

Socio-economic Monitoring for Coastal Management

Guide for Basic Training



Prepared by
Centre for Resource Management and Environmental Studies
University of the West Indies

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Disclaimer

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About SocMon training

The background to the initiative entitled Socioeconomic Monitoring for Coastal Management in the Caribbean, better known as SocMon Caribbean, is provided in Appendix 1. SocMon is a global initiative. The Centre for Resource Management and Environmental Studies (CERMES) at the Cave Hill Campus of the University of the West Indies (UWI) is the lead agency for SocMon in the English-speaking Caribbean. CERMES promotes and supports the use of SocMon methods mainly through training and technical advice.

This training module is intended to provide some guidance to those who wish to offer their own SocMon training. It should facilitate consistency in basic content and quality of information. However, it is not a complete “how-to train” guide and it is not a stand-alone document. Appendix 2 points out that several versions of SocMon training, of different duration and content, are available depending on the objective and the participants. For example, where the training is offered to a group of participants in a single country or district we expect the approach to be tailored to the local circumstances, use local cases, incorporate a field trip or mini-assessment nearby and have other features that will be specific to the particular training event. Trainers are therefore expected to be creative in going far beyond this basic module to design an offering that is most suited to the aim of the particular course. Some suggestions are given below.

This module is not stand alone because all SocMon Caribbean training also incorporates two other publications in the instruction and for reference. These are:

- Bunce, L., P. Townsley, R. Pomeroy and R. Polnac. 2000. *Socio-economic manual for coral reef management*. Australian Institute of Marine Science.
- Bunce, L. and R. Pomeroy. 2003. *Socioeconomic monitoring guidelines for coastal managers in the Caribbean (SocMon Caribbean)*. GCRMN.

Trainers are expected to draw upon these books for their workshop material, provide copies to all participants and encourage them to actively use the documents for obtaining further information. No detailed information is provided in this module on the contents of the basic SocMon slide presentation (Appendix 3) since it is contained in the above documents.

The slide presentation can be delivered using different approaches to suite that aim and audience. It can be augmented by additional information and images, but there are few instances in which the basic presentation should be shortened or condensed further. The presentation is best delivered in an interactive format. Appendices 3 (on preparatory activities and planning) and Appendix 4 (on survey instrument design and data processing) are only two of the many possible exercises you can include.

On training courses longer than one day it is important to include a field trip or practical field exercise so that participants gain confidence in putting into action what they have learnt. Again the options for organising these are too numerous to mention. Ideally participants, and especially those new to social science methods, should practice in teams as many of the SocMon steps and activities as possible.

Visit the CERMES web site (www.cavehill.uwi.edu/cermes) for further information and contacts. See various documents and presentations produced as outputs of SocMon Caribbean coastal monitoring.

Appendix 1: Background to SocMon



Global Socioeconomic Monitoring Initiative

“MPA management is about managing people, not fish” is an increasingly common phrase in the marine conservation community as managers recognize the importance of understanding and incorporating community conditions into the management process. Information on the social, cultural and economic foundation of communities that rely on coastal resources is as critical as understanding the behavior, migration patterns and habitat requirements of the marine ecosystems. In particular, socioeconomic information is useful for:

1. Determining how MPA management is contributing to community development, including poverty alleviation and equitable sharing of benefits, which is useful to determining management effectiveness;
2. Valuing the marine resources in terms of cultural and economic significance, which is critical to lobbying for public and political support;
3. Facilitating stakeholder involvement by gaining a greater understanding of community perceptions and needs; and,
4. Tailoring management to the local situation, such as developing education programs based on community members’ understanding of resources conditions and threats.

In contrast to the acknowledged need for greater socioeconomic information of coastal communities, little exists in comparison with biophysical information. Moreover, there is relatively limited understanding of how to develop a socioeconomic monitoring program. Recognizing this need for clear, concise guidance on how to monitor socioeconomic conditions for the benefit of coastal management, WCPA-Marine in collaboration with the Global Coral Reef Monitoring Network, and the U.S. National Oceanic and Atmospheric Administration, is coordinating a **Socioeconomic Monitoring Initiative for Coastal Management**. The goal of this initiative is to establish socioeconomic monitoring programs around the world. This initiative is being implemented at the global and regional levels. Regionally, the initiative is currently focused in the Caribbean and Southeast Asia through partnerships with the University of West Indies and World Fish Centre, respectively.

