

The Caribbean Coastal Co-management and Coral Regeneration Programme

4Cs JAMAICA PROJECT

DEVELOPING A FISHERIES MANAGEMENT PLAN: NMP COMMUNITY CONSULTATIONS

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1. ABOUT THIS REPORT

This report outlines a draft paper entitled ‘Towards a Fisheries Management Plan for the Negril Marine Park, Jamaica’ by Miller *et al.*, 2005. It was presented at the 58th annual meeting of the Gulf and Caribbean Fisheries Institute (GCFI) in San Andres, Columbia and is currently in preparation for publication in the Proceedings of the GCFI.

Currently there is no fisheries management plan (FMP) for the Negril Marine Park (NMP). The paper contributes to the formulation of the NMP’s first FMP. It examines one of the elements vital to the development of a FMP: the participation of fishers. Miller *et al.*, (2005) summarise information from various fisheries consultation meetings and provide insights on the lessons learned through this participatory process involving fishers and key fisheries stakeholders.

The draft paper is followed (in the Appendices) by notes from community consultation meetings held in fishing communities adjacent to the NMP at which fishers provided input on issues and possible recommendations for fisheries and coastal resource management.

The appendices also include notes from consultation meetings at which fishing communities were presented with results of a socio-economic study conducted in the NMP in 2005. Fishers commented on the results and gave further recommendations to help manage fisheries in the NMP. These notes were also deemed useful to the development of the NMP FMP, especially for the inclusion of socioeconomic information.

2. TOWARDS A FISHERIES MANAGEMENT PLAN FOR THE NEGRIL MARINE PARK, JAMAICA

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ABSTRACT

The Negril Marine Park (NMP) covers a total area of approximately 160 Km², extending approximately 3 Km outward from shore. In extension the park runs from Davis Cove in the north to Salmon Point in the south covering sections of two neighbouring parishes on the western end of the island of Jamaica. The biodiversity existing within the park is presently under severe threat by nutrient overload from fertilizer run-off from agriculture sources, partially treated sewage intrusion, boat anchors and overfishing.

The Park was declared a protected area under the Natural Resources Conservation Authority Act (1991) on March 4, 1998 and the Negril Coral Reef Preservation Society (NCRPS) was given the mandate to manage the area in conjunction with the stakeholders (NRCA, 2002).

A series of consultations with fishers commenced in June 2005 and targeted the eight major fishing communities within the Negril Marine Park, namely, Little Bay, Homers Cove, Salmon Point, Davis Cove, Cousins Cove, Orange Bay, Green Island and South Negril River. Discussions focused primarily on getting the opinions of the fishers with respect to the compilation of a NMP Fisheries Management Plan. This paper summarizes the responses of fishers to questions related to a) major threats to the fishery and possible solutions; b) a NMP permit and licensing system for fishers; c) the importance of data in the management of marine resources; d) alternative livelihoods; and e) fishers organizations. The opinions of the fishers are critical to the co-management of the area since fisheries management strategies will impact either negatively or positively on their livelihoods. The paper also sets out options and criteria for arrangements to involve fishers more in co-managing the NMP.

Key words: Co-management, fisheries, protected area, Jamaica

Hacia un Plan de Administración de la Zona Pesquera del Parque Marino de Negril, Jamaica

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RESUMEN

El Parque Marino de Negril (NMP) cubre un área total de 160 Km² aproximadamente, extendiéndose alrededor de 3 Km hacia fuera de la costa. En extensión, el parque va desde la Ensenada Davis en el norte hasta la Punta Salmon en el sur, cubriendo secciones de dos provincias adyacentes en el extremo oeste de la isla de Jamaica. La biodiversidad que existe dentro del parque, se encuentra actualmente bajo amenaza severa por la acumulación excesiva de nutrientes que provienen del derrame de fertilizantes de fuentes agrícolas, la intrusión de aguas residuales parcialmente tratadas, las anclas de los botes y la pesca excesiva.

El Parque fue declarado área protegida el 4 de marzo de 1998, bajo el Acta de la Autoridad de Recursos Naturales (1991), y se le dio el mandato de administrar el área a la Sociedad para la Preservación del Arrecife de Coral de Negril (NCRPS) junto con los socios (NRCA, 2002).

