

# Report of the Workshop on Socio-economic Monitoring and Fisheries Management Planning for the Negril Marine Park 14 April 2005, Negril, Jamaica



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Environmental Studies  
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## Disclaimer

This document has been produced with the financial assistance of the European Community and the US National Oceanic and Atmospheric Administration (NOAA). The views expressed herein are those of Counterpart Caribbean and can therefore in no way be taken to reflect the official opinion of the European Commission or NOAA.

## Funding and technical advice

The funds of this project for fisheries management planning are provided by the European Commission and administered by Foundation for the Peoples of the South Pacific International (FSPI) through Counterpart Caribbean (Contract number B7-6200/2002/066-075/RPA).

The funds of this project for socio-economic monitoring are provided by the National Oceanic and Atmospheric Administration (NOAA) Coral Reef Conservation Grant Program to the Negril Coral Reef Preservation Society (NCRPS).

Technical advice for both projects is provided by the Centre for Resource Management and Environmental Studies (CERMES), University of the West Indies, Cave Hill, Barbados.

# 1 Welcome, background and introductions

Project Manager with the Negril Coral Reef Preservation Society (NCRPS), Carl Hanson, welcomed the participants and shared background information on the main project of which the workshop was a part. This included its funding by the European Union (EU) through Foundation of the Peoples of the South Pacific International (FSPI) and Counterpart Caribbean, with technical assistance from the Centre for Resource Management and Environmental Studies (CERMES) of the University of the West Indies (UWI) Cave Hill Campus in Barbados. Activities are listed below.

- Socio-economic monitoring (SocMon)
- Fisheries management planning (FMP)
- Accessory activities
  - Junior Rangers
  - Stakeholder analysis
  - Conflict management and negotiation
  - Coastal co-management
  - Communications strategy
  - Coral reef restoration

He introduced Patrick McConney, the technical adviser from CERMES. Participants then introduced themselves (Appendix 1). Many of those present had taken part, on the previous day, in the Workshop on Marine Protected Areas (MPAs) and Sustainable Coastal Livelihoods organised by the Caribbean Natural Resources Institute (CANARI). Several topics discussed in the CANARI workshop were noted as being relevant to this workshop. This especially included stakeholder analysis and the principal topic of sustainable livelihoods. Ensuring the latter is one of the goals of the Park and fisheries management planning. The technical adviser then reviewed the workshop's arrangements and outputs.

# 2 Workshop arrangements and expected outputs

The group accepted the workshop programme (Appendix 2) and noted the various training materials (Appendix 3). The arrangements and outputs were discussed under:

- Purpose – Objectives of the workshop
- Participation – Contributions from participants
- Process – Workshop methods to be used
- Payback – Anticipated benefits for all

Each session of the workshop had a specific objective contained in its presentation. Participants were expected to share their knowledge and opinions throughout; receiving more in the morning half that explained the research, and giving more in the afternoon for implementation design. The workshop was entirely interactive, from the slide presentations to collectively filling in information tables for study sites etc. The research leader for NCRPS, Malden Miller, was the note-taker for the meeting. Payback was expressed in terms of participants ultimately benefiting from more informed decision-making and better managed fisheries within the park.