Accomplishments:

1. **Publication of the *Socioeconomic Manual for Coral Reef Management***, a tool to help coral reef managers better assess and manage the human communities that use and depend on coral reefs (published in November 2000). The manual provides practical, step-by-step guidelines on how to conduct socioeconomic assessments of reef stakeholders, including: preparatory activities; planning and reconnaissance; field data collection; and, data analysis. The manual was written for reef managers in developing countries to assist them in conducting socioeconomic assessments and developing monitoring programs in their communities.

2. **Publication of region-specific socioeconomic monitoring guidelines.**

SocMon Caribbean (published in October 2003) and *SocMon Southeast Asia* (published in March 2003), were developed to compliment the *GCRMN Socioeconomic Manual for Coral Reef Management* by providing more standardized guidelines on how to conduct socioeconomic monitoring specific to each region. The two documents are meant to be used together – *SocMon* for the priority indicators to assess, the questions to ask and the tables to analyze the data, and the *Socioeconomic Manual for Coral Reef Management* for the details of how to do it. Both publications were developed through substantial collaboration among social scientists and coastal managers in each region. Recently *SocMon Caribbean* was translated into Spanish to reach a broader audience in the region. A subset of indicators can now also be incorporated into ReefCheck (mini-SocMon). Future activities also include expanding to the Pacific region with similar publications and training.



3. **Regional and national training workshops** around the world to help reef managers incorporate socioeconomic assessments and monitoring into their reef management programs. Following the release of the *SocMons*, workshops have been held with the University of the West Indies in Barbados (July 2003) and with Southeast Asia Fisheries Development Centre and ReefCheck in the Philippines (April 2003). The Barbados workshop included 35 coastal experts from 15 Caribbean countries and territories. A second Caribbean workshop, conducted in Spanish, followed the release of the Spanish version of *SocMon Caribbean*. Following the release of the *Socioeconomic Manual for Coral Reef Management*, regional training workshops were held in Kenya (August 2000), with 25 reef managers from East Africa; Sri Lanka, with 18 reef managers (November, 2000); and the Maldives, with 15 reef managers (January 2001).
4. **Site monitoring** by sites around the world, including incorporating results into management actions. Funding has been, and will continue to be, provided through the NOAA Coral Grants program. To date support has been provided to sites in Belize, Indonesia, Philippines, Vietnam, Malaysia, and Thailand. In addition small grants (<\$1000/site) have been provided to four Caribbean sites, which sent participants to the Caribbean workshop: San Andres, Colombia; Corn Island, Nicaragua; Speyside, Tobago; and, Caribbean coast, Guatemala. This seed money will not only help the sites initiate monitoring programs, but will also help to build a long-term program in the region. Future activities include partnering with networks of sites through such organizations as The Nature Conservancy, International Coral Reef Action Network, and the World Heritage Centre to better institutionalize socioeconomics into coastal management programs.

Coordination:

For further information and to download copies of the manuals, visit

<http://ipo.nos.noaa.gov/socioeconomic/> or

<http://iucn.org/themes/wcpa/biome/marine/socioeconmanual.htm>

Appendix 2: Course outline

Duration: 1 - 5 days depending on the number and level of practical exercises as recommended below.

- 1 day general awareness course uses slide presentation, discussion and one desktop exercise.
- 2-3 day basic training includes additional exercises, a field trip and a case study worked example
- 5 day full training covers all steps of monitoring from design through implementation to reporting

Aim: To increase and improve the use of socio-economic information in coastal management decision-making by all stakeholders in the process

Target group: Coastal resource managers, NGO and CBO leaders, student researchers, coastal residents and businesses

Course Objectives – at the end of the course participants will know:

- What is SocMon Caribbean?
- Why should I do socio-economic monitoring?
- What socio-economic data do I collect?
- How to collect and analyze data?
- How to generate, present and use information?

Course content:

- Introduction to SocMon Caribbean and socio-economic monitoring
- Preparatory activities: goals and objectives, process and work plan, study area, stakeholder analysis, study approvals, assessment team
- Key informants, secondary data, household interviews, observation
- Coding; data tables, simple statistics, presentation of information
- Validation workshop, final report, use/learn/adapt cycle, monitoring

Method of instruction: Interactive lectures and group practice sessions depending on level of course

Method of evaluation: Oral and practical evaluation of the course; validation of fieldwork findings

Teaching aids: PowerPoint, flip chart, handouts, fieldwork supplies and equipment

Bunce, L., P. Townsley, R. Pomeroy and R. Polnac. 2000. *Socio-economic manual for coral reef management*. Australian Institute of Marine Science.

