.
- The late release of the funds created some limitations for the execution of some components of the project; pre-proposal funding should be made available; the monies seem inadequate for the magnitude and importance of the project; lateness of funds made it impossible to complete the scheduled validation meetings
- It took too long.
- Short period of workshop
- Data entry (the survey was too detailed and had too many open-ended questions)
- The time-frame was too limited
- Not enough help with conducting the interviews, lack of resource persons. The time frame for collecting the funds to complete the project was too lengthy and frustrating.

All SocMon team members indicated numerous ways in which the socio-information collected at their sites will be used. See Table 3 for narratives of their responses.

Table 3 Thoughts on ways in which SocMon information collected at sites will be used

MPA	Use of SocMon data
MB	To further intensify our public awareness program by developing and implementing a communication plan
WCCB	It will be very beneficial to the site since there are four key stakeholders in the area - fishermen, marinas, yachting and business communities – all of which are dependent on each other to varying degrees. Therefore the information collected will be used as a guide to improve the services, assess needs to see what other services are needed and ways of providing them. The information will also help authorities and key decision makers determine threats, problems and possible solutions to issues such as garbage disposal, pollution, etc. which were identified as major concerns in the area
SIOB	The information collected will be used to direct management actions at the site level. For example, the results indicated that a significant percentage of the community is not fully aware of the goals and objectives of the MPA, this is something that we need to address.
SCMCA	Several projects have been earmarked for implementation in the SCMCA. Chief among the projects/programmes is the upgrade of the SCMCA to a marine park. This seminal SocMon report [site monitoring report] would provide critical information to aid the design, planning, operation and management of the new park. For instance, the study shows that the communities are very concerned about land-based and other sources of pollution, and hence, have recommended that priority focus be placed on improving the environmental quality of the park. For the South Coast Marine Conservation Area planning. Monitoring of change in the use of the area.
TCMP	It will be used in conjunction with our strategic plan to help improve and develop the management structure of the Park.
PSEPA	The socio-economic information collected at my site (PSEPA) can be used to inform policy for environmental protection of the area. It can also be used to make a case for the need for environmental education for the communities within the PSEPA.
SMMA/PMA	The agencies responsible for managing the two protected areas will now have good data on the perception of residents on the usage of the PMA and SMMA. The consultants conducting the Limits of Acceptable Change study on the PMA which will be presented to the World Heritage Commission can reference the report in their study.

4.7 Project outcomes and products

4.7.1 Outcomes

The expected project outcomes are outlined in Table 4. Most of the Caribbean Challenge SocMon project outcomes deliberately have a long-term focus that can be addressed beyond the life of the project and as such it is not possible to comment on their achievement here. Where the outcomes may be beyond the life of the project, suggestions for their realization are provided.

The immediate capacity of eight MPAs across three Caribbean Challenge countries has been increased (Outcome 1a) by training provided to 32 MPA professionals and stakeholders. This increased capacity is

just under what was expected to be achieved during the project. Although the aim was to train five people from each participating MPA and their closest partners, some MPAs were unable to spare additional MPA staff for the duration of the training due to limited MPA staff and demands on this staff complement. Additionally, some invited partners were unable to attend due to other commitments. Evaluations of the training workshop (n = 30) and overall project (n = 9) were all favourable and complimentary (Outcome 1b). The overall value of this metric at grant completion was just under expectation but the outcome should still be considered as quite successful since a large number of MPA professionals and partners took part in training and limitations in training participation was not expected (Outcome 1). In the long-term, it is expected that capacity in socio-economic monitoring among Caribbean Challenge MPAs will be further increased with a significant proportion of Caribbean Challenge MPA managers trained in SocMon methodology.

At this stage, it is still difficult to determine whether Outcome 2 – the incorporation of SocMon MPA monitoring and research frameworks/programs in Caribbean Challenge countries will be fully achieved. Socio-economic monitoring needs to be incorporated into such frameworks and programs since most MPAs in the region, focus on ecological monitoring. Seven site assessment/monitoring programmes have been initiated in this project (one less than originally expected due to the joint project of the SMMA and PMA). This joint SMMA/PMA project however, did not in any way detract from expected outputs but instead resulted in more efficient use of project resources and collection of data. Therefore this outcome at grant completion can be viewed as successful. All sites indicate that socio-economic monitoring should be sustained given the needs and current social and economic conditions at their MPAs, therefore it is quite possible that this outcome will be fully achieved in the long-term provided funding and other resources are available.

The opportunity exists for the information collected in the project to be used for improving capacity or built knowledge for MPA decision-making among Caribbean Challenge countries (Outcomes 3a and 3b), especially in participating project countries. While all sites indicate that the socio-economic data collected during the project will be used to adapt management in certain areas, specific activities have not been identified or determined. Perhaps this was a weakness of this project. Provision of funding for implementing adaptive management activities at sites should probably have been made to encourage use of the socio-economic data in improving management in a tangible manner. Follow-up is required to determine the number of sites that have used the information collected during this project to adapt management as well as the scope of activities for adaptive management.

Through this project the promotion of SocMon has been increased among the three participating Caribbean Challenge countries. The three participating project countries and sites expressed an interest in receiving training in SocMon during the pre-proposal phase and as such were beneficiaries of SocMon training. It is hoped that in the future, all Caribbean Challenge countries will benefit from similar training. For this outcome (Outcome 4) to be fully realized in the long-term further promotion among other Caribbean Challenge countries will be necessary. This outcome was successfully achieved during the project. Linking this promotion with small grants programs such as the CaMPAM Small Grant Program will aid the increased uptake of SocMon among Caribbean Challenge countries (Outcome 6a).

Outcome 5 is another outcome that may be achieved in the long-term. While there were no direct requests during the Caribbean Challenge project for SocMon information as project inputs, the socio-economic information collected at the Woburn/Clarke’s Court Bay MPA in Grenada, South Coast Marine Conservation Area in St. Vincent, the Soufriere Marine Management Area and Pitons Management Area in St. Lucia will be beneficial inputs into continued management planning, management plan development and acceptable limits of physical development, respectively, at these sites.

Outcome 6a has not yet been realized but is hoped that by using Caribbean Challenge SocMon project successes as leverage, CaMPAM and international donors would agree to award small grants to proposals focusing on or including some component of socio-economic monitoring (at least one small grant per year) with the SocMon Caribbean methodology used as the preferred monitoring method. It should be noted that CaMPAM has been very supportive of this project since through UNEP-CEP it has been involved in a project associated with the Caribbean Challenge Initiative, “Regional support for the Caribbean Challenge initiative: Networking, consolidation and regional coordination of MPA management.” As such Maria Pena was invited to participate in two meetings hosted by CaMPAM (in 2011 and 2012) relevant to this UNEP-CEP project where she shared information about the Caribbean Challenge SocMon project.

During the project, the 65th GCFI held in 2012 was used as a means of increasing uptake of SocMon among Caribbean Challenge countries (Outcome 6b). During the MPA Science and Management session, preliminary results from a few project sites were shared with a regional and international audience. While it was not a special SocMon session, the number of oral presentations given was sufficient to peak interest in the methodology and project. At this 2012 meeting, the inaugural Socio-economic Café was launched as a result of the need to have a forum for sharing talks that could not be accommodated in the socio-economic session category due to limited space. The idea behind the café was to have an informal gathering of GCFI’s socio-economic session leaders and contributors who would chat with GCFI members about a preferred main topic chosen by participants for about 10 minutes. The café was well received and would be another forum where SocMon success stories could be shared. At least one SocMon session every three years would be a good way of increasing upake of SocMon in the Caribbean region. This may be an opportunity for the NOAA Coral Reef Conservation Program to further support SocMon by sponsoring these regular sessions.

Table 4 Anticipated Caribbean Challenge SocMon project outcomes

Outcome(s)		Metric	Baseline value	Value at grant completion	Long term goal value	Year long term value anticipated
1a.	Increased capacity for socio-economic monitoring among Caribbean Challenge MPAs	# of Caribbean Challenge MPA managers trained in SocMon	0	40	Greater than 40, significant proportion of Caribbean Challenge MPA managers trained	2015-2020

Outcome(s)		Metric	Baseline value	Value at grant completion	Long term goal value	Year long term value anticipated
1b.	Increased capacity for socio-economic monitoring among Caribbean Challenge MPAs	# of complimentary evaluations	0	40	40	2012
2.	Incorporation of SocMon in Caribbean Challenge MPA monitoring and research frameworks/programs	# of sustained socio-economic monitoring programs	0	8	8, at least one sustained monitoring program per Caribbean Challenge country	2015-2020
3a.	Improved capacity/built knowledge for MPA decision-making among Caribbean Challenge countries	# of adaptive management activities	0	TBD	3 (at least one per participating project country)	2015
3b.	Improved capacity/built knowledge for MPA decision-making among Caribbean Challenge countries	Scope of adaptive management activities	0	TBD	TBD	2015
4.	Increased promotion of SocMon among Caribbean Challenge countries	# of requests for SocMon training	3 Caribbean Challenge countries, many past request	3 (participating Caribbean Challenge countries)	8 (all Caribbean Challenge countries)	2015
5.	Increased number of MPA projects and external initiatives that utilize socio-economic information	# of requests for SocMon monitoring information as project inputs	0	TBD	TBD	TBD
6a.	Increased uptake of SocMon among Caribbean Challenge countries	# of CaMPAM SocMon Small Grants	0	TBD	1, at least one per year	TBD
6b.	Increased uptake of SocMon among Caribbean Challenge countries	GCFI special sessions marketing SocMon success stories and outputs	0	TBD	1 session every three years	TBD

TBD – to be determined

4.7.2 Project products

The products of this project have been variously mentioned in previous sections but are listed below for completion.

1. Three site-specific workshop training reports (Pena and Blackman 2011; Pena and Blackman 2012 a and b)
2. Seven site monitoring reports (Cazaubon et al. 2013; Daniel 2013; Harvey 2013; Harvey et al. 2013; Jeffrey et al. 2013; Lockhart et al. 2013; Pascal et al. 2013)
3. One final technical report (Pena et al. 2013)
4. Five oral presentations and conference papers (CERMES 2013):
 - Pena, M., P. McConney and K. Blackman. In press. Common socio-economic monitoring indicators for Caribbean Challenge MPAs
 - Cazaubon, N., A. Dominique, M. Pena and K. Blackman. In press. Using socio-economic data to inform strategies to mitigate impacts of planned development within the Pitons Management Area (PMA) and Soufriere Marine Management Area (SMMA), St. Lucia
 - Harvey, O., K. Williams and A. Nanton. In press. Developing a core set of indicators for decision-making and adaptive management at the Tobago Cays Marine Park, St. Vincent and the Grenadines.
 - Jeffrey, C., F. Gibbs, S. Antoine, M. Mitchell, R. Baldeo, K. Blackman and M. Pena. In press. Assessing the feasibility of alternative livelihood options for communities surrounding the Molinière-Beauséjour Marine Protected Area, Grenada
 - Pascal, S., M. Pena and K. Blackman. In press. Perceptions of changes and impacts accompanying the introduction of management planning to the Woburn/Clarke's Court Bay MPA, Grenada
5. Two training videos recorded during SocMon training in St. Vincent and St. Lucia.