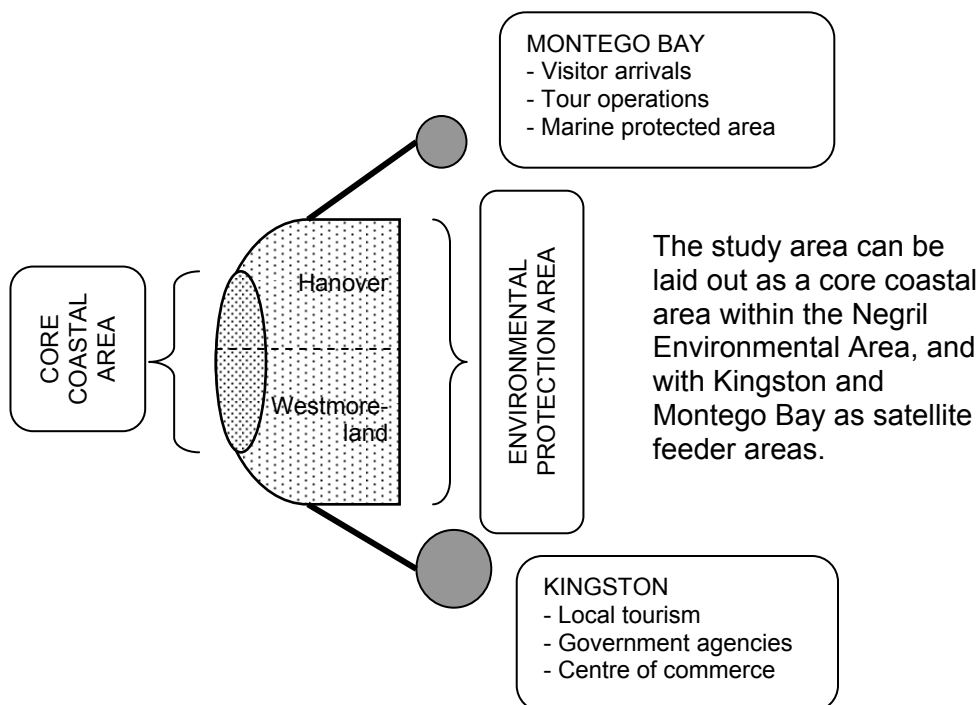
# 3 Socio-economic monitoring for coastal management in the Negril Marine Park

The slide presentation covered the topics listed in Appendix 3. It was a general overview of the SocMon Caribbean methodology. However, specific to the Negril Marine Park (NMP) were the four most relevant goals from the NMP management plan that participants agreed were appropriate for guiding SocMon.

The table below sets out the goals extracted from the NMP management plan (updated in 2003) with the SocMon objectives beside them. Participants were reminded that setting study objectives was one of the key preparatory activities for the SocMon activity.

NMP management plan goal	SocMon objective
<u>Research and Monitoring</u> Gather, interpret and disseminate information pertinent to the Park on a continual, long term basis, so that changes can be noted over time, analyzed by appropriate scientific personnel and other technical experts, and used to make sound management decisions	Initiate a simple and affordable system of socioeconomic monitoring, relying to the greatest extent possible on readily and regularly available secondary data, and unobtrusive primary data collection methods
<u>Resource Management</u> Protect natural resources within the Marine Park, conserve existing biodiversity and wherever possible restore damaged ecosystems	Supply socioeconomic information useful for resource management decision-making, particularly on conservation measures and restrictions on fishery resource use or access
<u>Sustainable Community Development</u> Implement programmes in collaboration with local citizens that benefit the community economically, while protecting the natural resources within the Marine Park	Supply socioeconomic information useful for understanding livelihood strategies and sustaining livelihoods compatible with Park goals, particularly those related to fishing
<u>Visitor Management</u> Encourage the use of the Park by visitors while minimizing damage to its resources and conflict between resident and non-resident users	Supply socioeconomic information useful for managing conflicts between different users, and particularly between fishing and tourism

Discussion of the interaction between stakeholders and study area continued from the previous day's workshop using the conceptual model shown below. Details were addressed in the afternoon session.

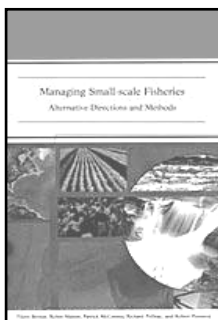


Having had so many previous studies of the Negril area, participants quickly grasped the SocMon methodology and appreciated what they hoped would be a critical difference outlined in the final slides of the presentation. This difference is that the study builds learning, communication and use of outputs into its design, rather than leaving these components as afterthoughts or for follow-up.