Bunce, L. and R. Pomeroy. 2003. *Socioeconomic monitoring guidelines for coastal managers in the Caribbean (SocMon Caribbean)*. GCRMN.


Appendix 3: Basic slide presentation

Socioeconomic Monitoring for Coastal Management in the Caribbean

CERMES, UWI Cave Hill Campus

Purpose of this workshop


1. To introduce the concepts of socioeconomic monitoring based on SocMon Caribbean
2. To prepare participants to use SocMon Caribbean as an immediate follow-up



What is SocMon?

SocMon: guidelines on how to do socioeconomic monitoring useful for coastal management at the site level

SocMon is used with the “Socioeconomic Manual for Coral Reef Management” that contains field methods



Benefits of SocMon

SocMon can help us to understand the socio-economic contexts of coastal resource use by various stakeholders.

This is essential for assessing, predicting and managing coastal resource use over time.



Where are nearby SocMon studies?

- **Barbados**
 - Graeme Hall Swamp
- **Belize**
 - Glovers Reef Marine Reserve
 - Laughing Bird Caye National Park
 - Gladden Spit & Silk Cayes Marine Reserve
- **Grenadines Islands**
 - Several locations across two countries
- **Nicaragua**
 - Corn Island lobster fishery
- **Trinidad and Tobago**
 - Speyside proposed MPA in Tobago



Who is SocMon for?

- Coastal managers (Govt. and NGOs)
- Resource user groups
- Community organisations
- Donors / technical assistance
- Academic and research institutions
- Environmental news media / public



How does SocMon work?



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Preparatory Activities



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Preparatory Activities

- 1) define goals and objectives
- 2) identify the process for conducting monitoring
- 3) identify the coastal management stakeholders
- 4) identify the study area
- 5) consult with the stakeholders
- 6) assemble a SocMon team
- 7) identify variables
- 8) develop a workplan
- 9) obtain government and stakeholder approvals



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Plans with socio-economic aspects provide rationale for using SocMon

- MPA management plans
- Fisheries management plans
- Coastal zone management plans
- Tourism development plans
- Physical development plans
- Poverty alleviation plans



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Stakeholders ⇔ Study area(s)

- Stakeholder analysis
 - Primary
 - Secondary
 - Interests
 - Organisations
- MPA and watershed management plans
- Core coastal area
- Watershed area
- Satellite study areas



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Consult with stakeholders

- Explain purpose, process and outcomes to that stakeholders can participate if they wish
- Ensure the concerns and priorities of as many stakeholders as is feasible are included in the planning of SocMon
- Ensure the cooperation of stakeholders, and particularly their organizations, in SocMon

The SocMon team

- ✓ Coastal manager
- ✓ Social scientist
- ✓ Local advisors
- ✓ Field researchers
 - Interdisciplinary
 - About 5 people
 - Meets regularly



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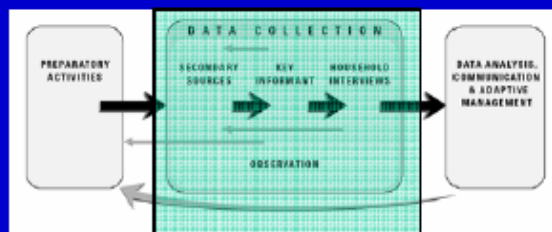
Work-plan

The work-plan defines the:

- SocMon activities;
- methods to be used;
- resources required;
- timing and target dates;
- team responsibilities;
- data processing, reporting



Data collection



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What Data Do I Collect ?



So many socioeconomic variables to choose from!