5 CONCLUSION

Careful preparation and the cultivation of partner relationships were key ingredients to the successful start of the project. Critical in this was respect by CERMES for the situation of under-capacity and over-work faced by many MPA authorities and their SocMon team members. The planning process had to proceed at the pace appropriate to the partners rather than one set by the project management agency. It was also important to try to fully understand the circumstances of the monitoring site, and the level of priority likely to be accorded to the SocMon initiative by all of the invited participants.

The quality of data collected among sites was fairly good and in most cases is baseline data on which future monitoring may be based. In general sites could have made more use of secondary data collected to corroborate primary data. This was an overall weakness at all project sites. Collection and use of secondary data therefore needs significant emphasis in future SocMon training workshops.

Feedback from project sites was generally good. Initiation of monitoring experienced significant delays in most sites in spite of follow-up from CERMES after training had concluded. Understandably prior

commitments of partners impacted the progress of the project and significant delays encountered at the South Coast Marine Conservation Area resulted in site visits by the project manager and assistant SocMon trainer. Unfortunately site monitoring initiation was hindered due to significant delays in transfer of sub-grant funds from the UWI. Despite continuous follow-up from the project manager, disbursement of project funds was slow. In future SocMon projects, an alternative method of transferring funds, for example, by accountable advance, may have to be utilized to ensure efficient project management.

Recommendations provided in the workshop and project evaluations will be taken into account by CERMES in future rounds of SocMon initiatives. An extended field trip period seems to be necessary for efficient assimilation of SocMon methodology and field techniques. A half-day session each on data coding and analysis, key informant interview and survey design, as well as report production may also be necessary to improve these components of SocMon projects. Either a slightly longer workshop period or a series of site visits may be necessary to accommodate this. Webinars could also be incorporated to reinforce SocMon components. However, demonstration of techniques for example for data analysis are best accomplished by face-to-face interaction. Alternatively, due to the significant delays in initiation of site monitoring and reporting, the process of future SocMon projects may have to be examined and revised. SocMon workshops may now have to be conducted for extended periods of time of up to two weeks as is presently being practised in the Pacific region. This will ensure that the initiation of monitoring and data analysis will be conducted and completed with onsite assistance from the project manager. This method is intense and requires full commitment from participants. Intense SocMon workshops and monitoring will expedite data collection and analysis, resulting in timely reporting. Any of the changes to current training and technical guidance in SocMon will result in increased project costs. Therefore reduced geographic scope of SocMon projects or increased funding allocated by donors may be necessary to provide more “bang for buck.”

Due to similarity in variables chosen, questions asked and sampling designs that include similar stakeholders among the Caribbean Challenge MPA sites, there are a number of variables that can be potentially qualitatively and quantitatively compared. The opportunity therefore exists for building a sub-regional socio-economic picture of Caribbean Challenge MPAs and regional MPAs in general (Pena et al. In press).

Generally, goals and objectives for monitoring vary according to site and as such drive the selection of variables for the SocMon process. However based on the “popularity” of specific variables identified in this project, the potential exists for development of a core set of variables or indicators that can be rapidly monitored in future rounds of SocMon by each site in addition to other goals and objectives. A standardized key informant interview and survey could be developed for rapid SocMon assessment or monitoring using the most popular variables as a base. Sustained monitoring using this core set of variables will provide valuable data for determination of trends, changes, and MPA management effectiveness within and among sites. All of these can be used to inform and adapt MPA management (Pena et al. In press).

With the inclusion of eight MPA sites in this project, there is potential for the development of local, sub-regional and even transboundary Caribbean Challenge SocMon networks for enhanced capacity in socio-economic monitoring. The latter is especially probable with the establishment in January 2011 of the Grenadines Network of Protected Areas comprising the Sandy Island/Oyster Bed MPA, Molinière/Beausejour MPA and Tobago Cays Marine Park. Even if informal in nature, these networks will enable collaboration among sites for promoting the incorporation of SocMon in MPA monitoring and research frameworks. The sites that participated in this project now have good SocMon expertise that they can collectively use in future monitoring.

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7 APPENDICES

Appendix 1: Summary proposal

Socio-economic monitoring by Caribbean Challenge MPA managers

NFWF recipient	Centre for Resource Management and Environmental Studies (CERMES), The University of the West Indies, Cave Hill Campus, Barbados
Recipient type	Higher education institution
Principal investigator and contact information	Ms. Maria Pena, Project Assistant, CERMES, UWI Tel: 246-417-4727; Fax: 246-424-4204 Email: maria.pena@cavehill.uwi.edu Web site: http://www.cavehill.uwi.edu/cermes
Grant program	NOAA CRCP International Coral Reef Conservation Cooperative Agreement
Specific objective(s) of the International Strategy Priority Goal One that the proposal addresses	Objective 5: Use regionally appropriate biophysical and socio-economic monitoring and evaluation protocols to: Establish baselines and detect changes over time in an adaptive management framework.
Project duration	1 September 2011 to 31 August 2012
Geographic location	Eastern Caribbean: Grenada, Saint Lucia, and St. Vincent and the Grenadines
Grant request and matching funds	<u>Grant request</u> : US\$63,186 <u>Matching funds</u> : US\$63,186

Project summary

The long-term conservation outcome of this project is that of increased capacity for effective MPA management among Caribbean Challenge (CC) countries through use of social and economic monitoring data in MPA decision-making.

Despite many projects, Caribbean MPA management authorities with small staffs struggle with inadequate capacity to manage most MPAs in the region. This is in part due to the fact that most of the regional, national and local agencies responsible for MPA management, do not have the training or skills required to achieve effective biodiversity conservation and successfully manage the areas under their supervision. Strengthening skills and knowledge, to manage protected areas adaptively is critical to preventing and/or arresting degradation of natural resources and ensuring sustainable livelihoods for those dependent on these resources. Consultation with representatives of the MPA community in the eight islands associated with the Caribbean Challenge Initiative at a meeting hosted by the Caribbean Marine Protected Areas Management (CaMPAM) Network at the 63rd Gulf and Caribbean Fisheries Institute

(GCFI), Puerto Rico, 1-5 November 2010 indicated the need for capacity building in socio-economic monitoring for the development of an effective regional system of MPAs.

This need for MPA capacity building in socio-economic assessment and monitoring was previously identified in a regional training needs assessment. This critical deficiency must be addressed. The Caribbean Challenge Initiative and regional training in SocMon provide a major opportunity for uptake of SocMon for achieving improved MPA management capacity and therefore conservation of coastal resources. With strengthened capacity for management through socio-economic monitoring MPA managers, authorities and field staffs will also increase their capacity for adaptive management through learning-by-doing.

SocMon Caribbean is a globally networked, regionally adapted, practical methodology of socio-economic monitoring for coastal management. Training in SocMon Caribbean will provide Fisheries/MPA management authorities with a tool to conduct sustained monitoring of socio-economic conditions at their MPAs. The SocMon Caribbean training package already successfully offered includes specialisation modules on resource valuation, co-management, livelihoods analysis and other options to tailor training to site-specific demands.

Project goals and objectives

Goal	Objectives
Build capacity for improved and effective MPA management among CC countries by promoting the use of social and economic data in MPA management	Train approximately 40 MPA managers/staff, from 3 CC countries, in the practical use of SocMon Caribbean methods via three country-specific workshops
	Assist the initiation of 8 site assessment and monitoring programs for coastal management in each of the countries receiving the training
	Document training and monitoring initiation processes, and make them available to a worldwide audience and CERMES communications for replication, with improvement, in future rounds of SocMon activity
	Submit compatible data to the Reef Base Socio-Economic global database and CaMPAM database

Project activities

The primary project activities include:

1. **Country-specific SocMon training workshops** – Three Caribbean Challenge countries (Grenada, St. Vincent and the Grenadines, and St. Lucia) will be invited to participate in the training. This process will allow the nomination by Caribbean Challenge country representatives and fisheries/MPA authorities of suitably committed MPA managers and staff to participate in training.

An intense 5-day SocMon workshop in all participating countries, and local demonstration study site monitoring for practical purposes with onsite assistance from the project manager and project investigator, will familiarise participants with all phases of the SocMon methodology including data analysis and report preparation, which in the past have been problematic for some project sites.

The maximum size of each training workshop is about 10-15 participants, 5 persons per MPA site (See Figure 1). The 5-day training session combines concepts with practice to provide a thorough introduction to SocMon that can be fit into the busy schedules of MPA managers and practitioners. Using a local demonstration study site throughout enhances the relevance of the training and will make initiation of MPA-specific follow-up SocMon studies easier. A specialised module on developing a socio-economic monitoring plan for sustained monitoring may be offered.

Additional training or advice can be immediately offered by the trainer on site. All training will utilise the SocMon Caribbean guidelines (Bunce and Pomeroy 2003) and manual (Bunce et al 2000). CERMES experience conducting SocMon and other projects related to MPA management effectiveness and governance will strengthen the training experience.

Workshop goal: For Caribbean Challenge MPA managers and relevant staff to learn how to develop and implement socio-economic monitoring programs for strategically selected sites using SocMon Caribbean methods.

Workshop objectives: To introduce socio-economic monitoring using SocMon Caribbean methods and to develop a feasible site monitoring plan and timeline for each study site for implementation.

2. **Site monitoring initiation** - Each participating fisheries/MPA authority will be given the opportunity to apply for a small grant of USD 2,500 to assist in the initiation of monitoring at a specific MPA site or network, supported by communication and one site visit from CERMES as needs dictate. We expect that 8 training sites will be ready to start monitoring within the timeframe of this project. See Figure 1 for project sites. The fisheries/MPA management authority will be expected to form and lead a SocMon team and produce a report within the period of this project. Where possible, the potential study sites proposed in the training will be selected, but following the training other or better candidate sites may emerge.
3. **Process documentation** - CERMES has previously documented its SocMon training and the outputs produced in SocMon projects. In this project new components may be added. CERMES will report on the training and fisheries/MPA authorities will report on their initiation of monitoring. These documents will be made available on the CERMES web site. They may also be used, as others have been in the past, as teaching material for graduate students and outreach with NGOs around the region.
4. **Data sharing** - Compatible data will be submitted to the Reef Base Socio-Economic global database by use of standard reporting formats based on the selected indicators. Data sharing with CaMPAM will also be pursued.