Una serie de consultas con los pescadores se inició en junio de 2005, y tuvo como objeto las ocho comunidades pesqueras principales dentro del Parque Marino de Negril, a saber, Little Bay, Homers Cove, Salmon Point, Davis Cove, Cousins Cove, Orange Bay, Green Island y South Negril River. Las discusiones se enfocaron primariamente en conocer las opiniones de los pescadores con respecto a la compilación de un Plan de Manejo de Zonas Pesqueras NMP. Este documento resume las respuestas de los pescadores a la preguntas relacionadas con a) amenazas principales a la zona pesquera y las posibles soluciones; b) un sistema de permiso y licencia de NMP para las zonas pesqueras; c) la importancia de los datos en el manejo de los recursos marinos; d) alternativas para la subsistencia; y e) organizaciones de pescadores. Las opiniones de los pescadores son críticas para la administración conjunta del área, dado que las estrategias de manejo de zonas pesqueras tendrán un impacto negativo o positivo en su subsistencia. El documento también determina opciones y criterios para los preparativos, con el fin de involucrar más a los pescadores, en la administración con junta del NMP.

Palabras claves: Administración conjunta, zonas pesqueras, área protegida, Jamaica

INTRODUCTION

The Negril Coral Reef Preservation Society (NCRPS) is currently accommodated at the Negril Marine Park Headquarters in the rural town of Negril in the parish of Westmoreland. Since its inception in 1990, NCRPS in collaboration with the Negril Area Environmental Protection Trust (NEPT) and the Negril Chamber of Commerce, played a key role in the establishment of the Negril Marine Park until official declaration of the Park on 4th March 1998 (NRCA, 2002). The Negril Marine Park (NMP) is located at the western end of the island of Jamaica (Figure 1) and the area of the NMP is approximately 160 km². The NMP extends from Davis cove in the North to St. Johns Point in the south (Figure 2).

NCRPS is a non-governmental, voluntary membership environmental organization that was originally formed by a small group of scuba diving operators concerned about the state of Negril's coral reefs. With the growth of tourism came an increase in the number of recreational boats in the area, especially those carrying visitors to the reefs. Boat operators were dropping anchors on the reef, causing damage to the very resources upon which their livelihoods depended. NCRPS' initial plan was to protect the coral reefs from further decline through the elimination of anchor damage and the creation of a national park, but it was later expanded to include efforts at whole-watershed and reef management (Otuokon, 1997; Thacker & Hanson, 2003). The mission of the Negril Coral Reef Preservation Society (NCRPS) is to protect and preserve coral reef ecosystems, locally, regionally and globally, through education, research, training, monitoring, lobbying, and the creation of Marine Protected Areas. Programmes and projects implemented by NCRPS addressed related issues such as education, overfishing, zoning and coral reef and water quality monitoring. NCRPS in collaboration with the Fisheries Division has also collected fish catch and effort data from various fishing beaches and have implemented a mesh exchange programme with local fishermen. Under this programme, more sustainable fishing is encouraged by exchanging larger mesh sizes for the smaller and often illegal mesh being used by fishermen to make fish.

Through a series of annual workshops and other meetings held since 1991, the Negril Coral Reef Preservation Society has been working with the Negril Chamber of Commerce, Government agencies, the community and other stakeholders in the Negril area to develop plans on various aspects of the management of the park.

A series of consultations with fishers commenced in June 2005 and targeted the eight major fishing communities within the Negril Marine Park, namely, Little Bay, Homers Cove, Salmon Point, Davis Cove, Cousins Cove, Orange Bay, Green Island and South Negril River. Discussions focused primarily on getting the opinions of the fishers with respect to the compilation of a NMP Fisheries Management Plan. Approximately, eighty (80) fishers participated in the first series of meetings. This paper summarizes the responses of fishers to questions related to a) major threats to the fishery and possible solutions; b) a NMP permit and licensing system for fishers; c) the importance of data in the management of marine resources; d) alternative livelihoods; and e) fishers organizations. The opinions of the fishers are critical to the co-management of the area since fisheries management strategies will impact either negatively or positively on their livelihoods. The planning processes for the meetings were also reviewed.

The venues were selected initially to accommodate powerpoint presentations. A combination of flyers, person to person communication was used to spread the word that a meeting was planned to discuss the Negril Fisheries Management Plan. Effort was also made to document what was said using flip charts and notetakers. Fishers who were reluctant to join the meeting were approached quietly by notetakers to get their opinion. Once the comments were summarized the information would be presented to the fishers during another series of meetings.

Some of the basic principles governing participatory planning/participatory monitoring and evaluation (PM&E) (Geoghagen *et al* 2004) and new ideas in managing small-scale fisheries (Berkes *et al* 2001) were employed in designing the strategies for involving the fishing community in the possible development of a fisheries management plan for the Negril Marine Park.