See SocMon Caribbean Guidelines

Sources of data

- **Secondary sources**
 - Existing documents, maps, data, etc.
 - Compiling a bibliography, keep it updated
- **Key Informants**
 - People knowledgeable on particular topics
 - Use to fill in gaps, profile places, activities
- **Household interviews**
 - Survey questions for specific standard info
 - Interview households in selected settlements
- **Observations**
 - Notes and records, often now done by photos
 - Develop a digital image library, link to GIS



Secondary data and data from key informants is used to:

- refine the lists of objectives, stakeholder groups, study sites and parameters [planning]
- identify gaps in existing knowledge in preparation for field data collection [questions]
- ensure the field data collection does not collect information that has already been collected [efficiency]
- provide a basis for cross-checking information collected during the field data collection [validation]




What Data Do I Collect? Community Level Demographics

- | | |
|--------------------------|--|
| K1. Study area | K7. Education |
| K2. Population | K8. Literacy |
| K3. Number of households | K9. Ethnicity |
| K4. Migration rate | K10. Religion |
| K5. Age | K11. Language |
| K6. Gender | K12. Occupation |
| | K13. Community infrastructure and business development |

What Data Do I Collect? Coastal and Marine Activities

- | | |
|----------------------------------|-----------------------------------|
| K14. Activities | • K19. Use patterns |
| K15. Goods and services | • K20. Levels and types of impact |
| K16. Types of use | • K21. Level of use by outsiders |
| K17. Value of goods and services | • K22. Household use |
| K18. Goods and services market | • K23. Stakeholders |
| | • K24. Tourist profile |

What Data Do I Collect? Governance

- | | |
|--|---|
| K25. Management body |  |
| K26. Management plan | |
| K27. Enabling legislation | |
| K28. Management resources | |
| K29. Formal tenure and rules | |
| K30. Informal tenure and rules, customs and traditions | |
| K31. Stakeholder participation | |
| K32. Community and stakeholder groups | |

What (Survey) Data Do I Collect ? Household demographics

- | | |
|--------------------|-----------------------------------|
| S1. Age | S9. Household income |
| S2. Gender | S10. Household activities |
| S3. Ethnicity | S11. Household goods and services |
| S4. Education | S12. Types of household uses |
| S5. Religion | S13. Household market orientation |
| S6. Language | S14. Household uses |
| S7. Occupation | |
| S8. Household size | |

What (Survey) Data Do I Collect ? Attitudes and Perceptions

- | | |
|---|---------------------------------------|
| S15. Non-market and non-use values | S19. Compliance |
| S16. Perceptions of resource conditions | S20. Enforcement |
| S17. Perceived threats | S21. Participation in decision-making |
| S18. Awareness of rules and regulations | S22. Membership in stakeholder groups |

What (Survey) Data Do I Collect ? Attitudes and Perceptions

- S23. Perceived coastal management problems
- S24. Perceived coastal management solutions
- S25. Perceived community problems
- S26. Successes in coastal management
- S27. Challenges in coastal management
- S28. Material style of life

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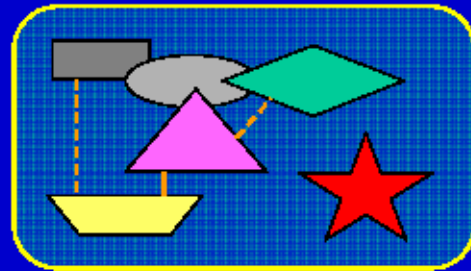
Mapping, photos, (maybe GIS)

Resource features
Resource uses
Infrastructure
Areas of conflict
Demographics
Reference sites
Boundaries, zones
Etc., etc., etc.



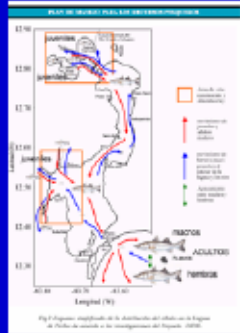
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Organisational relationships



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Combine local knowledge with science information



- Climatic conditions
- Life histories, cycles
- Species harvested
- Fishing vessels used
- Fishing methods used
- Processing of catch
- Trade and income
- Fish consumption
- Alternative livelihoods
- Culture and religion

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Local knowledge and classification