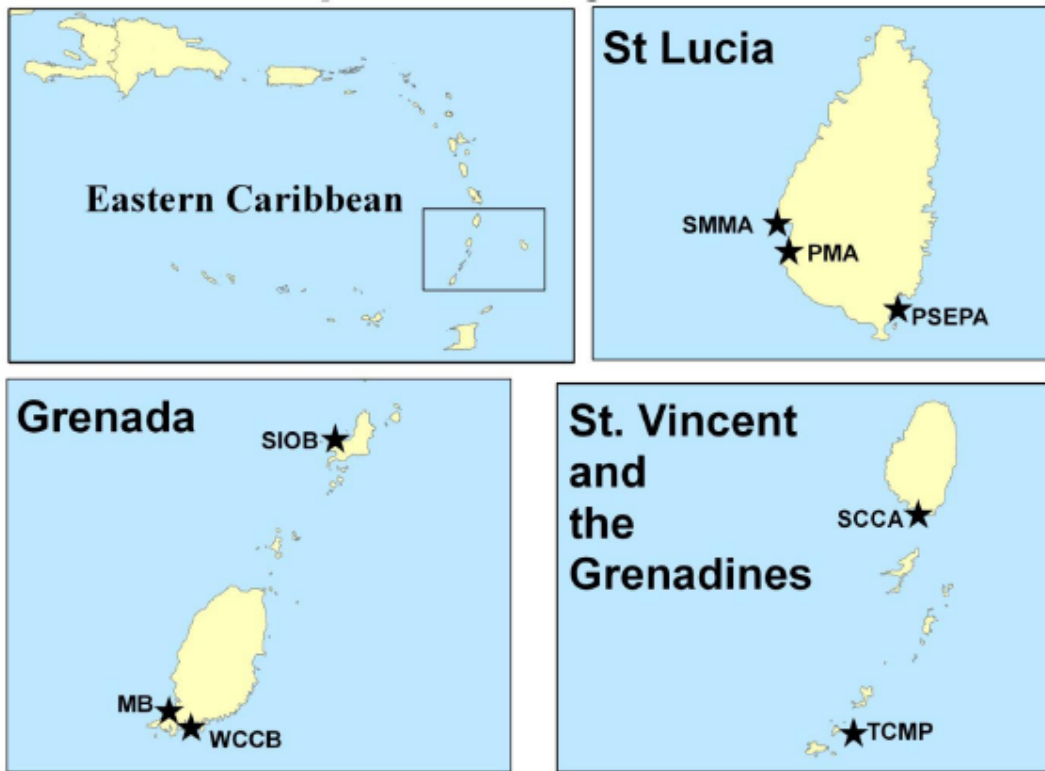


Figure 1 Caribbean Challenge SocMon project sites

Task timetable

The following schedule of implementation is suggested, taking into account the need for the fisheries and MPA management authorities to also service other activities, and the preference for completing the training within the last quarter of the year.

Major activities: 2011									S	O	N	D
Project announcement and selection of workshop dates for CC SocMon training									x			
Preparation of training materials and team									x			
Implementation of site-specific training workshops									x	x	x	
Selection of 8 monitoring initiation sites; preparatory activities; planning for initiation of monitoring									x	x	x	x
Reporting of training											x	

Major activities: 2012	J	F	M	A	M	J	J	A	S	O	N	D
Initiation of site monitoring with support	x	x	x									
Validation of project results				x	x							
Preparation and review final project reports						x	x					
Project close								x				

Anticipated products and outcomes

Product	Outcome
Report on application process for selecting SocMon training participants and sites	40 preferred participants and 8 study sites
Reports of SocMon training workshops	At least 40 trained MPA stakeholders
Reports on site assessment initiation	At least 8 monitoring programs established
Training and site monitoring final reports	Shared information for improving SocMon
Oral presentation and paper at GCFI 2012	Sharing of project findings with region

Budget summary

Cost category	Federal funds (USD)	Matching funds (USD)
PERSONNEL Total	10,500	54,000
TRAVEL Total	23,536	1,800
SUPPLIES Total	9,150	6,386
OTHER Total	20,000	1,000
GRAND Total	63,186	63,186

Sept 2011 to Aug 2012

Socio-economic monitoring by Caribbean Challenge MPA managers

PROJECT GOAL

Building capacity for improved and effective MPA management among Caribbean Challenge countries through the use of social and economic monitoring data in MPA decision-making

PARTICIPATING MPAs

Grenada
Molinère/Beauséjour
Woburn/Clark's Court Bay
Sandy Island Oyster Bed

St. Vincent & the Grenadines
Tobago Cays Marine Park
South Coast Marine Conservation Area

St. Lucia
Soufriere Marine Management Area
Point Sable Environmental Protection Area
Pitons Management Area

PROJECT ACTIVITIES

- Three 5-day SocMon training workshops (Sept – Nov 2011)
- Initiation of 8 site assessment & monitoring programs
- Documentation of training and outputs
- Data sharing with compatible databases

Grant funded by the NFWF Coral Reef Conservation Fund
(Project 2011-0051-012)
Implemented by:
The Centre for Resource Management and Environmental Studies (CERMES)
The University of the West Indies, Cave Hill Campus, Barbados, BB 11000
<http://cavehill.uwi.edu/cermes>

For further information contact:
Maria Pena
(246) 417-4727
maria.pena@cavehill.uwi.edu




Centre for Resource Management and Environmental Studies
FACULTY OF PURE AND APPLIED SCIENCES
THE UNIVERSITY OF THE WEST INDIES
CAVE HILL CAMPUS, BARBADOS



TEL: (246) 417-4316 cermes@uwichill.edu.bb
FAX: (246) 424-4204 www.cavehill.uwi.edu/cermes

For Immediate Release

**Socio-economic Monitoring by Caribbean Challenge MPA Managers training workshop hosted by
The Centre for Resource Management and Environmental Studies (CERMES)
in collaboration with the National Parks, Rivers and Beaches Authority (NPRBA) and the Fisheries Division
of St. Vincent and the Grenadines**

*St. Vincent and the Grenadines MPA stakeholders converge on home soil for a Socio-economic monitoring by
Caribbean Challenge MPA managers project workshop.*

From the 17-21 October, participants from St. Vincent and the Grenadines and Union Island will converge at the Sunset Shores Beach Hotel to attend a Socio-economic monitoring by Caribbean Challenge MPA managers training workshop. This five-day workshop which is specifically focused on training MPA managers and field staff in socio-economic monitoring will be the 1st of three to be held in three Caribbean Challenge countries (Grenada, St. Vincent and the Grenadines and St. Lucia) where research will be conducted.

The workshop will commence with an opening ceremony from 9:00 am until 10:00 am on Monday the 17th of October. Opening ceremony guest speakers will include Andrew Wilson, Director of National Parks, Rivers, and Beaches Authority (NPRBA); Raymond Ryan, Chief Fisheries Officer and Kenneth Williams, Manager of the Tobago Cays Marine Park (TCMP). The training workshop will be practically-oriented with workshop participants benefiting from field trips, a demonstration study site assessment, group work exercises, slide presentations and discussions guided by Project Investigator and CERMES Project Assistant, Ms. Maria Pena. Through this series of workshops and initiation of site monitoring at specific MPA sites, the project aims to achieve its primary long term outcome of increasing the capacity for effective MPA management among Caribbean Challenge countries through use of social and economic monitoring data in MPA decision-making.

Through a consultation with representatives of the MPA community eight islands associated with the Caribbean Challenge Initiative hosted by the Caribbean Marine Protected Areas Management Network and Forum (CaMPAM) at the 63rd Gulf and Caribbean Fisheries Institute (GCFI), in November 2010, in Puerto Rico, the idea for this project was conceptualized. The need for capacity building in socio-economic monitoring for the development of an effective regional system of MPAs was expressed among Caribbean Challenge countries. CERMES has engaged the NPRBA and the Fisheries Division of St. Vincent and the Grenadines as partners in this important sub-regional project which is expected to be of tremendous benefit to both the Tobago Cays Marine Park and the proposed South Coast Marine Conservation Area (SC MCA). The latter will serve as the demonstration study site for the duration of the workshop.



Centre for Resource Management and Environmental Studies

FACULTY OF PURE AND APPLIED SCIENCES

THE UNIVERSITY OF THE WEST INDIES

CAVE HILL CAMPUS, BARBADOS



TEL: (246) 417-4316 cermes@uwichill.edu.bb
FAX: (246) 424-4204 www.cavehill.uwi.edu/cermes

6 October 2011

Mr. Raymond Ryan
Chief Fisheries Officer
Fisheries Division
Kingstown
St. Vincent and the Grenadines

Dear Mr. Ryan,

Invitation to the Socio-economic monitoring by Caribbean Challenge Marine Protected Area Managers (Caribbean Challenge SocMon) Training Workshop

You are invited to nominate two persons to participate in a training workshop on socio-economic monitoring being held at the Sunset Shores Hotel and Villa from 17-21 October 2011. This five-day training workshop is one component of a project, *Socio-economic monitoring by Caribbean Challenge Marine Protected Area Managers (Caribbean Challenge SocMon)*, the objective of which is to increase capacity for effective MPA management among Caribbean Challenge Initiative (CC) countries through the use of social and economic monitoring data in MPA decision-making.

SocMon Caribbean is part of a recent global initiative to improve the quantity and quality of information available for decision-making related to human use of coastal and marine resources.

The Caribbean Challenge SocMon project is being implemented by the Centre for Resource Management and Environmental Studies (CERMES) of the University of the West Indies, Cave Hill Campus, Barbados, in partnership with MPA authorities and Fisheries Divisions of St. Vincent and the Grenadines, Grenada and St. Lucia. This project is funded by a US National Fish and Wildlife Foundation (NFWF) Grant. The workshop brings together a wide range of MPA stakeholders in St. Vincent and the Grenadines. Please find attached the draft workshop programme for your information.

