

Socio-economic Monitoring by Caribbean Challenge by MPA Managers (Caribbean Challenge SocMon)

Site monitoring plan for MPA follow-up study

1. Goal and objectives guiding socio-economic monitoring

Monitoring must have a goal and specific objectives for being undertaken. These are often based on management plans (e.g. fisheries, MPA, tourism) or other expressions of policy.

Monitoring goal
To develop a core set of socio-economic indicators to assist with decision-making and the effective adaptive management of the TCMP.

SMART objectives for socio-economic monitoring (please be as specific as possible)

Monitoring objectives (Smart, Measurable, Attainable, Realistic and Time-bound)
To determine stakeholder perceptions of changes in the conditions of the marine resources since the re-launch of the TCMP in 2006.
To determine the level of stakeholder participation and satisfaction in the management of the TCMP since the re-launch of the TCMP in 2006.
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.

2. Defining the study area

Using the information on issues and stakeholders, define the geographic area appropriate for the study site (contains all or most critical activities/issues and stakeholders). Document the specific selection criteria that you used. Clearly identifying the study area is important in identifying use patterns and potential threats to resources. The study area should include where the stakeholders live and work.

Study area selection criteria	Study area description (or attach area map)
The study area would include the communities of Mayreau, Union Island, Canouan and Palm Island such that it includes all the major stakeholders of the TCMP.	See appendix

3. Stakeholder identification

Stakeholder identification and selecting the boundaries for the study site are iterative processes. Start by identifying the activities in the area and then determine who the likely stakeholders are. Name their organisation, if any.

Study area activity or issue	Primary stakeholder [and organisation]	Secondary stakeholder [and organisation]
The study area would include the islands of the Tobago Cays (5) along with Mayreau, Canouan and Union Island. This allows us to capture all the major stakeholders of the TCMP.	Fishers	Yachtees
	Water Taxi Operators	Tourists
	Vendors	ENGOS
	Dive Operators	Hoteliers/Restaurateurs
	Day Tour Operators	Vegetable Vendors
	Yacht Companies	

4. Stakeholder locations and key informants

The communities where SocMon will take place will depend primarily on the stakeholders involved in coastal management. Suggest key persons who can talk about the larger population. The communities where SocMon will take place will depend primarily on the stakeholders involved in coastal management. Suggest key persons who can talk about the larger population.

Stakeholders (1° and 2°)	Location of stakeholder	Key informants for stakeholders
Water Taxi Operators	Mayreau & Union Is.	SGWTA
Vendors	Mayreau & Union Is.	SGWTA
Dive Operators	Union Is. And Canouan	Glenroy Adams
Day Tour Operators	Union Is. & Palm Island	Martin Jennett
Yacht Companies	Canouan	Simon (sunsail)
Yachtees	TCMP	Phil (Splendid Adventure)
Tourists	TCMP	Tourist Bureau
ENGOS	Union Is. & Mayreau	Susgren
Fishers	Union Is. & Mayreau	UIFFO
Boat Repair Services	Union Is.	Earl Allen
Hotels/Restaurants owners	Union Is. & Mayreau	Jean-Marc Saille
Vegetable Vendors	Union Is.	Signa Pollard

5. SocMon team and tasks

Although an initial study or monitoring can be done by a single person (e.g. MSc student), the process is intended to be undertaken by an interdisciplinary team, the size and the required talents of which partly depend on the goal and objectives of the study or monitoring program. What types of expertise do you need and where from?

Role on team (or skill requirement)	Specific tasks	Proposed team member name and affiliation
Survey supervisor	Ensures the accurate administration of surveys (Quality assurance).	Althea Nanton, Kenneth Williams
Communication	Ensure that stakeholders are aware of the SocMon activities.	Olando Harvey, Althea Nanton, Kenneth Williams
Biologist	Evaluate stakeholders responses with regard to actual resource conditions	Olando Harvey
Statistician	Conduct Data Analysis of questionnaire responses	Kenneth Williams, Olando Harvey
Sociologist	Develop Questionnaires and survey guidelines	CERMES
Team Leader	Ensure all tasks are completed accurately, on-time and within budget with results being validated and fed into management decision-making	Kenneth Williams

6. Work plan schedule

A SocMon study should take no more than one month, however duration varies between 3 -8 weeks, so you need to schedule your work accordingly, remembering the SocMon stages including validation. Set out tasks under each heading