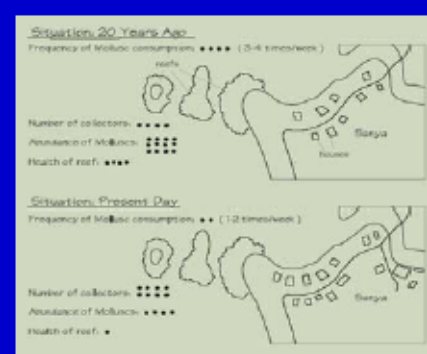
Description/ English name	Species	Relative abundance	(Changes in conditions)	Habitat	Name in local language
Clam (very large, almost smooth)	unknown	••••	+	mud / manure	tu
Big spider shell	Lamella orbis	••••	0	reef	epkor
Clam (large, white, vertical ridges)	unknown	••••	0	reef	tu
Clam (large, brown, cross ridges)	Asidara spp.	••••	+	mud	karolepa
Pearl oyster	Pinctada margaritifera	••••	0	sand / mud	viaviva lili
Limpet	Colobla nitida	••••	+	coral islands	tu rak
Surfer shell	Argopecten irradians	••••	+	beach / mud	tu rak
Small top shell	Tridacna maculatus	••••	0	reef	pele
Clam (big, grey, smooth)	unknown	••••	0	sand beach, near reefs	stio
Green shell	unknown	••••	0	reef	itupapa
Pan shell	Perna perna	••••	0	sand / mud	manai
Clam	unknown	••••	0	sand	viaviva
Small green shell	unknown	••••	0	reef	ali mata parua

Timelines of key events



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Historical mapping of changes



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Historical transect matrix

Year	Mombasa population	Income from Tourism	Number of Fishers	Fish Catch	Coral Reef
1960					
1970					
1980					
1990					
2000					
Trends	+	+	+	-	-
Indicators	• More visitors • More tourism	• More guest houses • More restaurants	• Crowding out fishers among fishers • More licenses	• Decreasing fisher income • Fewer fishers • Reported catch	• Coral reef damage • Damaged reef structure
Reasons	• History reputation • National growth	• National reputation for pristine coral reefs, fisheries	• Overfishing • Overfishing factory supported by reefs	• Overfishing • Coral reef habitat degradation	• Sedimentation • Overfishing • Increased water sports

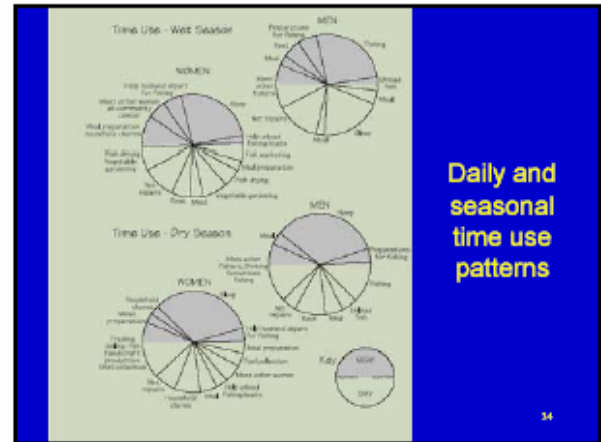
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Ranking e.g. of impact factors

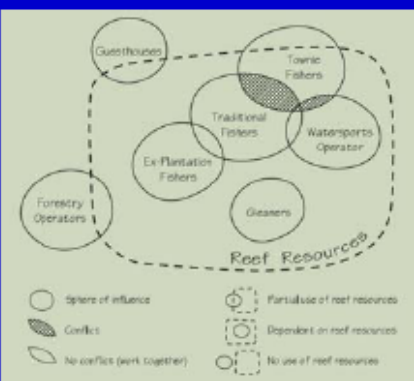
Reef Stakeholders	Number of people	% Men	% Women	% Children	Damage caused to reef
Traditional Fishers	75	95%	0%	5%	Lowest
Ex-Plantation Fishers	40	80%	0%	10%	Medium
Tourist Fishers	60	75%	0%	25%	Highest
Women Cleaners	30	0%	60%	40%	Medium highest

Seasonal calendar

	jan	feb	mar	apr	may	jun	jul	aug	sep	oct	nov	dec
Weather	calm season			stormy season		hot season		wet season			calm season	
	dry			some rain				rains			dry	
Snapper catches	•	•	•	•	•	•	•	•	•	•	•	•
Snapper prices	•	•	•	•	•	•	•	•	•	•	•	•
Grouper catches	•	•	•	•	•	•	•	•	•	•	•	•
Grouper prices	•	•	•	•	•	•	•	•	•	•	•	•
Spiny lobster catches	•	•	•	•	•	•	•	•	•	•	•	•
Spiny lobster prices	•	•	•	•	•	•	•	•	•	•	•	•
Income from fishing	•	•	•	•	•	•	•	•	•	•	•	•