Additionally, we are asking the participating MPA and fisheries authorities for permission to put their logos or other identifying marks on future project products in order to prominently acknowledge them as project partners. In publications there will be a disclaimer making it clear that the authors (whoever they may be for the various products) and CERMES, not the project partners or funding agency, bear responsibility for the content of any product. CERMES will of course maintain its high standard of internal review. Can we use the St. Vincent and the



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Grenadines Fisheries Division logo? If so, please provide me with an electronic copy of the logo.

For further information, please contact Mr. Andrew Lockhart, NPRBA Superintendent, Marine and Terrestrial Parks, who is the local organiser for the training workshop at (784) 453-1623 or via email at andylockhart65@yahoo.com.

We look forward to your participation.

Sincerely,

Maria Pena
Project Assistant
CERMES
Tel: (246) 417-4727
Fax: (246) 424-4204
maria.pena@cavehill.uwi.edu

Appendix 4: Project evaluation survey

Socio-economic Monitoring by Caribbean Challenge MPA Managers Project Evaluation by SocMon team members

*SocMon team evaluation of the
"Socio-economic Monitoring by Caribbean Challenge MPA Managers" Project*

Now that you have completed a socio-economic assessment or monitoring project at your site, we would like you to evaluate the SocMon process from training to initiation of site assessment/monitoring through to reporting. Your evaluation will be valuable in helping to improve future SocMon activity in the region.

1. a) You were trained in the SocMon Caribbean methodology via a 5-day training workshop. The workshop's learning outcome was for participants to be able to develop and implement socio-economic monitoring programs at selected sites using the SocMon Caribbean method. Please rate the length of the workshop. *Check ONE.*

- Too long
 Just the right length
 Too short

- b) If the workshop was either too long or too short, suggest what its length should be in number of days.
_____ days

2. Training in the SocMon Caribbean methodology comprised presentations on the SocMon process, a reconnaissance field trip to the workshop demonstration site, discussion on survey and key informant design, demonstration of survey coding and data analysis, and group work involving site plan development, data collection, data analysis and presentation of results using the demonstration site.

- a) Did the workshop content, sufficiently prepare you to implement SocMon at your site?

- Yes No

- b) Please explain your answer.

- c) Workshop content was delivered and reinforced using Power Point presentations, group discussion, field and group work and group presentations. Were these effective means of content delivery?

- Yes No

- d) If no, why not?

3.

- a) Rate the level of difficulty of the following components of implementing SocMon. Check the appropriate rating for each. Rate only those components you were directly involved in.

Component	Level of difficulty			
	High	Medium	Low	NA*
Site monitoring plan development	[]	[]	[]	[]
Survey and/or key informant interview design	[]	[]	[]	[]
Data collection	[]	[]	[]	[]
Data analysis	[]	[]	[]	[]
Reporting	[]	[]	[]	[]

* Not applicable

- b) For each of the components that you found to be particularly difficult (those with a *high level of difficulty*) indicate ONE challenge you encountered.

Component	Nature of main challenge in high difficulty components
Site monitoring plan development	
Survey and/or key informant interview design	
Data collection	
Data analysis	
Reporting	

4. In your opinion, have the goal and objectives for assessment or monitoring at your site been achieved?

[] Yes [] No ... why not? _____

5. In what way(s) do you think the socio-economic information collected at your site will be used?

6. CERMES has provided technical assistance throughout the project. Rate the level of assistance provided. Check **ONE**.

- Very good
- Good
- Fair
- Poor
- Very poor

7. How, if at all, can support from CERMES be improved during future SocMon projects? Check **ALL that apply**.

- Regularly scheduled Skype meetings with SocMon teams
- 2 to 3-day site visits during planning for site initiation, data collection, analysis and reporting
- More e-mail communication
- More peer support – getting the SocMon teams to communicate more with each other
- Other, please specify _____

8. How, if at all, can CERMES ensure improvements and capacity building in the timely production of site monitoring plans, data analysis and reports? Check **ALL that apply**.

Site monitoring plans	Data analysis	Site monitoring report
<input type="checkbox"/> Webinar during drafting	<input type="checkbox"/> Data analysis webinar prior to data collection	<input type="checkbox"/> Provision of report template
<input type="checkbox"/> Series of Skype meetings during drafting	<input type="checkbox"/> 2 to 3-day CERMES site visit after data collection for assistance	<input type="checkbox"/> 2 to 3-day writeshop with SocMon team
<input type="checkbox"/> 1 to 2-day CERMES site visit for drafting assistance	<input type="checkbox"/> Basic linked spreadsheets that automatically generate charts	<input type="checkbox"/> Other _____
<input type="checkbox"/> Other _____	<input type="checkbox"/> Other _____	

9. The things I liked most about this project were: (list)


10. The things I liked least about this project were: (list)

11. Other thoughts, comments, or suggestions?

Thank you

Appendix 5: Group workshop presentations

Socio Economic & Environmental Monitoring in the Proposed South Coast Marine Park





Olando Harvey, Althas Nanton & Andrew Lockhart



South Coast MPA (Proposed)

Introduction/Background

- One of 10 Marine Conservation Areas
- Fisheries Act 1986, Regulations 1988
- Encompasses 5 communities in one of the largest constituencies in SVG
- Within main tourist hub on St Vincent island
- 2 Marinas
- Young Island Resort (Green Globe Awardee)
- Fort Duvernette
- Dive sites
- Swimming & picnicking by local residents & nationals

SocMon in the SCMCA

Goal:

- To establish baseline data on stakeholders' attitudes and perceptions on the Proposed South Coast Marine Park

Objectives:

- To determine the various uses/users/use patterns in the area.
- To measure the impact of any new management arrangements on stakeholders' livelihoods in the area.
- To assess stakeholders' awareness of the current conservation status of the area.

SocMon in the SCMCA

Methodology:

- Key Informant Interviews w/ Fishers, tourists stakeholders & taxi driver
- Survey

Instrument: Questionnaire (5)

Variables:

- Demographics
- Use of the coastal & marine resources for leisure & livelihoods
- Condition of the resources of the Study area
- Threats to the resources of the area
- Knowledge of threats, rules & regulations
- Interest in management decision-making

Questionnaire was piloted with members with Group 1 to eliminate any ambiguity

Sampling unit: Households
Simple Random Sampling

Area: Calliaqua

Date: 20 October 2011

Enumerators: Olando Harvey (TCMP), Andrew Lockhart (NPA) & Althas Nanton (TCMP)

Activities



Yachting



Football

Stakeholder Interviews



Fisher Calliaqua

Hotelier Glen

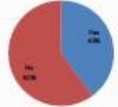
Key Informant Interviews

- Aware of the establishment of the fisheries conservation area.
- Only aware of the rules regarding fishing within the area.
- Most fish that are landed in Calliaqua are not caught within the SCMCA. The area is used by fisheries in times of bad weather and for baitfish. Consequently, closure of the area to fishing would have a high impact on their livelihoods.
- They are not currently involved in the decision-making process that manages the area, but would like to be part of the process.

SocMon in the SCMCA


Results:

Knowledge of the SCMCA



Response	Percentage
No	74%
Yes	26%

Percentage of Persons Who Swim in The Area

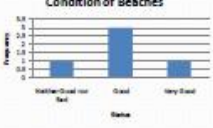


Response	Percentage
No	74%
Yes	26%

SocMon in the SCMCA

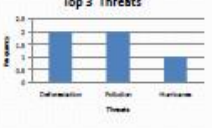
Results:

Condition of Beaches



Condition	Percentage
Very Good	0.2
Good	0.5
Very Good	0.3

Top 3 Threats

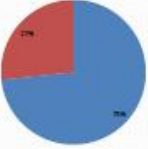


Threat	Percentage
Deforestation	0.3
Pollution	0.3
Harms	0.2

SocMon in the SCMCA

Results:

Compliance With Fisheries Regulations



Compliance Level	Percentage
Some Compliance	74%
All Compliance	26%

SocMon in the SCMCA

Key Learning:

- Multi use marine space
- Adequate knowledge of rules & regulations
- General conditions of beaches needs improvement
- Limited knowledge of marine resources such as mangroves & sea grasses
- Land based & other sources of pollution – a real threat
- Community are willing to participate in any new management arrangement
- SocMon in the SCMP is a positive initiative

SOCMon Case Study: South Coast Marine Conservation Area

Bernard John, Bradford Latham
Lucine Edwards, Kenneth Williams, Sternley Walker

GOAL

- To collect Socio – economic data to inform management planning

OBJECTIVES

- To identify a core set of socio-economic indicators for assessing change over time.
- To identify the range of socio-economic uses within SCMCA & factors to be taken into account when formulating MCA goals.

Background



- Legislated as a MCA in 1987
- Includes three bays
- Coral reefs, seagrass beds, mangroves
- Historical and cultural sites
- Tourism hub
- Largest population

Major uses in Area



Methods

- Questionnaire and key informant interviews
- Key informants
 - Keith Howard - KP Marine
 - Chief Stowe - Royal St. Vincent and the Grenadines Coast Guard
- Questionnaire administered via 9 household interviews

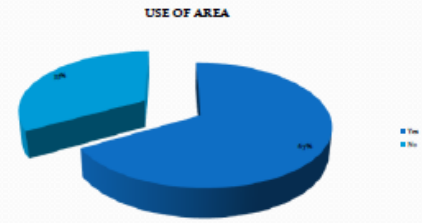
QUESTION VARIABLES

- **Key informants - 5 variables:**
 - study area, community infrastructure and business development, activities, use patterns, levels and types of impact
- **Households - 8 variables:**
 - Age, education, occupation, household activities, awareness of rules and regulations, membership in stakeholder organizations, perceived coastal management problems, perceived community problems

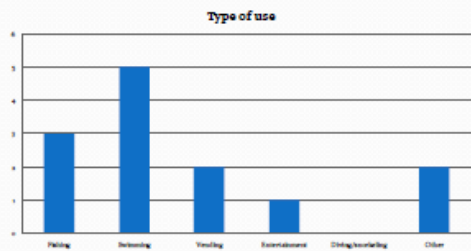
Results – key informants

- Both stationed in SCMCA for over 20 years
- Aware of SCMCA and its boundaries
- Need for infrastructure improvement e.g. sewage, garbage disposal
- Informants well involved in community through various activities e.g. sports, business activities
- Identified no user conflict concerns
- Members of community based organizations

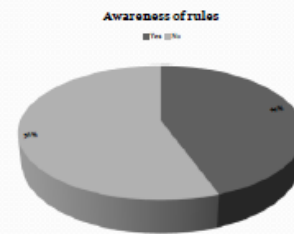
Results



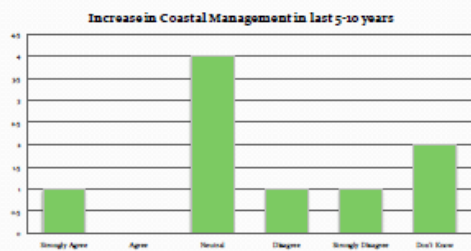
Results



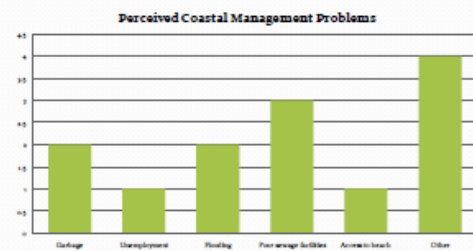
Results



Results



Results



Results

Perceived Community Problems

■ Waste ■ Poverty ■ Unemployment ■ Lack of Education ■ No problem



Suggested Recommendations

- Regular cleaning of rivers
- Political intervention
- More projects for youths to be engaged in
- Employment
- Motivation

Key learning points

- General awareness of SCMCA
- Widely used by a range of stakeholders
- Waste management identified as a major problem

SOCMON methodology

- Useful data analysis training

THANK YOU !!!