Activity / task	Time unit →	Wk1	Wk2	Wk3	Wk4	Wk5	Wk6	Wk7	Wk8
Preparatory activities									
Conduct awareness meetings		X	X						
Develop Questionnaires		X	X	X					
Identify and train enumerators			X	X					
Coding of Questionnaires				X					
Secondary data collection									
Review previous SCOMON Data		X							
Gather bio-physical reports (Reef Check, Turtle Assessments)		X							

Activity / task	Time unit →	Wk1	Wk2	Wk3	Wk4	Wk5	Wk6	Wk7	Wk8
Gather infraction records (TCMP database)		X							
Primary data collection and observation									
Pretest Questionnaires				X					
Conduct Key Informant Interviews					X	X			
Conduct Questionnaires					X	X			
Data analysis and interpretation									
Data Entry							X		
Analysis of Data							X	X	
Generation of Preliminary Report								X	
Submission of Preliminary Report to CERMES								X	
Validation, communication, adaptation									
Conduct stakeholder meetings on Key findings								X	
Generation of Final Report									X
Submission of Final Report to CERMES									X

7. Critical research resources required (budget and non-budget)

Many resources will be used in the research, but there are usually just a few that are so critical the assessment may not be able to proceed without them. You must know early what these are.

Resource description	Use of resource	Comments on availability
Computers	Data analysis	In-kind (TCMP)
Stationery	Preparation of research documents	budgeted
Public education material	Community education	In-kind (TCMP)
Research materials (photos and maps)	Secondary data collection	In-kind (TCMP)
Transportation for Enumerators (Mayreau, Canouan and Tobago Cays)	Data Collection	In-kind (TCMP)
Data collectors stipend	Data collection	Budgeted

Resource description	Use of resource	Comments on availability
Refreshments	Stakeholder meetings	Budgeted
Venue	Validation meeting	Budgeted
Projector	Stakeholder meetings	Budgeted
Camera	Photography	In-kind (TCMP)

8. Budget

The SocMon methodology is intended to be affordable so that monitoring can be sustained. Pay close attention to what are realistic costs, including in-kind contributions that may be available. Use the work plan schedule to estimate the monitoring costs, broken down by SocMon stage in order to provide information on required cash flow based on the schedule. Critical resources can be skills (communication specialist, visual artist etc.).

Description of expense	No. of units	Unit cost*	Total cost*
Preparatory activities			
Stationery/posters/brochures for project announcement	5 posters	15	75.00
	25 flyers	1	25.00
Stakeholder community meeting			
A/V equipment	3	30	90.00
Venues (Union, Mayreau & Canouan)	1	150	150.00
Refreshments	50	4	200.00
Transportation (Canouan for SocMon Team)	1	60	60.00
Transportation (Mayreau for SocMon Team)	1	45	45.00
Enumerator Training			
A/V equipment	1	40	40.00
Venue	1	100	100.00
Refreshments	10	4	80.00
Consultant stipend (Questionnaire Design)	-	-	300.00
Secondary data collection			
All activities occurs in-house	-	-	In-kind
Interviews and observation			
Interviewer stipend (Questionnaire)	100	4	400.00
Stationery for questionnaires	2 reams	10	20.00
Ink for printing questionnaires	1 set	120	120.00
Transportation (Canouan & Mayreau return)	1	200	200.00

Description of expense	No. of units	Unit cost*	Total cost*
Data analysis and interpretation			
Data analyst			In-kind
Report writing			In-kind
Validation, communication, adaptation			
Validation Meetings (3)			
A/V equipment	3	30	90.00
Venues (Union, Mayreau & Canouan)	1	150	150.00
Refreshments	50	4	200.00
Transportation (Canouan for SocMon Team)	1	60	60.00
Transportation (Mayreau return for SocMon Team)	1	45	45.00
Sum total of SocMon costs			2,500.00

* = currency used [US\$]

9. Key variables to be monitored

Based on the goal and objectives of the monitoring, you need to determine which (if not all) of the SocMon Caribbean variables need to be measured, sources of secondary information to consult before interviewing (key informant or household), and practical considerations for each variable. The practical considerations include levels of difficulty in acquiring information, issues, error or uncertainty, challenges in implementing fieldwork, links to data sources that are desirable, etc.