Daily and seasonal time use patterns

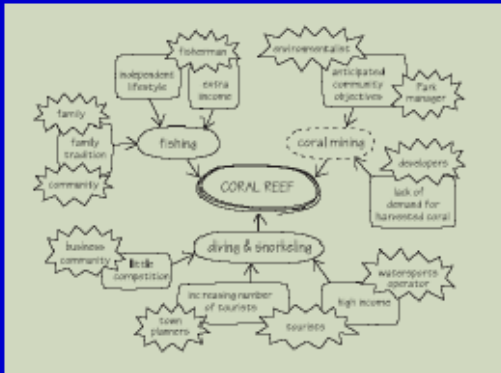


Venn diagram of resource uses and resource users

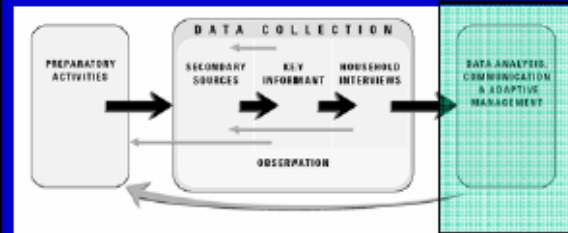
Flow charts of various types



Decision diagramming



Data analysis, communication and adaptive management



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SocMon results /analysis tables

Occupation	PRIMARY		SECONDARY		Total percent of community members dependent on this occupation (primary and secondary)
	Number of household members listed as primary occupation	Percent household members that listed as primary occupation	Number listed as secondary occupation	Percent household members that listed each occupation as secondary	
Holiday	0%	0.0%	0	0%	0.0%
Real development	0	0%	0	0%	0%
Apprentice	0	0%	0	0%	0%
Clubs (social, working, swimming)	5	0.0%	0	0%	0.0%
Non-occupation	0	0%	0	0%	0%
TOTAL	0	0.0%	0	0%	0.0%

* record together all occupation that were noted for 0.5% of the household members
 ** for example, unemployed, students, retired

SocMon results /analysis tables

Major occupations in community	Percent of working population conducting this occupation as primary occupation	Number of people conducting this occupation as primary occupation	Percent of working population conducting this occupation as secondary occupation	Percent of working population conducting this occupation as tertiary occupation
1. Fishery	0%	0	0%	0%
2. Water sports operator	0%	0	0%	0%
3. Aquaculture activities	0%	0	0%	0%
4. Real estate	0%	0	0%	0%
5. Tourism	0%	0	0%	0%

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SocMon results /analysis tables

Coastal and Marine Activities	Coastal and Marine Goods and Services	Types of Use (primary)	Coastal and Marine Activities	Coastal and Marine Goods and Services	Value of Goods and Services
Fisheries	Loabster	Trap	Fisheries	Loabster	High
	Groupper	Handline		Groupper	High
Tourism	Hotel	guest houses (2-7 rooms)	Tourism	Hotel	Medium
	diving	SCUBA		diving	Low
Aqua-culture	Oyster	Line	Aqua-culture	Oyster	Medium

How to Analyze:

Secondary Data, Key Informant info, Household Interviews, Observations

Basic principles for analysis:

- involve all team members
- prioritize quality, not quantity
- prioritize key learning, rather than just getting information



- Key learning** refers to issues identified or lessons learned that are essential to the objectives of the monitoring, or are needed to understand the socioeconomic context of the stakeholders

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How to Analyze: Secondary Data, Key Informant info, Household Interviews, Observations

Final data analysis involves:

- 1) refining the key learning
- 2) using data to illustrate key learning
- 3) presenting the key learning in an accessible form for interpretation
- 4) validating the key learning with stakeholders
- 5) incorporating the key learning into a useful report and other communications



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Validation workshop

- Verification of data analysis
- Feedback to participants
- Encourage decision-making
- Foster trust and respect
- Accountability, transparency
- Pave way for follow-up
- Community empowerment



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Communication choices

- written material (*report, GCFI paper*)
- visual material (*posters, pictures*)
- oral presentations (*area meetings*)
- one-on-one discussion (*animators*)
- mass media (*newspaper, radio, TV*)
- internet group discussion (*CAMPAM*)
- electronic bulletin boards (*NCRPS?*)

Using SocMon outputs

- MPA management decision-making
- Stakeholder strategies (fishers, hotels)
- Designing sustainable monitoring
- Prioritising future research
- Preparing project proposals
- Area development planning
- Social improvement plans
- External agency guidance



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Appendix 4: Preparatory activities worksheets

These worksheets are *guides* to organizing the preparatory activities. They can be modified in any way you find useful. Other worksheets are in the socio-economic manual. Spreadsheets are often more convenient than word processing applications for working with tables of all types.