Figure 2.1: Map of Jamaica showing the location of the Negril Marine Park



Figure 2.2: Negril Marine Park Zoning showing boundaries of the Negril Environmental Protection Area and Negril Marine Park

RESULTS

Issues	Summary of Fishers Comments
Threats to fisheries, fish nurseries and habitats	Main threats included poor agricultural practices (sediment, fertilizers, and pesticides); tourism; global warming, hurricanes, improper waste disposal (sewage, solid waste); seine nets; and dynamite.
Fisheries management strategies	Fishers thought that a combination of 1 ¼” and 1 ½ “mesh for fish traps was ideal for the trap fishery. Ninety percent of the fishers supported a ban on seine nets. Some seine net fishers were of the opinion that it would be difficult to change gear type but were willing to increase the net size while others were willing to change gear type but they wanted to look at possible options before making a decision.
Education	The fishers thought that education was important however the older fishers were of the opinion that this was suitable for the younger generation.
Marine Park permitting and license system for fishers	The majority of the fishers were in favour of a permit and license system.
Fines and penalties for breach of Fisheries legislation	Fishers were in favour of harsher penalties for those who break the law. Recommendations were: warning for first offence; fine not less than \$50,000 Jamaican dollars; court action with the possibility of imprisonment.
The Fisheries Management Plan and Co-management	Fishers were in favour of a fisheries management plan and supported the idea of co-management.
Stock assessment/data gathering	Fishers agreed that data was important and that they were willing to participate in such a programme
Alternative livelihoods	The fishers were willing to discuss alternatives but they were non-committal whether they would do something different. The older fishers expressed that it would be difficult to change at this time.
Fishers Organizations	The majority agreed that an organization was required but efforts in the past have failed.

DISCUSSION

Lessons Learned

Stakeholder Involvement, Empowerment and Community Support

- It is critical to involve the primary stakeholders at the earliest possible stage. This involvement heightens the sense of ownership and involvement in the decision-making leading towards self policing and effective enforcement.
- A setting that encourages full participation from the stakeholders is critical to the process. The selection of the meeting venue merits serious consideration since this might affect the numbers of fishers that attend.

- Community meetings establish stronger working relationships between Park Rangers and the fishers resulting in more effective enforcement.

Development of Fisheries Management Plans (FMP)

- Staging of meetings is a useful tool to get the fishers involved in the decision-making process while keeping them informed of policies that might affect their livelihoods.
- The fishers, park staff, and the government fisheries agency must be involved in the vision, mission and goals of the FMP.
- Active participation by, and empowerment of, critical stakeholders in the development of a management plan to conserve and sustainable use their resources is key to the successful implementation of protected areas.
- A management plan should be arrived at through an extensive and collaborative process involving all stakeholders.

Public Awareness and Education

- Public awareness campaigns are an important part of the process in order to level the playing field.
- Experimental hands-on training should be provided for fishers.

LITERATURE CITED

- Berkes, F., R. Mahon, P. McConney, R. Pollnac and R. Pomeroy. 2001. *Managing small-scale fisheries: Alternative directions and methods*. International Development Research Centre, Ontario, Canada. 308p.
- Christophersen, K.A., F. Homer and S.J. Grant. 1997. Sustainable interventions for Negril fisher families. Prepared for USAID/Jamaica, Development of Environmental Management Organisations (DEMO). 51p.
- Geoghagen, T., Y. Renard and N.A. Brown. 2004. Guidelines for Participatory Planning: A Manual for Caribbean Natural Resource Managers and Planners. Caribbean Natural Resource Institute (CANARI) Guideline Series 4. 36 p.
- NRCA. 2002. Delegation instrument between the Natural Resources Conservation Authority and the Negril Coral Reef Preservation Society. 5p
- Otuokon, S. 1997. Negril Marine Park Management Plan. Negril Coral Reef Preservation Society.
- Thacker, K. and C. Hanson. 2003. Negril Marine Park Management Plan. Negril Coral Reef Preservation Society. 130p.

3. APPENDICES

Appendix 1: Fisheries Management Participatory Meeting (Green Island)

The meeting was held at the Green Island Primary school on June 30, 2005 and commenced at 1400, instead of the scheduled time of 3:00pm. Among those present were Richard Kelly (Senior Fisheries Officer), Errol Bartley (Chief Fisheries Instructor)-both of the Fisheries Division, Ministry of Agriculture, Carl Hanson (Director, Negril Coral Reef Preservation Society [NCRPS]), Deanne Grant (US Peace Corp Volunteer/NCRPS-Note taker), Sharia Patterson (Former National Youth Service (NYS) Volunteer/NCRPS), park rangers-Everton Frame and Vernon Summerbell, Malden Miller (Caribbean Regional Environmental Programme Demonstration Project Manager [CREP DPM]) and Martin Hughes-Community Liaison Officer (CLO) of CREP.