**Remember the two types of variables: Key informant interview/secondary sources variables (K) and survey variables (S).*

Also remember that if a variable specific to your purposes of monitoring is not available among the 60 SocMon Caribbean variables, you can add new variables.

KEY INFORMANT INTERVIEW/SECONDARY SOURCES VARIABLES			
Var. No.	Variable to be monitored	Obj. 1, 2, 3...	Secondary sources of information & practical considerations, constraints and challenges with secondary data sources and carrying out fieldwork
K5.	Age	1,2,3	*
K6.	Gender	1,2,3	*
K7.	Education	1,2,3	*
K12.	Occupation	1,2,3	*

KEY INFORMANT INTERVIEW/SECONDARY SOURCES VARIABLES			
Var. No.	Variable to be monitored	Obj. 1, 2, 3...	Secondary sources of information & practical considerations, constraints and challenges with secondary data sources and carrying out fieldwork
K14.	Activities	1	*
K15.	Goods and services	1	*
K20.	Levels and types of impact	1	*
K25.	Management body	2, 3	*
K26.	Management plan	2	*
K27.	Enabling legislation	2, 3	*
K31.	Stakeholder participation	2	*
K32.	Community and stakeholder organisations	2	*

*Note: Key Informant interviews would be conducted with a representative of each of the major stakeholder groups within the study area. Conducting these surveys would not be very difficult because most of these stakeholder groups are formally organised into cooperatives or associations. In cases where a formal organization exist the president would be interview and in the cases where one does not exist the largest operator/enterprise would be interview as the key informant

SURVEY VARIABLES			
Var. No.	Variable to be monitored	Obj. 1, 2, 3...	Secondary sources of information & practical considerations, constraints and challenges with secondary data sources and carrying out fieldwork
S1.	Age	1, 2 & 3	+
S2.	Gender	1, 2 & 3	+

SURVEY VARIABLES			
Var. No.	Variable to be monitored	Obj. 1, 2, 3...	Secondary sources of information & practical considerations, constraints and challenges with secondary data sources and carrying out fieldwork
S4.	Education	1, 2 & 3	+
S7.	Occupation	1, 2 & 3	+
S9.	Household income	1, 2 & 3	+
S10.	Household activities	1, 2 & 3	+
S14.	Household uses	1 & 3	+
S16.	Perceptions of resource conditions	1, 2 & 3	+
S17.	Perceived threats	1 & 3	+
S18.	Awareness of rules and regulations	1 & 2	+
S19.	Compliance	3	+
S20.	Enforcement	3	+
S21.	Participation in decision-making	2	+
S22.	Membership in stakeholder organisations	2	+
S26.	Successes in coastal management	1, 2 & 3	+
S27.	challenges in coastal management	1, 2 & 3	+

+Note: Household Interviews would be conducted with all members of the identified stakeholder groups in order to get a complete view of the impact of the MPA on the activities of these stakeholders and their perception on the effectiveness of the MPA in meeting its objectives “To protect, conserve and improve the natural resources of the park for current and future generations”.

10. Interview sample design

Depending on many factors ranging from the objectives of monitoring to area demographics, you need to determine ‘how’ and ‘how many’ for selection of key informants and households.

a. Key informants	b. Households
<p>Critical information areas</p> <p>Key Informants of identified stakeholder groups</p>	<p>Estimated number of stakeholder households in study area and means of obtaining estimate</p> <p>~ 100 Stakeholder households exists within the defined boundaries of our study area</p>
<p>No. of informants: 12</p>	<p>Approx. sample size: 100</p>
<p>Selection process: We are going to interview one key informant for each of the identified stakeholder groups.</p>	<p>Sample selection method: We intend to do saturation sampling based on registration records for current primary stakeholders.</p>

11. Visualisation techniques

The GCRMN manual describes several visualisation techniques that are useful for collecting, displaying and communicating socio-economic data informatively to document or assist decision-making. Many methods may be used simultaneously or sequentially. The means of presenting socio-economic monitoring results is critical in showing relationships among the data. Which methods will you use?