## 4 Fisheries policy and management planning for the Negril Marine Park

The Terms of Reference from a NCRPS proposal for fisheries management planning, in 2000, state: *The study will describe the fisheries, their status and threats; the socioeconomic status and the activities of the stakeholders; as well as the approach and programmes to be undertaken in order to manage the site for conservation of the resources and sustainable development in the area.*

Resources for undertaking the planning study were not available to the NCRPS until now. Participants agreed that the TOR were still valid today, but with emphasis on a livelihoods approach. The technical adviser introduced a book that he recommended as a guide to fisheries management for small-scale fisheries. The alternative approaches set out in the book (see below) are more people-centred than practiced in conventional fisheries science.



Managing Small-scale Fisheries: Alternative Directions and Methods  
– Fikret Berkes, Robin Mahon, Patrick McConney, Richard Pollnac,  
and Robert Pomeroy  
– 2001, published by IDRC, Canada

Main message of the book:  
Data and information of high quality, suitable for fisheries management decision-making in many situations, can be obtained from people-centred processes complemented, where possible, by conventional fisheries science

The presentation (Appendix 3) described key elements of the proposed approach, including the main steps involved in making the fisheries management plan (FMP) for the NMP (see box below).

### **Making the fisheries management plan (FMP) for the NMP**

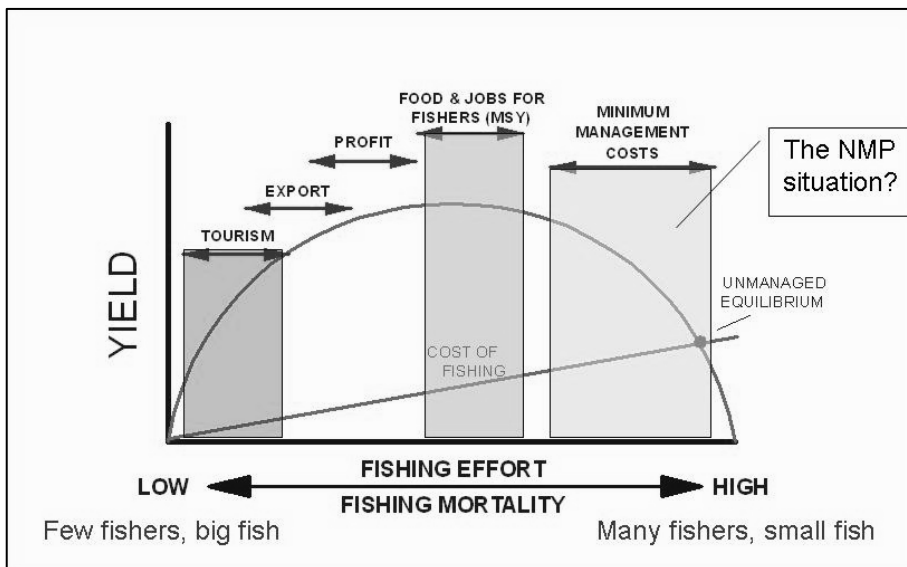
- Decide on boundaries for the FMP
- Compile secondary data (ecological, social, economic, cultural, political, institutional) on NMP area relevant to fisheries co-management
- Include unwritten local knowledge of NMP area relevant to fisheries co-management
- Communicate national draft policy, fisheries laws and livelihoods approach to fisheries management planning to NMP stakeholders
- Get stakeholder input on fisheries policy and management planning objectives for NMP
- Get stakeholder input on best strategies and actions for achieving agreed objectives
- Prepare draft NMP FMP, with implementation plan, and share with stakeholders to validate

A crucial point is that the task at Negril is intended to fit into the existing draft “Policy Framework and Strategic Plan for Sustainable Fisheries in Jamaica” with its accompanying draft legislation. The Fisheries Division is very supportive of the FMP serving as a test, and hopefully demonstration, of what the new approach to fisheries will be. Richard Kelly of the Fisheries Division assisted in presenting the policy process and fielded questions afterwards. Some queries concerned what was said for the Negril area in a public meeting on the fisheries policy held in August 2003. See box below.