Despite the efforts of the staff of the NCRPS to spread the word through one-on-one communication and the circulation of flyers the initial turn out of the fishers was zero. Fishers had to be picked up from their homes and transported to the venue. This low turn out was initially attributed to the rain that may have prevented them from showing however the fishers quickly pointed out that the Green Island fishers would not have come anyway. Some were tired of meetings. Subsequent discussions with the Chief Park Ranger suggested that 5 fishers represented the best attendance for some time.

More thought needs to go into what is the best way to get the fishers to attend meetings. When asked one fisher suggested using the town cryer or radio or pay them to attend (Not applicable in this case since they would not be fishing at this time of day).

The meeting began with introductions by Carl Hanson. He outlined the roles and responsibilities of all and emphasized that co-management is critical if we are to successfully manage the area. He mentioned the Fisheries Management Plan and indicated that this was the first in a series of meetings in the EPA soliciting their input.

Richard Kelly briefly elaborated on a number of issues including the planned National Fisheries Management Plan, status of the Jamaican Fishery and the Fisheries Policy and Laws. Richard went on the chair the discussion session with Malden and Deanne taking notes.

Threats to the Fishery, fish nurseries and habitats

The fishers were asked to identify threats to the fishery and possible solution. The names precede the comments.

Dickie Nelson stated that: 1) fertilizer used by farmers including cane farmers and banana farmers affects the sea and everyone. It kills small creature including baby shrimp and other microscopic plants and animals; 2) Hurricanes because of global warming affects the sea; 3) the rivers were also carrying more mud/sediment and debris/garbage. The garbage affects the fishing.

Lloyd Nelson stated that: Sewage affects the sea more so than the sediment.

Fisheries management issues

- Qu: What would you do to manage the fishery?

Lloyd Nelson: suggested using a combination of 1 ¼” and 1 ½” wire for fish traps. The reason for this is that the 1 ¼” traps fish faster and will catch something within 2 days. The larger mesh does well when it soaks longer but it takes some time. During that time the catch from the 1 ¼” traps will provide an income and food. He went on to repeat the popular story that customers want 5 fish that weigh 1 lb in total. Dickie supported this when he stated that people prefer to eat ½ lb fish than 20-30 lb fish when sliced.

Norman Thompson: Whom fishes with hook and line stated that he prefers to catch and sell big fish (>5 lbs.) to restaurants. He did not support Lloyd’s story. He also stated that the catch was not as good as first time, sometimes he catches nothing. Pollution from tourism including suntan oil was the reason for this.

Clement Watson indicated that he catches mainly silk, queen and red snappers from the deep ranging from 2-6 lbs. The financial returns were great.

Dickie Nelson: indicated that his seine net had shrunk from 1 ¼” to 1 1/8” and this resulted in it catching smaller fish. He stated that he could not get larger mesh from the suppliers (Fishers Cooperative). He also stated that it would be hard for him to change his fishing technique since this was what he was doing for years. He also has a China/gill net and he would obey the law if seine nets were banned. For the record he was the only one in Green Island using a seine net. He fishes outside the harbour on the fore-reef and catches mainly ½ lb and upwards. Mr. Bartley arranged to meet with him after to work out a possible solution.

In response to the question: What would you do if there were no fishing? Lloyd Nelson answered on behalf of the group and stated that it could not happen so the question was irrelevant.

Effort was made to get the opinions of the other fishers.

- Qu. Do you need education or not?

Lloyd indicated that he knows where to fish and where not to fish so he needed no further education. Iron Pipe stated that fishers needed to learn how to take care of the fish and not to catch the small ones. Winston Rowe indicated that he wanted to learn more. Everton suggested that fishers needed to learn how to swim. Dickie, like Lloyd felt that he was educated in fishing and other issues related to the environment. We needed to address those nuclear plants (e.g. Chernobyl) and greenhouse gases such as carbon dioxide.

Methods suggested included TV, video, radio, and home visits/one on one discussion.

- Qu. What do you think about a permit system for fishers? For example only 5000 fishers and no one else.

Dickie stated that this would create conflict since he fishes in Lucea sometimes. Thompson agreed with the permitting system while Iron Pipe felt that fishers needed to move back and forth.