– *Define goals and objectives*

Goal (category)	Objective	Specific objective (if applicable)

– *Identify stakeholders*

Activity or issue	Primary stakeholder [and organization]	Secondary stakeholder [and organization]

– *Stakeholder locations and key informants*

Stakeholders (1° and 2°)	Location of stakeholder	Key informant for stakeholders

– *Identify study area*

Study area selection criteria	Study area description (attach map of area)

– *Assemble the SocMon team*

Skill requirement / role on team	Proposed team member

– *Methods and visual presentation*

Objective / Specific objective	Method of data collection	Means of visual presentation

– *SocMon team member responsibility matrix*

Member		Member		Member	
Task	Duration	Task	Duration	Task	Duration
Member		Member		Member	
Task	Duration	Task	Duration	Task	Duration
Member		Member		Member	
Task	Duration	Task	Duration	Task	Duration

– *Work plan schedule*

Activity / task	Time unit →												

– *Research resources required*

Resource description	Use of resource	Comments on availability

– *Budget*

Item of expense	No. of units	Unit cost*	Total cost*
Sum total of SocMon costs			

* = currency used []

Appendix 5: Examples of questions, coding and data table

Questionnaire

1. How many people live in this household? _____
2. How long has this household been located in the community? _____
3. What are the 3 most important occupations of household members in order of the amount of income generated.
1^s. _____, 2nd. _____, 3rd. _____
4. What is the household's primary, secondary and tertiary most important sources of income?
1st. _____, 2nd. _____, 3rd. _____
5. Is any member of this household a member of a formal and/or informal organizations?
Yes _____ Who? _____ What organization? _____
No _____ Who? _____ What organization? _____
6. How would you describe the condition of marine resources five years ago?
very good ___ good ___ not good not bad ___ bad ___ very bad ___.
7. How would you describe the conditions of marine resources today?
very good ___ good ___ not good not bad ___ bad ___ very bad ___.

Coding sheet

1. Respondent # _____
2. Village _____ 1=Plancencia 2=Hopkins 3=Monkey River
3. HHsize _____ #
4. HHcomm _____ #
5. HHocc1 _____ 1=Fishing 2=diveoper 3=tourgd 4=fishgd 5=
6. HHocc2 _____ 1=Fishing 2=diveoper 3=tourgd 4=fishgd 5=
7. HHocc3 _____ 1=Fishing 2=diveoper 3=tourgd 4=fishgd 5=
8. HHinc1 _____ 1=Fishing 2=diveoper 3=tourgd 4=fishgd 5=
9. HHinc2 _____ 1=Fishing 2=diveoper 3=tourgd 4=fishgd 5=
10. HHinc3 _____ 1=Fishing 2=diveoper 3=tourgd 4=fishgd 5=
11. HHfish _____ #
12. HHrec _____ 1=Fishing 2=snor 3=diving 4=boating 5=
13. Feinc _____ 1=yes 0=no
14. Feinctact _____ 1=rest 2= 3= 4=
15. HHorg _____ 1=yes 0=no
16. Orgwho1 _____ 1=mother 2=father 3=son 4=daughter
17. Orgwhat1 _____ 1=Plac Co-op 2= 3= 4=
18. Orgwho2 _____ 1=mother 2=father 3=son 4=daughter
19. Orgwhat2 _____ 1=Plac Co-op 2= 3= 4=
20. Orgwho3 _____ 10=mother 2=father 3=son 4=daughter
21. Orgwhat3 _____ 1=Plac Co-op 2= 3= 4=
22. Orgwho4 _____ 1=mother 2=father 3=son 4=daughter
23. Orgwhat4 _____ 1=Plac Co-op 2= 3= 4=
24. Rescond5 _____ 1=VG 2=G 3=NGNB 4=B 5=VG
25. Rescond _____ 1=VG 2=G 3=NGNB 4=B 5=VG

Data table

Ref.	Resp #	Village	HHsize	HHcomm	HHocc1	HHocc2	HHocc3
001							
002							
003							
Ref.	HHinc1	HHinc2	HHinc3	HHfish	HHrec	Feinc	Feinctact
001							
002							
003							
Ref.	HHorg	Orgwho1	Orgwhat1	Orgwho2	Orgwhat2	Orgwho3	Orgwhat3
001							
002							
003							