A SOCIO-ECONOMIC MONITORING SURVEY DONE IN THE WOBURN CLARKE'S COURT BAY MARINE PROTECTED AREA.

GOAL

TO COLLECT BASE-LINE SOCIO-ECONOMIC INFORMATION TO INFORM POLICY AND DECISION MAKING FOR THE WOBURN CLARKE'S COURT BAY.

OBJECTIVES

COLLECT BASE-LINE INFORMATION ON THE NUMBER OF FISHERMEN IN THE AREA AND METHODS OF FISHING.

TO IDENTIFY CRITICAL AND IMPORTANT AREAS FOR THE INTEGRATION OF ZONING PLANS.

TO UNDERSTAND AND IDENTIFY ISSUES REGARDING STAKEHOLDERS AND RESOURCE USERS WITHIN THE SPECIFIED AREA.

Team members



SHAWNALY BASCAL, DESMOND NICHOLAS, DAVON BAKER, JODY PLACID, BRIAN WHYTE, FINBAR JAMES

THE DATA COLLECTED FROM THE KEY INFORMANTS WERE AS FOLLOWS:

KEY INFORMANTS

1. BUSINESS OWNERS/OPERATORS
2. FISHERMEN
3. SHOP KEEPER

Variables Selected

- K6, K7, K8, K11, K13, K14
- K15, K16, K17, K18, K19, K20,
- K21, K22, K23, K24, K25, K26, K27,
- K28, K29, K30, K31, K32.

ALL KEY INFORMANTS NOTED THE FOLLOWING:

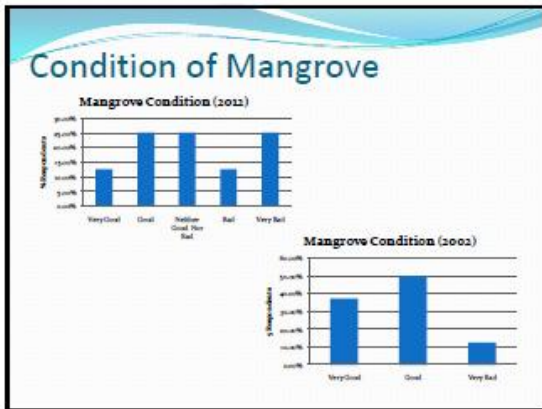
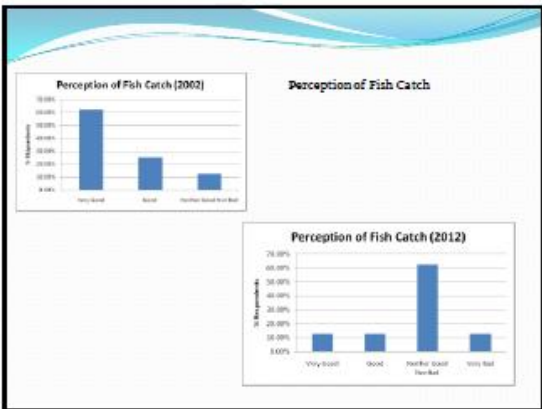
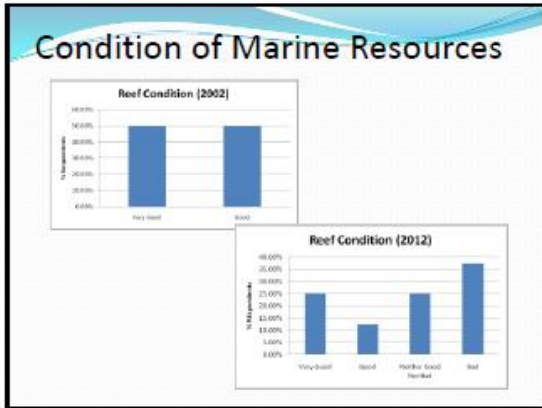
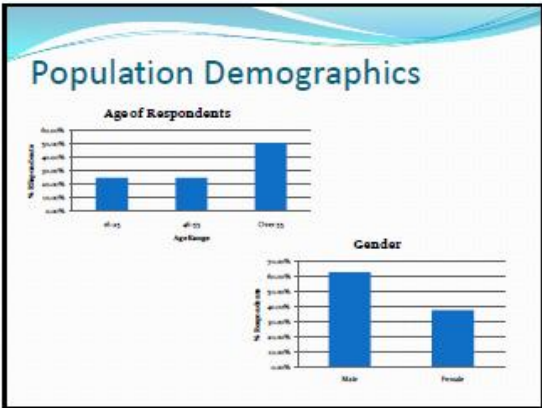
1. BUSINESS OWNER
 - Knowledge of the protected area.
 - Interest in development of the protected area.
 - Potential for growth.
 - Income generation.
- FISHERMEN
 - Knowledge of the Area
 - Techniques
 - Methods
 - Experience in Fishing
 - Geographical Location
- Shop Proprietor
 - Would like to see them being placed within a designated Area.
 - Vital for her Business.

Participation in MPA Development

100% of the respondents interviewed in the area had no participation.

Zoning

75% of the respondents interviewed in the area said the area should be zoned for different uses.



Socio-Economic Assessment Woburn Clarke's Court Bay

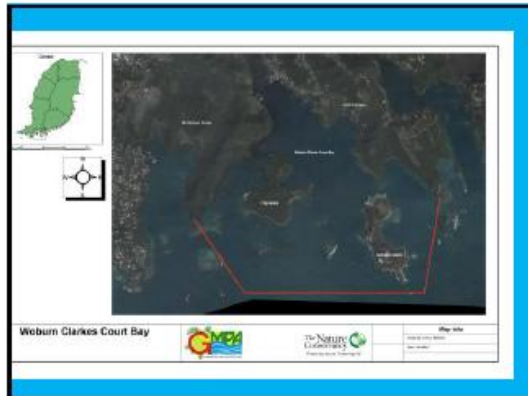


INTRODUCTION

- The WCCBMPA was designated as a protected area since 2001, for the protection of fishes and their breeding habitat.
- However the rich eco-system in mangroves, sea grass beds, coral reefs and bio-diversity the government made it fit to protect and conserve the entire area .
- The WCCBMPA is located on the south coast between Egmont Point and MtHartman Point ,which include Caliviny and Hog islands

Background

- To ensure that the WCCBMPA is effective, the Fisheries Division in collaboration with the Grenada Fund For Conservation and with the involvement of the community users of the WCCB including [local residents ,Fishermen, Mariners and private anchorage ,yachts at public anchorage, land development etc] are actively involve in the holistic develop of the MPA.



WCCB a mixture of local fishing and yachting Tourism



Small open sailing boats for participation in local regattas



Local restaurant may have been built in the 80's and with little activity



Local bar for recreation, and some indication of traditional gambling



Indication that fishing is done in deep waters, lambi (conch) harvesting



Tradition of fishing is sustained



Few houses, area not heavily populated



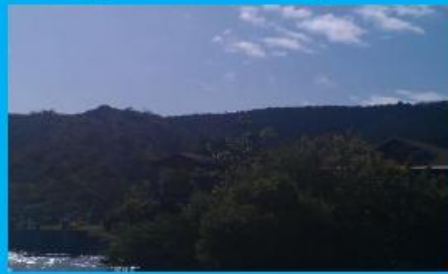
Conservation and mangrove restoration within the area



More modern a expensive homes and restaurant on the east side of park



Ongoing development on land, potential land degradation



More developed and cleaner on east side of park



GOAL

- To acquire socio-economic data to determine the impact of the yachting community ,for the Woburn Clarke's Court Bay Marine Protected Area to inform decision making.

OBJECTIVES

- To identify the socio-economic benefits of the yachting sector in the community .
- To determine the impact of the yachting community on the WCCBMPA.
- To obtain stakeholders suggestion and recommendations to address issues and concern within the WCCBMPA.