### **What was said for the Negril area**

- 19 August 2003; 51 people attended
- Fishers organisation for co-management
  - All fishers agreed to organization.
  - Fishers realize that they need a co-management focus.
- Stock assessments/Research
  - Fishers agree for research and stock assessment to be done.
  - Fishers say that fish catching this time of the year is much different from what used to be caught last year at this time.
- National Management Plan
  - Fishers agree to the need of a plan.
  - The Marine Park is presently working on a plan.
  - Sport fishing occurs on this beach; therefore a balance is needed for all people to work together.
- Increase in fines & penalties for illegal fishing
  - Fishers agree to the increase for the penalties such as prison terms and high fines especially for dynamiting.
  - Police should be penalized for illegal sale of dynamite and also for bribing.
  - Educate tourists on illegal taking of fish from fish pots and any other fishing gears. Awareness and education is important.
- Enforcement of mesh size limits and other gear limitations
  - One inch mesh should not be sold to fishermen. The smallest mesh to be used is one inch and a quarter.
  - Seine net is necessary for a certain fishery but the mesh size is important. Seine nets should be banned from certain areas such as the reefs and should be used in certain seasons and in allowable areas only.
  - Size mesh used is not the problem but the fishers who will not practice responsible fishing.
- “No-fish” zones
  - No fish zones already identified in Negril.
  - Some fishers helped in the zoning of the Negril area, but it is said that other fishers still need to be aware of these zones.
- Closed seasons
  - Fishers agree that close seasons should be enforced.
  - Is a collective responsibility.
  - Orange Bay fishers police the lobster close season.
- Licensing system, closed or open access?
  - Fishers agree that there needs to be a closed access system.
  - Fishers agreed that an organized group should recommend persons to receive fishing license and also suggest the amount of license to be issued.
  - Before a license is issued, applicants need to be tested in terms of ability to swim and the knowledge of fishing.
- Alternatives: e.g. deep sea fishing & processing
  - No responses recorded !!!
- Incentives for sustainable fishing practices
  - Fisheries Division should give incentives to fishers to encourage Fisheries Management e.g. wires.
- Safety at sea
  - No responses recorded
- Fishing beach management waste disposal and sanitation
  - Fishers should take responsibility for fishing beach. Link is needed between fishers and relevant agency to put in facilities for garbage disposal.
  - Fishers agree that fishing beach should be kept at certain standard.

Source: Fisheries Division



The discussion that accompanied this presentation drove home to participants a point made earlier in the session and in the CANARI workshop on the previous day. This point is that fisheries management is largely about trade-offs among stakeholders, resource uses and economic activities. The diagram here was used to illustrate this, and the probable position of the NMP, given the unanimous agreement among the group on the overfishing of nearshore reefs where the trade-offs are mainly with tourism

## 5 Socio-economic and fisheries information for managing the Negril Marine Park

The purpose of this session was to:

- Identify SocMon and FMP information of most interest in relation to the objectives
- Agree on the study area(s), stakeholders and key settlements for investigation
- Determine the most feasible methods for collecting and communicating information

The technical adviser explained various methods of research that can be used to produce information for the SocMon study and FMP (see Appendix 3). Several participants shared their experience with surveys and means for communicating effectively with respondents. The reluctance of fishers and other self-employed persons to share information on personal income, supposedly from fear of taxation, was noted.

<b>Coastal core</b>	<b>Further inland</b>
Davis Cove	Santoy
Green Island	Logwood
Orange Bay	Marchtown
S. Negril River	Revival
Homers Cove	Retreat
Little Bay	Sheffield
Broughton	Spring Garden
<b>Bordering EPA</b>	<b>Satellite areas</b>
Lucea	Montego Bay
Savanna-la-Mar	Kingston
Frome (factory)	

Participants agreed on the study area conceptual map showed earlier and identified seven settlements for investigation in the coastal core. These are shown in the adjacent table. Further inland the settlements supply fishers who work off the coast, and also the impacts of agriculture through drainage. Watershed issues were prominent given the importance of the Great Morass wetland to the ecology and economy of the area. Its hydrology and ecosystem services have apparently been severely impaired by approved and non-approved drainage. Bordering the EPA are two larger settlements that supply fishers, and a sugar factory that may be a source of pollution. Montego Bay and Kingston were noted as satellite areas for tourists and key agencies. Most fish supplied to the EPA apparently comes from Whitehouse

fishing beach, but this marketing link was not included for investigation at this point in the study.