After clarification by Carl Hanson and Richard Kelly the general consensus was that they were in agreement with such a system.

- Qu. From a legal viewpoint, were the fines and penalties ok?

With respect to fishing in nursery areas, no fishing zones, dynamiting, damage to fish traps, Lloyd Nelson suggested that harsh fines should be imposed (In excess of Ja\$50,000). This received support from the other fishers.

- Qu. Are you willing to make a commitment to the FMP and Co-Management?

Lloyd Nelson answered in the affirmative and seemed to be driven by the fact that he was a Game Warden with the powers of arrest. The other fishers were also in support.

- Qu. Was there a Fishers Organization in Green Island?

The last Fishers Cooperative was in the 1970s and it worked then but it collapsed due to politics.

Other problems

Lloyd Nelson indicated that he and Aubrey were the only trap fishers so there were no problems. The others have moved out of the area, changed fishing gear (e.g. Iron Pipe) or passed away (A grandfather clause maybe one way to go, i.e. no new fishers in the MPA. Simply license the existing fishers).

Dickie Nelson was the only seine net fisher in the area.

List of participants

Lloyd Nelson – Trap fisher also hook/line.
 Dickie Nelson – Seine net/Gill (China) net
 Clement Watson aka “Iron Pipe” – Hook&line deep sea
 Norman Thompson – Hook&line deep sea
 Winston Rowe – Hook&line/shallow

Appendix 2: NMP Management Plan meeting (Davis and Cousins Coves)

The meeting was held July 13, 2005 at the Davis Cove Basic School. The meeting started at 4:50 pm with 10 fishermen in attendance and was held Among those present were Richard Kelly and June Masters of the Ministry of Agriculture-Fisheries Division, Carl Hanson (NCRPS – Project Manager), Deanne Grant (NCRPS – US Peace Corps Volunteer), Linval Getten (NCRPS – Head Ranger), marine park rangers , Answerd Cary and Vernon Sommerville (both NCRPS–Marine Park Ranger) and Martin Hughes (CREP - Community Liaison Officer).

Initial observation: Very few fishers were present for the meeting at the scheduled time. An effort by Linval Getten to “round up” more fishers was successful as he managed to assemble five fishers at once while the others gradually turned out.

Mr. Hanson introduced the team to the fishers. He briefly outlined role of the Negril Coral Reef Preservation Society (NCRPS) as well as presenting further information on the Negril Marine Park inclusive of its boundaries, various zones and importance and reasons for its establishment.

Richard and Carl then jointly explained that the reason for this meeting was to assist the fishers within the park to establish a Management Policy/Plan for the Park, which will be geared at better management of the resources within the Park.

Richard asked the following questions and fishers gave the corresponding responses:

- How many of you think that the fishing industry is going down?
Ans. All were in agreement that the industry was declining.
- How many of you here are not fishermen?
Ans. All in attendance were fishermen
- How many persons here are businessmen?
Ans. One – Richard then disclosed that fishing is a business henceforth fishermen are businessmen. (All were in agreement shortly after)

He further explained that since fishing is a business and fishers are business people then they must have a business like approach towards their business. Richard introduced the concept of sustainable fishing and used an illustration involving three fishermen to test their knowledge and understanding of the concept. The fishers responded extremely well, proving that they were aware of sustainable fishing practices.

Illustration: Three sets of stones (representing fish in three different areas in the park) were placed on the ground. Within each group the stones varied in sizes. Three fishers were asked to go fishing and they did. When they were through, it was observed that there were some stones left and each fisherman removed equal amounts of stones and only the bigger stones were taken. Richard questioned their action, and the fishers explained that “the small fishes must stay in the harbour and develop (get time to breed) and we must fish and leave some for another day and for other fishermen”.

Next Richard gave a presentation (Power Point) with graphic illustrations and statistics on world capture and cultured fish over the period 1950-1997, world trends in fish catch versus number of fishers over the period 1970-1997. He also presented information on rare or possibly extinct fish species.

Ms Masters then briefly explained the importance of fisheries data to the management of the Marine Park and the establishment of a fisheries management plan. She added that information such as total daily fish catch (weight), species of fish caught and location of catch are some of the information required. She then asked if the fishers were willing to provide them with such information. The fishers were reluctant to give a response, however a small minority answered positively.