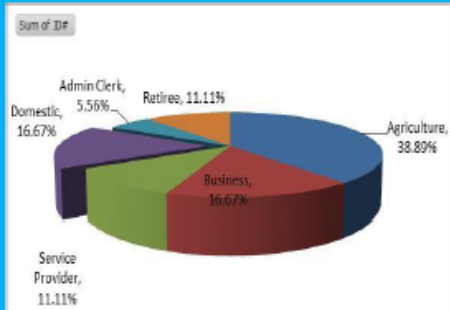
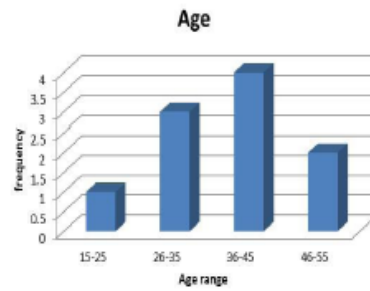
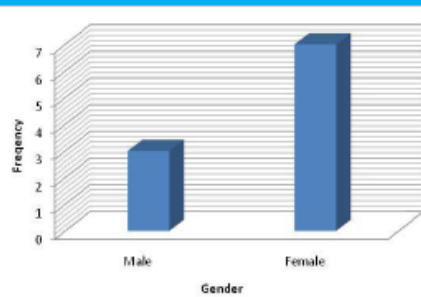
Methodology

- Conducted key informant interviews – key stakeholders in the area.
- 10 household surveys – using random samples
- Analysis of data using Excel

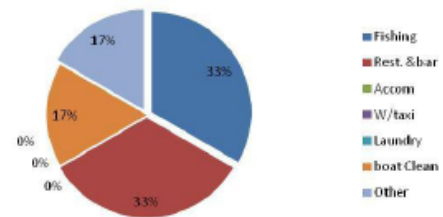
KEY INFORMANT

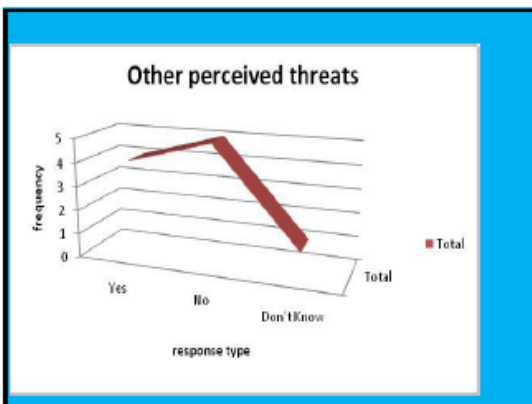
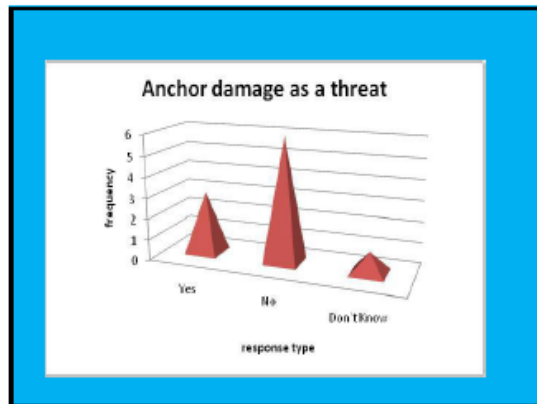
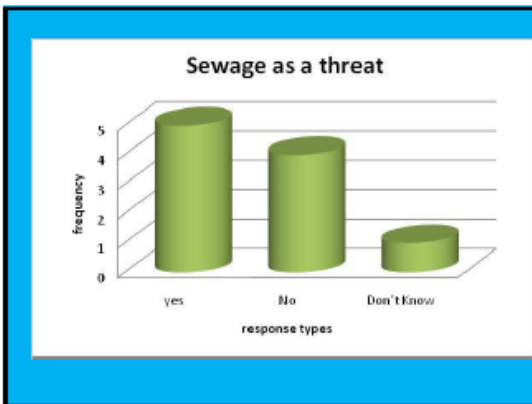
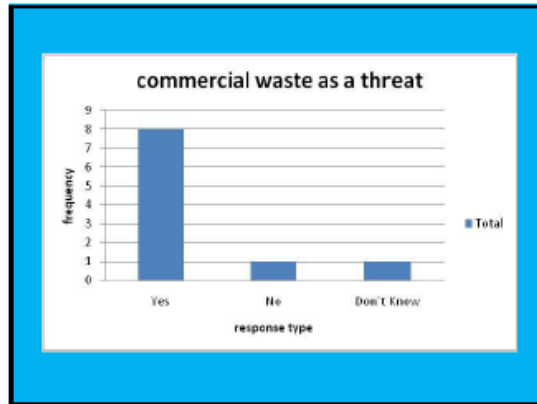
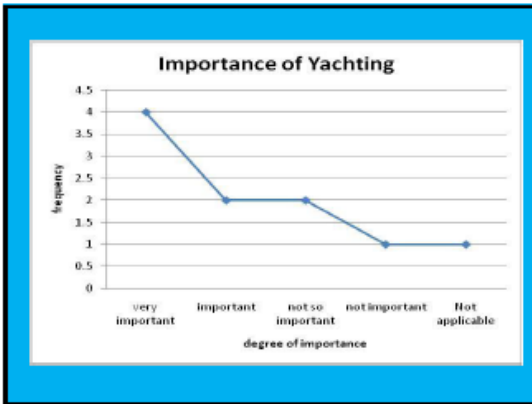
Key informant	Service provided	variable
Cletus Pascal	restaurant	K15,k17,k16,k20
Mr Philbert	fisherman	K15,k17,k16,k20
Mrs Jean	marina	K15,k16,k17,k20

Question #	Marina	Fisherman	Restaurant Owner
Services	Docking, laundry, shower, water/ice, internet	Shop owner	Restaurant, ice/water, accommodation, internet
Regularity	daily	daily	daily
Income	high	DK	Medium
Relationship	Very good	Very Good	Good
Perception	Very important	Pollution	Mixed



services provided to yachts





KEY LEARNING

- Yachting is very important to the community
- Services provided daily included laundry, internet, water, food and ice
- Most common types of services provided to yachts were fish, restaurant & Bar

KEY LEARNING

- Major threats affecting the area were commercial and sewerage waste
- Are in agreement with a management WCCBMPA

METHODOLOGY

- Survey area was identified
- 3 Key Informants (KIs) were identified and households randomly chosen
- Questionnaires were developed and pre-tested using the SocMon monitoring guidelines
- Questionnaires were administered within the study area, data was collated and analyzed.

TEAM UTILIZING SocMON GUIDELINES



KEY INFORMANT RESULTS

- KIs aware of the PSEPA prior to interview.
- KIs learnt about PSEPA from
 - colleagues
 - St. Lucia National Trust
- 2 of 3 KIs identified the extent of the area and one had a fair idea.

- KIs agreed with designation for the following reasons
 - ✓ Sustainability of flora and fauna
 - ✓ Touristic opportunities
- KIs were involved in establishment either through work, community personnel or as fishers.
- KIs identified the following activities at Savannes Bay
 - ✓ Tours to Scorpion and Maria Island
 - ✓ Fishing (Seine, Trolling and Pot)
 - ✓ Savannes Bay Day/Feasts

SEASONAL CALENDAR FOR SAVANNES BAY

Type of gear used		J	F	M	A	M	J	J	A	S	O	N	D
Pots	Season Catch						--	--	--	--	--	--	--
	# fishers						✕	✕	✕	✕	✕	✕	✕
Trolling lines	Season Catch	--	--	--	--	--							
	# fishers	✕	✕	✕	✕	✕							
Handlines	Season Catch	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	# fishers	*	*	*	*	*	*	*	*	*	*	*	*

Key
Catch: increasing (+), decreasing (--) or stable (o)
(---) represents the fishing season * 10 fishers

ECONOMIC ACTIVITY WITHIN PSEPA

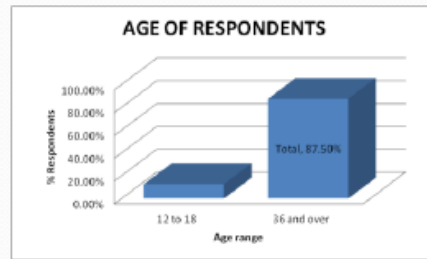
FISHING VENDING CHARCOAL PRODUCTION



- KIs thought that the Saint Lucia National Trust, Government and other users of the resources earning a livelihood should manage the PSEPA.

- The respondents believe that their role could be to
 - report illegal activities to relevant authorities.
 - work with authorities to further develop the area in a sustainable manner.
 - collaborate with other agencies in public and private sectors, NGO's, quasi government, local groups and the users of the resource
 - minimise pollution in and around the protected area
 - be part of any organisation/ group set up to oversee the management of the area

HOUSEHOLD SURVEY RESULTS



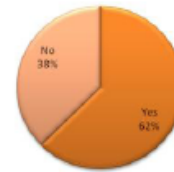
HOUSEHOLD SURVEY

GENDER DISTRIBUTION



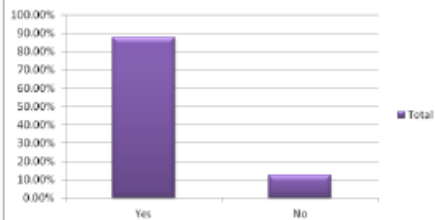
Household Survey

PSEPA AWARENESS



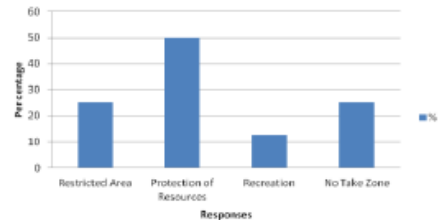
Household Survey

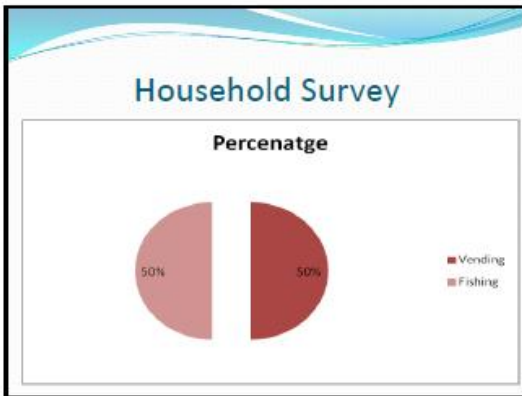
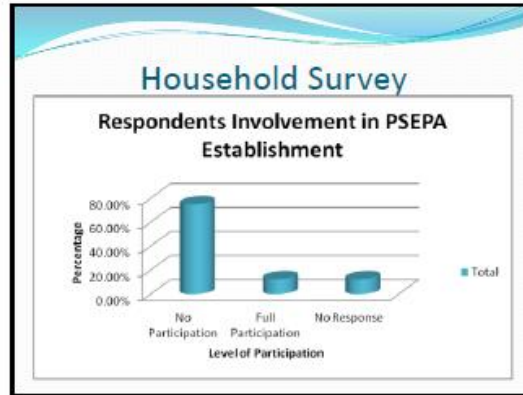
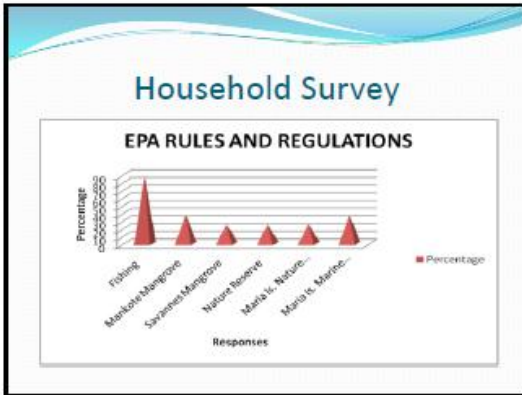
EPA AWARENESS



Household Survey

Meaning of EPA to Respondents





- ### KEY LEARNING
- Respondents are willing to accept the areas designation as an EPA
 - Fishers within the Savanna Bay area are quite knowledgeable of the EPA
 - To some extent, fishers and the community at large practices, are in keeping with the management plan as it relates to fishing.
 - Results indicate that they are participating in the management of the EPA.