## 6 Implementing socio-economic and fisheries studies for the Negril Marine Park

Following the guidelines of the presentation on preparatory activities, participants proposed additional members for the NMP SocMon team, given the areas of responsibility to be covered (see table below).

Team player responsibility	Name of proposed member
Coastal manager	Carl Hanson
Technical adviser	Patrick McConney
Local advisors	
Surveys, communication	Jean Brown
Fishing	Ceylon Clayton, Lloyd Nelson, Oscar Reckord, Dennis Evans
Watersports	Cecil Brown, Vincent Gaynair
Hotel tourism	Silvie Grizzle, Jean Jackson
Area planning	Cliff Reynolds
Town business	Wayne Cummings
Field researchers	
Research leader	Malden Miller
Document analyst	CERMES researcher
Interviewers	Female teachers (unidentified)
Communications specialist	US Peace Corps Volunteer

Carl Hanson is to finalise the team composition and terms of reference. Several have already started to assist, and the technical adviser highlighted the contribution of Maria Pena, the CERMES project officer who had assembled most of the secondary data on Negril that was available from the internet, and was tabulating the census and tourism data obtained from STATIN and the Jamaica Tourist Board respectively. University of Guelph graduate student interning with CANARI, David Currie, was also assisting in this. The 13-page annotated bibliography was

circulated and participants were asked to identify what was missing. The reports of several locally held workshops need to be added. Some, like one on tourism carrying capacity, are recent and very relevant to the study. A participant was also able to identify upcoming research by an overseas researcher and team of students that should also be relevant. It is likely that many more publications and articles in primary scientific journals refer to Negril. The technical adviser reminded participants that the bibliography could be a source of income for the NCRPS, especially if it was updated annually.

The workshop briefly tackled the thorny issue of how to address sustainable livelihoods and their links to poverty. Previous studies suggested alternative sources of income (fishing further offshore, community-based tourism, aquaculture and others) but there was no conclusive evidence on viability. Interest among participants was greatest in farming sea moss and a variety of high value marine organisms. There was said to be little scope for diverting fishers into watersport since the latter was experiencing overcrowding.

Participants examined a layout for a fisheries management and development plan (see box below). They thought that this layout was acceptable as a guide for the first draft FMP for the NMP.

### Fisheries management and development plan

Harvesting sector

Options for: improvement of fleet; shore-based facilities; fishers including organisations

Postharvest sector

Options for: processors; for retailers; for exporters; for value-added local consumption

Data and information needs for planning

Policy framework; shared goals and objectives; preliminary valuation of sector; statistics

Institutional strengthening

Fisheries Division; fishing industry organisations; other facilitating agencies

Fishery specific management plans



Although the SocMon study is likely to be undertaken before most of the FMP activities, participants found it useful to examine the list of fishing beaches published in the 1998 fisheries census that was due for updating and, hopefully, validating. The Fisheries Division spot checks since 1998 caused them to conclude that there were few significant changes since 1998. However the impact of Hurricane Ivan in 2004 may have caused the number of fishing boats or activities at fishing beaches to have changed.

The table below lists the Hanover and Westmoreland fishing beaches included in the 1998 census with those in the NMP area in ***bold italics***. The number of boats at each beach in 1998 is given.