Technique	Variable and objective nos.	Notes on application of the technique to the variable and objectives (e.g. for all or some stakeholders? Issues?)
Historical transects	1	Historical transects would be utilized to illustrate the changes that have occurred with regard to the marine resources of the TCMP before and since the 2006 re-launch
Venn diagrams	2	Venn diagrams would be utilized to highlight the relationships between stakeholder groups and the management framework for the TCMP.
Ranking	1, 2 & 3	The ranking system would be utilized to indicate: 1. The level of stakeholder participation along a

Technique	Variable and objective nos.	Notes on application of the technique to the variable and objectives (e.g. for all or some stakeholders? Issues?)
		<p>continuum from no participation to full participation.</p> <p>2. The level of enforcement and protection along a continuum from no protection/enforcement to full protection/enforcement.</p> <p>3. The status of the natural environment along the continuum from very good to very bad.</p>

12. Key points to consider in data analysis and interpretation

Depending on the nature of the study site and your monitoring process there are often special points to consider as you analyse and interpret data. These may be assumptions, constraints or expertise required. You will need to know these beforehand and to write them up with results.

1. Data limitations e.g. respondents reluctance to answer questions
2. Data entry errors
3. Data outliers

13. Communication plan and issues in arrangements for communication and validation

Communication and validation of results and key learning is often done in workshops, but other means are used to supplement this and ensure that various audiences receive the outputs. However done, there will always be some practical matters to address, i.e. issues in arrangements for communication and validation.

Target audience	Communication product(s)	Communication pathway(s)	Practical matters
Stakeholders (1° & 2°)	Presentations and worksheets	Validation Meeting	Transportation for stakeholders from Mayreau and Canouan
General Public	Summary of Study the findings	Flyers via electronic and conventional mail	Collecting feedback on our findings
TCMP Board	Final Report and Presentation	Board Meeting	

14. Plans for sustaining monitoring over the next five years

A socio-economic monitoring program is usually repeated every 2-5 years. The frequency of monitoring depends on the site situation and data needs for the site. List plans for sustained monitoring five years from now.

1. The next round of SocMon surveys would be conducted in 5 years to assess the impacts of the management plan for which this round of monitoring would guide
2. Subsequent rounds of monitoring would be conducted every three years from that point to guide our management planning via an adaptive management framework (to include effective natural resources management, stakeholder participation and governance.

15. Challenges of implementing a sustained monitoring program at your site

Implementing a SocMon monitoring program at coastal sites may be challenging for a number of reasons including lack of human and financial resources, lack of fully functional integrated coastal management, etc. Provide a list of challenges, if any, for your site.

1. Lack of Financial Resources
2. Lack of Trained Personnel at the site level

16. Initiatives/projects that may impact on SocMon at the site and future use of SocMon for socio-economic monitoring

It is important to know if there are any on-going or planned initiatives or projects at your site to determine relevance to the SocMon study, possibility for synergy; prevent duplication and intrusion in communities. List any initiatives or projects that are on-going or slated for your site.

Initiative/project	Impact on SocMon study
TCMP has on-going Management Effectiveness assessments that are conducted biennially.	This survey would help to answer SocMon questions on stakeholder participation and governance issues.

17. Informing MPA management and/or policy decisions in St. Vincent and the Grenadines

SocMon is a very useful methodology that may be used for guiding management of coastal resources and informing policy decisions. List a few areas where SocMon may be used for such.

1. To assess the effects of management decisions on the socioeconomic status of stakeholders
2. To assess the impact on management actions on the status of the natural environment

with regard to resources use.
3. Guide management options through adaptive management with regard to resources use

18. Potential for adaptive management using SocMon

SocMon can be especially useful in adaptive management in order to improve management, planning, impacts, accountability etc. List a few areas which will have the greatest potential for adaptive management if SocMon is used for monitoring in MPAs in St. Vincent and the Grenadines

1. Management effectiveness would be assessed focusing on the level or transparency, accountability and where improvements can be made to improve the level of these parameters.
2. Assess the impact of management actions, that is, the successes and failures of conservation option that have been taken. Collecting this data would facilitate the adaptive management process.
3. SocMon would allow TCMP to document stakeholder perceptions on MPA issues with regard to stakeholder participation in management.
4. The TCMP would be able to assess the perceptions of our various stakeholders groups with regard to the level of enforcement that has been implemented along with the level of compliance that has been achieved. Having this information would indicate to the MPA management team where we should focus attention to improve compliance.

19. Any additional notes (optional)

Appendix 1

Figure 1

Google Earth Map showing the Study sites of the TCMP SocMon (Canouan, TCMP, Union Island & Palm Island