GOAL

To determine the extent to which people are aware of and benefit from touristic opportunities in the PSEPA.

OBJECTIVES

- To determine the level of awareness of the PSEPA.
- To determine the existing and potential livelihood opportunities within the PSEPA.
- To determine the number of households currently benefiting (economically) from the PSEPA.

Pointe Sable Environmental Protection Area

- Environmental Protection Area comprising:
 - 1 wildlife reserve: Maria Islands (1982)
 - 3 marine reserves: Maria Island Marine Reserve, Mankote mangrove area (1986) & Savannes Bay both designated RAMSAR sites (2002)
 - Nature reserve (Maria Islands)
 - National landmark (upper Moule-a-Chique)
 - Historical sites

Legally declared in 2007
1,038 hectares, 688 of which is marine
1 of 2 EPAs designated in St. Lucia

Management agency:

- Ministry of Physical Development, Environment and Housing

Marine reserves management responsibility:

- Department of Fisheries

Pointe Sable Environmental Protection Area

- Fishing: pot, spear, seine
 - 2 small fish landing sites (Savannes Bay and Bois Chadon)
- Sea moss farms:
 - decreased activity in recent years
- Charcoal production
- Tourism: hotels
- Turtle nesting – Bois Chadon beach
- Historical sites
- Recreational: *inter alia* beach-going (Bois Chadon & Anse de Sable), windsurfing, horseback riding, kay tours etc.

Method

Preparatory Activities

➔

Data Collection
 • Secondary
 • Key Informant
 • Household interviews

➔

Data Analysis

KEY INFORMANT INTERVIEWS



Savannas Bay- James Daniel



Manikote Mangrove- Magdaline Neilson



Hotel Proprietor- Andrew Paul

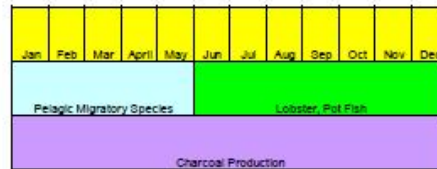
Key Informant Responses

Issue	Fishermen	Charcoal Producer	Guest House Manager
Knowledge of PSPFA	Protected area	Manikote Mangrove is a part of PSPFA	not very knowledgeable
Area protected?	Entire area from Manikote a distance to Savannas Bay	Only Mangroves	Savannas Bay, Manikote
Existing tourist activities			wind and kite surfing, scuba diving, Manikote tours, accommodation at Manikote, advice guests on tours. Would like to explore becoming a tour operator for birdwatching
Tourism product from hotel			north american stay over, culture, airport workers, wildlife view and bird watching
Existing activities	commercial fishing, near island tours, fishing tours, diving, sea mook production, charcoal production, horse back riding	Fishing, sea mook production, charcoal production, horseback riding, mangrove tours, bird watching tours, kite surfing, recreational beach activities, moola a charpe tours	
Ecotour activities	sea turtles, dugongs		
Economic activity within PSPFA	commercial fishing, subsistence farming, offshore boat tours, fishing tours	charcoal, almond flour guide (mangrove and birds), subsistence farming	

Key Informant Responses

Coastal and Marine Activity	Goods & Services	Techniques	Value of goods and services	Market Orientation
Fishing	Lobster	Pole	High (\$150)	local
	Reef Fish	Spears, Poles	Medium	
	Pelagic migratory species	FAD Trolling	Low to medium (\$50 - \$70)	
		Sabre	Flot	
Tourism	Herb (mangrove)	subistence	low (\$250 per hour but only 4 tours per year)	local, regional and international
	Eco-tours	Birdwatching, island tours, mangrove tours	low recreational value	
	Recreational beach activities	sea bathing, kite surfing, kayaking	low (high value per hour but very infrequent)	
	Fishing tours	guest houses, all inclusive hotel	medium (potential tourism \$)	
Hotel accommodation			low (\$50/bag or \$10/bushel). Although value is high, production is low	local
Forestry	Charcoal production	sustainable harvest	low	local

Timeline

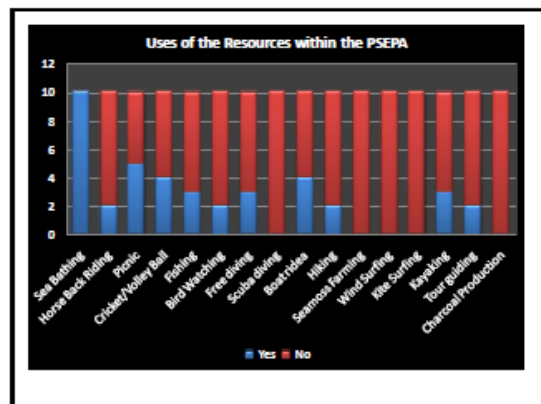
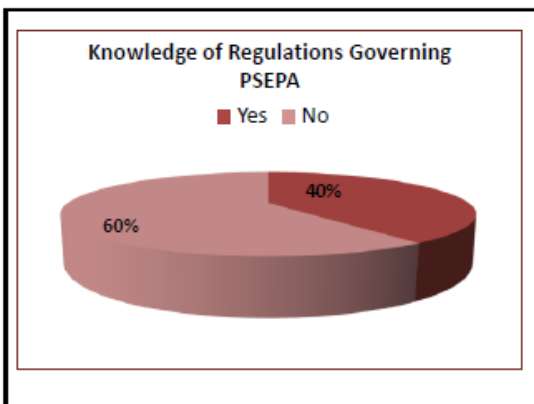
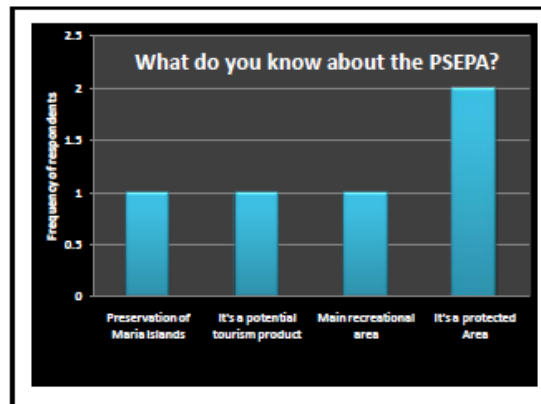
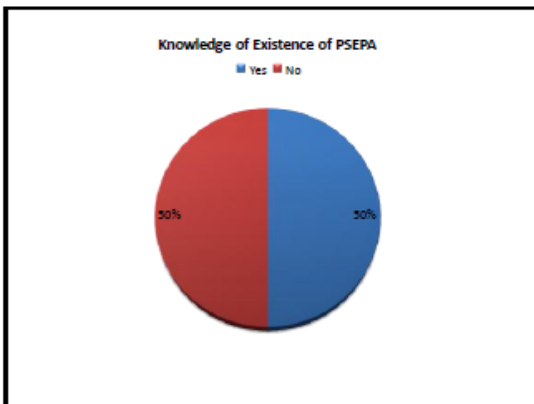
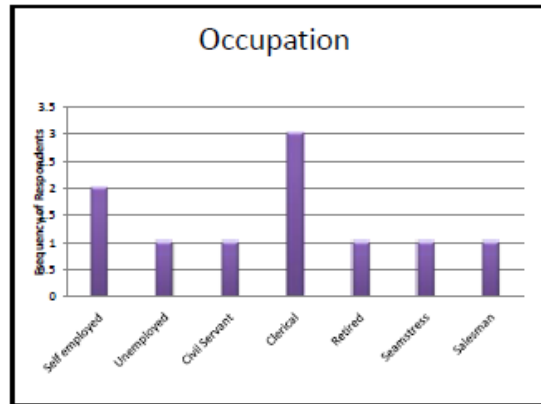
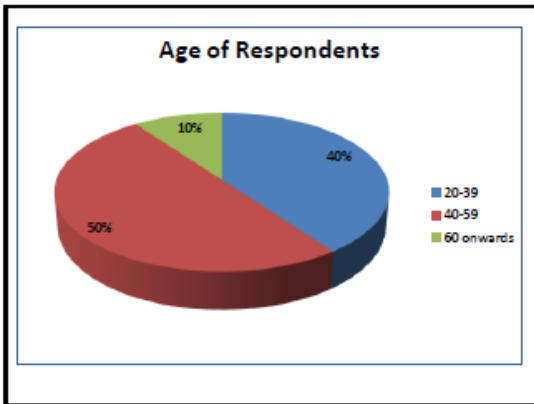