<b>HANOVER</b>		<b>WESTMORELAND</b>	
<b>Fishing beaches</b>	<b>Boats</b>	<b>Fishing beaches</b>	<b>Boats</b>
<b><i>Abingdon</i></b>	13	Belmont	34
Ballast Bay / Barbican Beach	2	Big Bridge	8
Bar Lane Beach	4	Black Bay	18
<b><i>Bloody Bay</i></b>	4	Bluefield	5
Button Wood	13	Bottom Beach	4
Cousins Cove	19	<b><i>Campbell Beach</i></b>	5
<b><i>Davis Cove</i></b>	15	Casha Tree Beach	3
Elgin Town	14	Cave	18
Esher Cove	7	Corpie Beach	2
Great River	8	Cox Beach	9
<b><i>Green Island</i></b>	46	Dillion	10
Hopewell	5	<b><i>Homers Cove</i></b>	30
Industry Cove	12	<b><i>Hope Wharf</i></b>	32
Johnson Town	16	<b><i>Little Bay</i></b>	15
Lances Bay	20	Market Beach	9
Little Cove	8	<b><i>Negril South Canal</i></b>	6
Lucea	73	Old Bay	38
Old Beach Road	1	<b><i>Pampie Bay Beach</i></b>	4
<b><i>Orange Bay</i></b>	58	Parker Bay	20
<b><i>Orange Cove</i></b>	12	<b><i>Revival</i></b>	1
Round Hill	2	<b><i>River Bank, Negril</i></b>	75
Sandy Bay	49	<b><i>Salmon Point</i></b>	37
Sawyer Beach	7	Savanna La Mar	1
Seafield	2	Scotts Cove	15
		Smithfield	28
		St Ann's	35
		St Mary's	40
		West End	5
		<b><i>Westland Beach</i></b>	6
		Whitehouse	54

Some beaches along the 'west end' of Negril were not known by the fisher participants who suggested that they were not regular fishing beaches, or were no longer in active use. In many cases there was more than one name for a beach. The fishers expressed keen interest in the re-census exercise.

## **7 Evaluation of workshop, outputs, conclusions and close**

In an open oral evaluation participants said that they found the workshop to be useful, especially since it was intended to lead directly into fieldwork and to yield results that they could put to use immediately. In summary they concluded that the workshop had achieved its objectives. What frustrated several of them was their powerlessness to stop or mitigate large tourism developments that had considerable negative impacts on the marine park and surrounding environment. Despite there being a well-known process of environmental impact assessment (EIA), some of the large hoteliers and other enterprises were able to circumvent or ignore the system. On the other hand, they also recognised that a number of hoteliers were very environmentally conscious and responsible. While nearshore fishing, and especially illegal spearfishing, was deemed harmful to the NMP, major threats were perceived to come from tourism.

The technical adviser stated that he should return 28-30 May for data analysis and interpretation, and then perhaps again on 30 June for presentation of preliminary results. Participants who requested them received electronic copies of the SocMon Caribbean guidelines and the socio-economic manual to assist in their follow-up to the course. All participants were thanked for contributing to the projects' work plans.

Carl Hanson closed the workshop with assurances that participants would be kept informed of progress. Although a local reporter was unable to attend, a brief release on the workshop was prepared for public information (Appendix 4). Participants were informed that the SocMon team would continue planning the following day.

## 8 Appendices

### *Appendix 1: List of participants*

<b>Name</b>	<b>Affiliation</b>
Nicole Leotaud	CANARI staff
David Currie	CANARI student intern
Patrick McConney	CERMES technical adviser
Derrick Gayle	Environmental Foundation of Jamaica
Richard Kelly	Fisheries Division
Bernard Blue	National Environment and Planning Agency
Lloyd Nelson	NCRPS Director, Green Island fisher representative
Ceylon Clayton	NCRPS Director, Little Bay fisher representative
Oscar Reckord	NCRPS Director, Orange Bay fisher representative
Jean P. Brown	NCRPS Director / Public Education Coordinator
Carl Hanson	NCRPS staff
Linval Getten	NCRPS staff
Elsa Hemmings	NCRPS staff
Ansurd Carey	NCRPS staff
Earl Murdock	NCRPS staff
Malden Miller	NCRPS, contracted research leader
Silvie Grizzle	Negril Chamber of Commerce
Nadia Ferguson	Negril Environmental Protection Trust
Dennis Evans	Negril Fishing Co-operative
Tamara Hewitt	Negril Green Island Area Local Planning Authority & Negril Resort Board
Cecil Brown	Negril Water Sports Association
Bridgette Williams	Negril Water Sports Association
Anna Reader	Tourism Product Development Company