Richard further asked if there should be a limit on the number of fishers who use the park or if it should be open access (allowing anyone to come in and fish). The majority stated that it should be open access as sometimes they might go to other areas to fish and vice versa. He then explained that the most severe threats to sustainable fishing in Jamaica and the rest of the world are:

- Environmental degradation
- Over fishing
- Habitat loss

Problems faced by fishers:

- Use of seine net (mainly by fishers from outside the area e.g. men from Green Island probably Mr. Nelson)
- Environmental Degradation
- Prophecy fulfilling
- Pollution (debris/garbage blocking river mouth)
- Night spear fishers – chasing the fishes away
- Spear fishermen – shooting fish out of other fishers pot
- Use of larger mesh size yield a slow catch
- Very poor fishing ground (fish does not come here often)
- Motorized boats damaging reefs
- Fishers returning small fish when they are dead

Some possible solutions as outlined by the fishers were:

- Eliminate/ban seine net but strike net can remain in use.
- Fishers group needed (approx. 50% was in support)
- For non-compliance the following were suggested;
 - fine not less than \$50,000
 - warning for first offence
 - court action be taken with the possibility of imprisonment

The meeting adjourned at about 6:10 pm.

List of participants

Horace Crooks	Pot/ Fish trap
Lloyd Crooks	Pot/ Fish trap and hook and line
Gorge Crooks	Pot/ Fish trap
Lebert Mowatt	Strike net and Fish trap and hook and line
Vincent Clarke	Pot and hook and line
Nigel Coleman	Pot and hook and line
Lenard Stewart	Pot and hook and line
Charles Barret	-----
William Spencer	Fish trap
Denton Donaldson	Pot and hook and line and net
O'Neil Whitmore	Pot and hook and line and net
(2 no name)	Spear fishers

Appendix 3: Fisheries Management Policy & Plan Participatory Meeting (Negril)

The meeting was held at 11:00 am at the South Negril River Fishing Beach on July 22, 2005. Among those present were Richard Kelly (Senior Fisheries Officer) and June Masters of the Fisheries Division, Ministry of Agriculture, Deanne Grant- US Peace Corp Volunteer/NCRPS- Note taker, Sharia Patterson- Former National Youth Service (NYS) Volunteer/NCRPS, Linval Getten (Park Ranger), Malden Miller (Caribbean Regional Environmental Programme Demonstration Project Manager [CREP DPM]) and Martin Hughes (CREP Community Liaison Officer [CLO]).

Richard Kelly called the meeting to order at 11:00am, at least 2 hours earlier than planned. June Masters was collecting data in the morning and it was decided that since the fishers were present it would be best to convene the meeting before they left the beach. This was also the third attempt within the past 2 weeks to convene a meeting. Hurricane Emily affected one meeting while it was suggested that fishers were not comfortable with meeting at the Negril Marine Park Office. The scheduled time of 3:00PM was also inconvenient since most of them usually leave for home before then. The meeting was chaotic for the most part, however we gathered useful information.

Malden Miller introduced the team and gave a brief outline of the aims and objectives of the meeting while emphasizing that the input of the fishers was critical to the process. The Fisheries Management Plan was mentioned and the fishers were informed that this was the first in a series of meetings in the EPA soliciting their input.

Richard Kelly briefly elaborated on a number of issues including the planned National Fisheries Management Plan, status of the Jamaican Fishery and the Fisheries Policy and Laws. Richard went on the chair the discussion session with Malden and Deanne taking notes. June Masters emphasized the importance of data to the management of the fishery and cited an example where a united group of fishers gathered information on fish traps damaged by the Ritz Carlton Hotel and won the ensuing legal battle.

Threats to the Fishery, fish nurseries and habitats

The fishers were asked to identify threats to the fishery and possible solution.

The threats were: Dynamite; sewage; tourism; boats damaging nets (Zein travel across pot sets all the time); improper waste disposal (garbage).

Fisheries management issues

- Qu. Do you need education or not?

The fishers suggested that the guests and hotel workers should be educated particularly in the area of waste disposal (at sea). Representation of fishers at the Negril Chamber of Commerce meeting was recommended.

- Qu: What would you do to manage the fishery? Fines & penalties?

- Qu. What do you think about the size of mesh and nets?

Fishers use 1" sprat net and justified this saying that small fish better for poor people. The story that large families prefer small fish so that each person gets their own fish was murmured in the crowd.

The Consensus was that 1 ¼" was OK. 1" nets should be banned. Kevin advised that if 1" wire is banned then Chinese wire should also be banned (not sure what that was, when questioned they seem to use some other wire apart from the hexagonal chicken wire; I was still wondering if they meant china net)

Natty was the only man who used beach seine and he indicated that he was willing to change his fishing gear but it depended on the type of fishing gear. Mr. Kelly did not pursue this at that time and requested that we documented Natty's willingness to change fishing gear.

