

The Caribbean Coastal Co-management and Coral Regeneration Programme

4Cs JAMAICA PROJECT

TRAINING MODULE ON SOCIOECONOMIC MONITORING FOR COASTAL MANAGEMENT

Implemented by



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Content


SocMon Presentation Slides

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

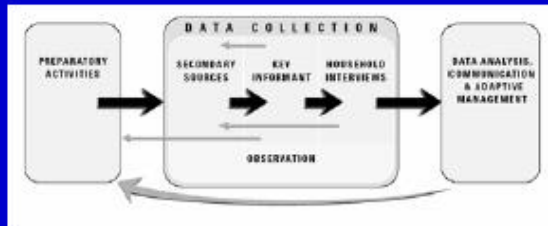


Who is SocMon for?

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

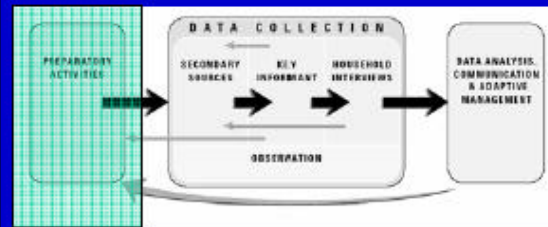


How does SocMon work?



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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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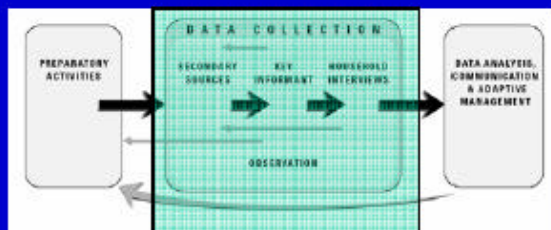
Work-plan

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

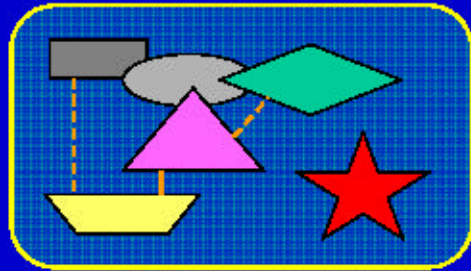
Mapping, photos, (maybe GIS)

- 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

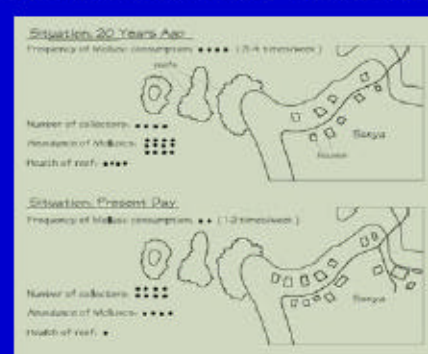
Description/English name	Species	Relative abundance	Changes in conditions	Habitat	Home in local language
Clam (two lines, almost smooth)	unknown	••••	+	mud / mangrove	ku
Big spider shell	Littorina unguis	••••	0	reef	spaka
Clam (large, white, vertical ridges)	unknown	••••	0	reef	ku
Clam (large, brown, cross ridges)	Anadara spp.	••••	+	mud	kapalepa
Pearl oyster	Pinctada margaritifera	••••	0	sand / mud	vivaha kiki
Limpet	Gibberia striata	••••	+	coral masses	ku ra
Surfer shell	Argopecten irradians	••••	+	sand / mud	ku ra
Small top shell	Tridacna tridacnoides	••••	0	reef edge	pele
Clam (big, grey, smooth)	unknown	••••	0	hard beach, near reefs	ku
Coel shell	unknown	••••	0	reef	kuakua
Pen shell	Penaeus monodon	••••	0	sand / mud	muqai
Cum	unknown	••••	0	sand	vivaha
Small green sea slug	unknown	••••	0	reef	alimua puma

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 guest houses • More restaurants	• Growing conflicts among fishers • More tourism	• Decreasing fisher income • Smaller • Reduced catch	• Coral reef damage • Damaged reef structure
Drivers	• Higher population • National growth	• National population for pressure on coral reefs, fisheries	• Droughts • Overfishing • Overfishing reported by reefs	• Overfishing • Coral reef habitat degradation	• Sedimentation • Overfishing • Increased water sports