## **Appendix 2: Programme**

- 8:30 am Registration and distribution of documents
- 9:00 am Welcome, background and introductions
- 9:15 am Workshop arrangements and expected outputs
- 9:30 am Socio-economic monitoring for coastal management in the NMP
- 10:30 am Break
- 11:00 am Fisheries policy and management planning for the NMP
- 12:00 noon Lunch
- 1:00 pm Socio-economic and fisheries information for managing the NMP
- 3:00 pm Break
- 3:15 pm Implementing socio-economic and fisheries studies for the NMP
- 4:15 pm Evaluation of workshop, outputs and conclusions
- 4:30 pm Close

## **Appendix 3: Training materials**

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

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

McConney, P., R. Pomeroy and R. Mahon. 2003. *Guidelines for coastal resource co-management in the Caribbean: Communicating the concepts and conditions that favour success*. Caribbean Coastal Co-management Guidelines Project. Caribbean Conservation Association, Barbados. 55pp

### **Slide presentation: Socioeconomic Monitoring for the Negril Marine Park**

- Purpose of this workshop
- What is SocMon?
- Benefit of SocMon
- Where are nearby SocMon studies?
- Who is SocMon for?
- NMP SocMon Project
- How does SocMon work?

- Preparatory Activities
- Goals and objectives
- Rationale for using SocMon
- Stakeholders ↔ Study area(s)
- Consult with stakeholders
- The SocMon team
- Work-plan
- What Data Do I Collect ?
- Sources of data
- Community Level Demographics
- Household demographics
- Attitudes and Perceptions
- Data analysis, communication and adaptive management
- How to Analyze
- Communication choices
- Using SocMon outputs

**Slide presentation: Fisheries policy and management planning for the Negril Marine Park**

- Purpose
- Approach
- Main message of the book
- Management decision-making
- Alternatives in management planning
- Know where you want to go!
- Participatory management planning
- Overview of Jamaica situation
- Making the FMP for the NMP
- Methods
- Development Of A Policy Framework And Strategic Plan For Sustainable Fisheries In Jamaica
- What was said for the Negril area
- What else should be said?

**Slide presentation: SocMon and FMP information and implementation of studies for the Negril Marine Park**

- Purpose of this session
- Secondary data
- 1998 fisheries census
- Fish catches and fishing effort
- Marketing of fish
- Census, tourism etc. statistics
- Key informants
- Household longitudinal surveys
- Mapping
- Using aerial photos
- Marine park zoning scheme
- Organisational mapping
- Stakeholders and co-management
- Local fishery knowledge
- Historical mapping, timelines
- Daily time use and historical trends analysis
- SocMon results tables

#### ***Appendix 4: Public information notice***

The Negril Coral Reef Preservation Society (NCRPS) put on two workshops on 13 and 14 April 2005 to further improve the management of the Negril Marine Park. Workshop participants included representatives of fishermen, watersports, tourism, environmental and business groups as well as government funding, planning and management agencies.

How the marine park can contribute to and sustain the livelihoods of people who live in the area and use the park was the focus of the first workshop held on 13 April in association with the Caribbean Natural Resources Institute (CANARI). Social and economic monitoring for coastal management, and fisheries management planning for the Negril Marine Park, were the topics of the second workshop held on 14 April in association with the UWI Centre for Resource Management and Environmental Studies (CERMES).

The participants guided the design of research that will be done in the area over the next few months to put together information that the NCRPS and others can use for making decisions about park use, especially relating to fisheries, tourism and coastal development. People who were not at the workshop will have opportunities to participate in the research. Before the projects are finished they will also be able to discuss the findings and add their comments.

Educational material, based on the Negril Marine Park, will be developed from the projects and shared nationally, regionally and internationally so that others can learn about the successes and challenges here at the Negril Marine Park. People from around the world are interested in learning from the experiences of Negril as they try to set up their own marine parks elsewhere.