A spear fisher who was skilled in boat building (he was adding fibreglass matting to a boat while participating in the meeting) did not agree with banning spear fishing and indicated that trap fishers stole from each other and blamed spear fishers and dolphins. He plans to use traps soon. 1 ½" wire is best for offshore banks while 1 ¼" was best for closer to shore.

Within the nursery areas there should be no boats, no tourists. Fishers should be fined for first time offence of fishing in the nursery area. The second offence should receive 4-5 yrs confinement as well as revoke the fishing licence.

When asked if they were interested in aquaculture one fisher was quite knowledgeable of a failed business venture where a \$3 Million dollar investment saw a 2 Million dollar loss.

- Qu. Is data important?

Data is important and they agreed to cooperate in sharing data freely.

- Qu. What do you think about a permit system for fishers?

They were in agreement with such a system. They also indicated that the current licence expires too quickly. They were advised that there was a cost attached to the acquisition of a licence from the NCRPS.

- Qu. What was the status of the fishers Organization?

Mr. Evans stated that fishers were not willing to pay the \$400 dollars weekly to clean. It was difficult to organize meetings because no one attends. The Japanese/Canadians were here to support the construction of a fishing villager and the fishers behaved badly during a meeting. The Donors left saying that they would be back when they were more organized. (A missed opportunity perhaps).

List of participants

Wilbert Reid – Cane vendor on the beach
Dennis Evans – Fishers Cooperative
Julian McKenzie – 640-0365
Howard Banford
Carlton Reynolds – 918-7071
Clement Richards
Bennett Williams
Lloyd Dowdie
Stanford Wynter – 399-7636
Vinton King – 851-5388
Fabian Townsend
Derrick Brown – 777-0839
Crafton Samuels – 854-5302
Keith Morgan – 401-2503
Dennis Brown – 469-9142
Patrick Lewis – Sheffield – 854-2216
Jahman Osbourne – fish scaler; 472-6932
Hugh Williams
Paulette Hemmings – Fish scaler
B Dowdie - Fish Vendor
Devon Brown – Spearfisher
Brigadeer Connell
Kevin Dowdie
Robert Williams

Appendix 4: Socio-economic monitoring and fisheries management planning at NMP

Forum on project outputs and future actions held on 23 November 2005, Negril, Jamaica

Agenda

- 0900 Welcome and introductions
- 0915 Background to the projects
- 0930 Presentation of key findings
- 1000 Discussion of findings and future action
- 1045 New initiatives by NCRPS and CERMES
- 1100 Closing conclusions and refreshments

Purpose of the forum:

- Provide information on the NMP projects
- Exchange views on management implications
- Recommend future action to be taken

SocMon and fisheries management plan workshop proceedings

Welcome and introductions

The workshop started about 0935 with Carl Hanson opened the half-day workshop, giving the context of the projects. He read out a welcome statement from Ms Jean Brown, President of the NCRPS. Participants introduced themselves.

Background to the projects

Patrick McConney merely summarised the background to the projects since much had been covered in the information from Mr. Hanson and Ms Brown.

Presentation of key findings

McConney presented slides on key findings, much the same as for the fisher community meetings. However, he added a timeline:

Timeline of events

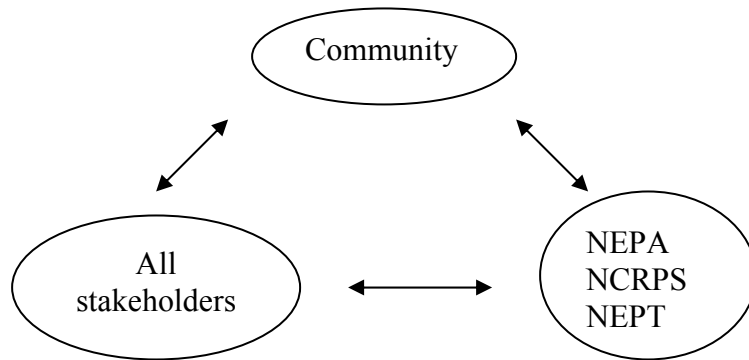
- April inception workshop in Negril
- Socioeconomic monitoring study
 - Literature review and Negril bibliography
 - Collaboration with CANARI on key informants
 - Design and execution of household survey
- Fisheries management planning process
 - Full endorsement by fisheries authorities
 - Collaboration on FMP contents and formats
 - Community consultations on FMP in NMP
- Combining the outputs of the two studies
- Validation workshops with key participants
 - Interviewers, FD, NEPT, CREP, NCRPS
 - Analyses by CERMES and Fisheries Division

- Presentation of papers at the meeting of the Gulf and Caribbean Fisheries Institute in San Andres, Columbia (7-11 November)
-Carl Hanson, Malden Miller, Maria Pena
- Near completion of research paper by MSc candidate Katherine Blackman
- Validation workshops with all stakeholders

A general discussion followed.