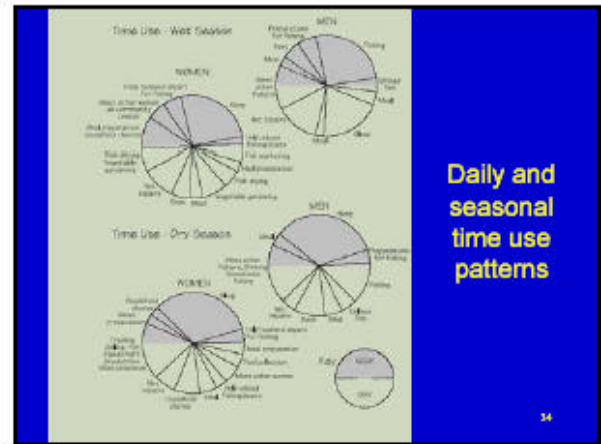
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Ranking e.g. of impact factors

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
Townie Fishers	60	75%	0%	25%	Highest
Women Divers	30	0%	60%	40%	Medium highest

Seasonal calendar

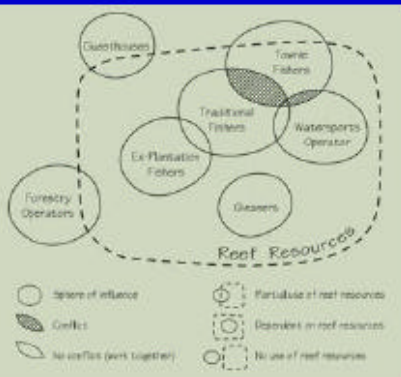
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Weather	calm season			stormy season		hot season		WET season			calm season	
	dry			some rain				rains			dry	
Snapper	catches			prices								
Grouper	catches			prices								
Spiny lobster	catches			prices								
Income from fishing												



Daily and seasonal time use patterns

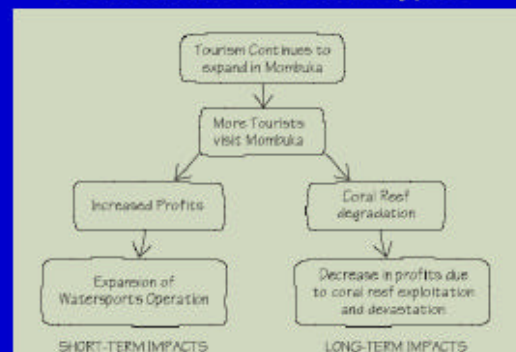
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Venn diagram of resource uses and resource users

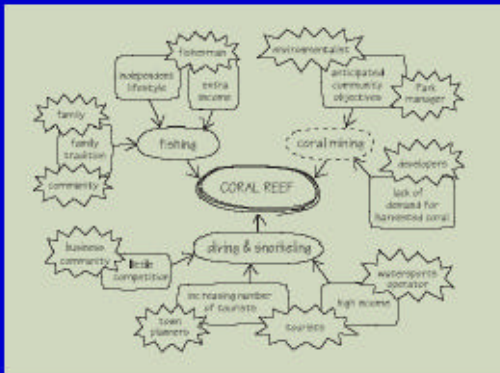


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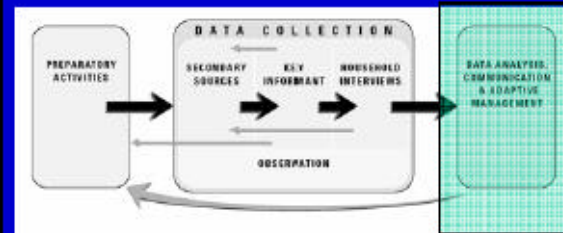
Flow charts of various types



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%
Hotel/development	30	7.5%	30	30%	30%
agriculture	0	0%	0	0%	0%
fisherfolk (small, medium, large)	5	1.2%	30	30%	31.2%
Manufacturing	0	0%	0	0%	0%
TOTAL	350	87.5%	300	30%	100%

* sector together all occupations that were noted for 10% 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. fishing	30%	300	30%	0%
2. hotel/development	30%	300	0%	0%
3. agriculture/industry	0%	0	0%	0%
4. retail/service	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	lobster	Trap	Fisheries	lobster	High
	Crab	Handline		Crab	High
Tourism	Hotel	Guest houses (2-7 rooms)	Tourism	Hotel	Medium
	snorkeling	SCUBA		snorkeling	Low
Aquaculture	Oyster	Line	Aquaculture	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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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 []

SocMon Caribbean training: 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=Placencia 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. Feincact _____ 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	Feincact
001							
002							
003							
Ref.	HHorg	Orgwho1	Orgwhat1	Orgwho2	Orgwhat2	Orgwho3	Orgwhat3
001							
002							
003							