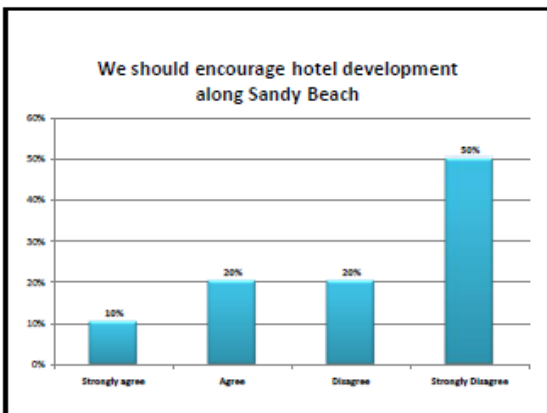
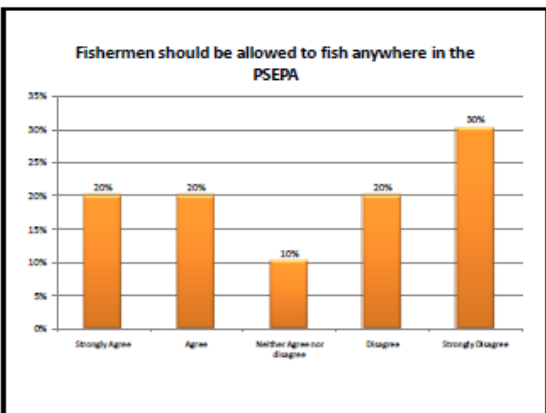
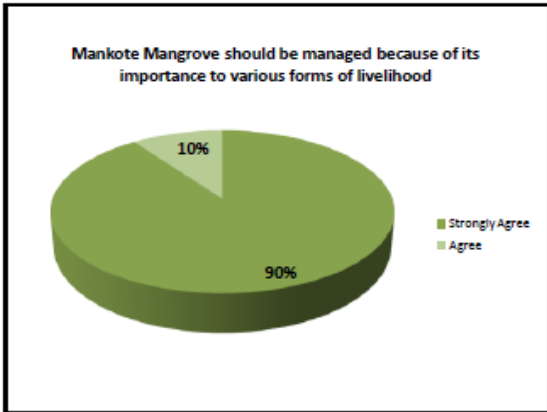
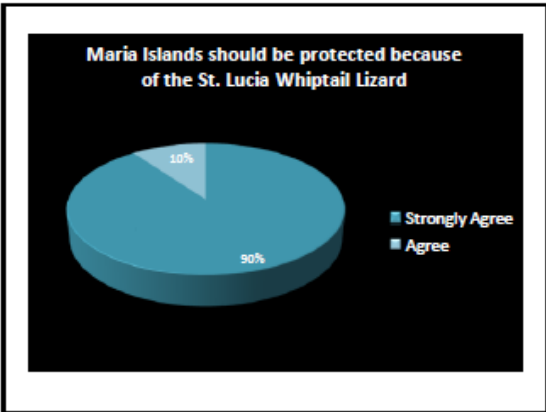
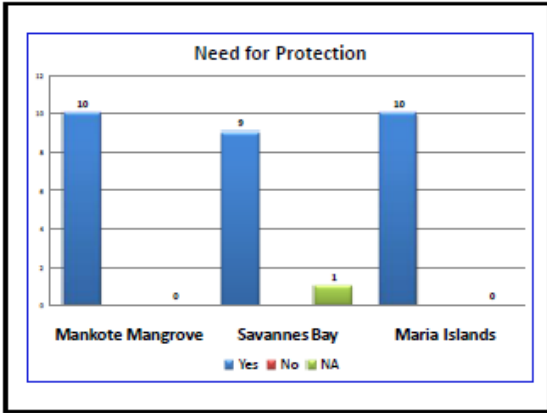
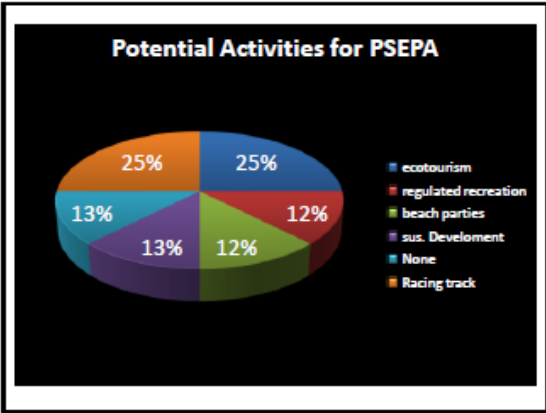
Household Interviews

- 10 households interviewed from the town of Vieux Fort.



Results and Data Analysis





Key Lessons

- There is a greater knowledge of the resources within PSEPA than there is knowledge on the existence of the PA
- There is a great value placed on the resources within the PSEPA
- There is much potential for livelihood opportunities within the area
- Persons recognise the need for its protection



Appendix 6: Goals and objectives for socio-economic assessment/monitoring by MPA

Country	MPA	Goals and objectives
Grenada	Molinière/Beauséjour MPA	<p><i>Goal:</i> To assess the feasibility of alternative livelihood options for the communities surrounding the Molinière/Beauséjour Marine protected Area ((MBMPA).</p> <p><i>Objectives:</i></p> <ol style="list-style-type: none"> 1. To assess how the MPA impacts livelihoods of the communities in the area. 2. To strengthen community participation in MPA management and MPA ownership based on examining potential linkages between resource protection and livelihoods. 3. To identify the socio-economic conditions that will enable alternative livelihood options: tourism and its related development.
	Woburn/Clarke's Court Bay MPA	<p><i>Goal:</i> To determine the changes and impacts, particularly those related to yachting, that accompany the introduction of management planning to the WCCB MPA</p> <p><i>Objectives:</i></p> <ol style="list-style-type: none"> 1. To determine what changes in the WCCB area are perceived by the major stakeholder groups due to the introduction of management. 2. To determine whether changes are perceived as positive or negative, equitable or not, from a socio-economic perspective. 3. To determine the direct and indirect impacts of the yachting sector to WCCB and identify socio-economic benefits of Marinas. 4. To integrate socio-economic monitoring indicators into the evaluation of management effectiveness during management planning.
	Sandy Island/Oyster Bed MPA	<p><i>Goal:</i> To determine impacts, and attitudes and perceptions trends of the Sandy Island/Oyster Bed Marine Protected Area (SIOBMPA), on persons living and working in communities adjacent to the MPA.</p> <p><i>Objectives:</i></p> <ol style="list-style-type: none"> 1. To obtain MPA stakeholder feedback on the MPA management process, impacts and effectiveness of management activities within the protected area before and after the establishment of the MPA. 2. To determine the current conditions of the coastal and marine resources. 3. To identify the specific uses of the MPA and its resources by households within the adjacent communities.
St. Vincent and the Grenadines	Tobago Cays Marine Park	<p><i>Goal:</i> To develop a core set of socio-economic indicators to assist with decision-making and the effective adaptive management of the TCMP.</p> <p><i>Objectives:</i></p> <ol style="list-style-type: none"> 1. To determine stakeholder perceptions of changes in the conditions of the marine resources since the re-launch of the TCMP in 2006. 2. To determine the level of stakeholder participation and satisfaction in the management of the TCMP since the re-launch of the TCMP in 2006. 3. To determine the perceptions of stakeholders on the level of enforcement, compliance and protection (security) within the TCMP since the re-launch of the TCMP in 2006.
	South Coast Marine Conservation Area	<p><i>Goal:</i> To collect socio-economic data to inform management planning of the South Coast Marine Conservation Area</p> <p><i>Objectives:</i></p> <ol style="list-style-type: none"> 1. To identify a core set of socio-economic indicators for assessing change in resource conditions and patterns of use over the next 3-5 years. 2. To identify a range of socio-economic uses/use patterns in the SCMCA. 3. To determine stakeholders awareness, attitudes and perceptions of the coastal and marine resources in the SCMCA. 4. To measure the impact of management arrangements on stakeholders livelihoods and the area's natural resources.
St. Lucia	Pointe Sable Environmental Protection Area	<p><i>Goal:</i> To determine the extent to which the people in the Vieux-Fort community are aware of a) the Pointe Sable Environmental Protection Area (PSEPA) as a protected area and b) the various</p>

Country	MPA	Goals and objectives
		<p>current and potential livelihood opportunities which exist in the area</p> <p><i>Objectives:</i></p> <ol style="list-style-type: none"> 1. To determine the level of awareness of the existence of the PSEPA. 2. To determine the level of awareness of the current livelihoods and potential livelihood opportunities which exist within the PSEPA. 3. To determine the number of households currently benefitting (economically) from the PSEPA.
	<p>Soufriere Marine Management Area and Pitons Management Area (combination site)</p>	<p><i>Goal:</i></p> <p>To collect data to inform/guide strategies to mitigate the socio-economic impacts of planned development within the Pitons Management Area (PMA) and the Soufriere Marine Management Area (SMMA).</p> <p><i>Objectives:</i></p> <ol style="list-style-type: none"> 1. To determine perceived threats of planned development within the SMMA and PMA by residents and other users. 2. To determine the level and extent of use of the PMA and the SMMA by residents and other users. 3. To identify potential management solutions to address impacts identified.

Appendix 7: Key informant variables chosen according to site

Variable no.	Variable	Grenada		St. Vincent & the Grenadines	St. Lucia
		MBMPA	WCCBMPA	SCMCA	PSEPA
K12	Occupation	●			
K14	Activities			●	●
K15	Goods and services				●
K16	Types of use				●
K17	Value of goods and services			●	●
K19	Use patterns			●	
K20	Levels and types of impacts		●	●	
K23*	Stakeholders	●	●	●	
K31*	Stakeholder participation	●	●		
K33**	MPA changes or impacts	●	●	●	
K34**	Management support	●	●		
K35**	Critical activities for management intervention		●		
K36**	Perceptions of resource conditions (adopted - original survey variable S16)		●	●	
K37**	Perceived threats (adopted - original survey variable S17)		●	●	
K38**	Perceived changes in activities and uses		●	●	
K39**	Perceived MPA benefits		●		
K40**	MPA knowledge and awareness	●	●	●	●
K41**	Business and service provision	●	●		●
K42**	Types of interactions		●		
K43**	Livelihood trends, enhancement and vulnerabilities	●			
K44**	Alternative livelihoods				●
K45**	Best practices		●		
K46**	Perceived management responsibility			●	

Source: Pena et al. In press

*Variables recommended for revision

**New variables

Bolded variables – variables applicable as both key informant and survey variables

Variables used at more than one site (potentially comparable) are shaded.

Survey variables chosen according to site

Variable no.	Variable	Grenada	St. Vincent and the Grenadines		St. Lucia	
		SIOB	TCMP	SCMCA	SMMA/PMA	PSEPA
S1	Age	●	●	●	●	●
S2	Gender	●	●	●	●	●
S4	Education	●	●	●	●	●
S7	Occupation	●		●	●	●
S8	Household size		●		●	●
S9	HH income	●	●			●
S10*	HH activities	●		●	●	
S16*	Perceptions of resource conditions	●	●	●		
S17*	Perceived threats	●		●		
S18*	Awareness of rules and regulations		●	●		●
S19	Compliance		●			●
S20	Enforcement		●			
S21*	Participation in decision-making		●			
S23	Perceived coastal management problems	●	●			
S24	Perceived coastal management solutions	●	●			
S25	Perceived community problems		●			
S26	Successes in coastal management	●	●			
S27	Challenges in coastal management	●				
S29**	MPA knowledge and awareness	●	●	●		●
S30**	Types and changes in MPA livelihoods	●	●	●		●
S31**	Alternative livelihoods					●
S32**	HH MPA livelihoods	●			●	●
S33**	MPA changes or impacts	●	●	●		
S34**	Perceived management responsibility			●		
S35**	Management priority(ies)	●				
S36**	Sector development and sector impacts					●
S37**	Knowledge and perceptions of physical development, impacts and negative impact reduction				●	
S38**	Perceived responsibility for impact reduction				●	
S39**	Best practices		●			
S40**	Perceived MPA benefits			●		
S41**	MPA user frequency and type of MPA uses(s)		●		●	
S42**	Use patterns (adopted – original key informant variable K19)			●		
S43**	Perceptions of changes in species abundance		●			