Discussion of findings and future action

Based on the feedback provided from the SocMon survey Mr Karl Salmon (SDC) suggested an institutional structure to support the planning and implementation.



The suggestion was made that each area (settlement) should create a plan specific to their area. This can help take some of the pressure off NCRPS and empower the communities. It could facilitate finding integrated solutions to community problems.

Each structure must relate to each other, especially to deal with legal arrangements. It is an ideal structure where everyone can be represented in one way or the other. McConney pointed out that turned on its side, the proposed structure is similar to the present one with the NCRPS board as the integrator of the organisations.

There are now two suggested ways to construct the FMP either by

- 1) by area/ settlement (e.g. Little Bay, Salmon Point etc) or,
- 2) by resources (pelagics, reefs etc)

Carl Hanson suggested that the different regions experienced different issues and maybe the plan should be tailored to suit the communities. If the FMP is arranged by settlement/area, there are benefits e.g. more buy-in by stakeholders and integration of problems and the solutions.

Fisheries issues (regarding fisheries management)

Too many activities occur within the park for a plan to be developed. For example, while the designation of the fish sanctuary is protecting the fish, other activities are occurring that would affect the fish habitat.

A unified board is needed with tourism and fishing on board, as they both activities impact on each other. The body/board would represent the collective groups i.e. community and stakeholders.

Ceylon Clayton stated that watersport operators should be involved in fisheries management activities, as some are currently operating in the fish habitat. If there were no fish, there would be no tourists/tourism and hence no jobs for watersport operators. Watersport operators need to be educated and be invited to workshops. Not only the representatives should attend but most of them. This may help reduce their bad practices.

The demarcation of the park (especially the fishing and no-take [sanctuary] areas) is important. Demarcation will prohibit the watersport operators from entering the area. Signs with graphics should be installed for those who are illiterate. Buoys should be colour-coded with signage affixed.

There are some fishers who claim that they still do not know about the NMP's various zones despite all of the educational sessions and signage erected by NCRPS. [Note the observations in Carrier and Garner anthropological study on appropriate communication]

A ranger suggested that closed seasons should be applied not only to conch and lobster but also to finfish. There was a brief discussion of the difficulties in applying size limits to mixed populations of reef fish.

Education and sensitization

Bernard Blue of NEPA said people need to value their resources: "value what is valuable". They need to know how these resources affect them and how they impact on the resources.

Hotel guests also should be educated about the Negril Marine Park such as the various activities that are prohibited in the park. Regulations can be advertised in guest rooms. Some education by the NCRPS is being done but more should be done in other areas. The information on prohibited activities should be disseminated to tourists at the hotels. Tourist info has to be attractive and in several languages.

People need to be informed on the buoys and what the different colours (red, blue) indicate. If the codes are known, then watersport operators can abide by the rules.

Oscar Reckord observed that NCRPS is being asked to address problems as if they have not already been addressed. McConney suggested that new and more innovative solutions have to be tried to address the problems again. (But this speaks to the need for institutional memory and public knowledge of initiatives).

Fishers should be educating other fishers who do not know about the protected area. Furthermore, fishers should not fish in the nursery areas because all the fishers depend on this habitat.

Enforcement

No matter how many rules/regulations are put on paper, people will not follow the rules as long as there is no adequate enforcement. There needs to be constant enforcement. One ranger indicated that he filmed a watersport operator jet skiing in the fishing area and reported him. (Suggests the power of innovative techniques).

Fish catches which are landed should be monitored. Mr Hanson indicated that some enforcement is done but the capacity of the NCRPS is the problem. There is the Fisheries Act (or Wildlife Act?) which addresses the landing of juvenile fish but so far no one has been arrested and fined for landing juvenile fish.

The NCRPS does not have all the resources and authority needed to enforce regulations. The rangers have not been given the power by the government to arrest people. There is an enforcement agency (Marine Police) in Negril with 4 persons and a small boat that is seldom operational. Not all people respond positively to persuasion, so need enforcement.

Conch and lobster have size limits but finfish grow to different sizes and size limits for finfish have not been defined by the government. This is something to explore.

The local planning authority is considering moving the fishers from by the mouth of the South Negril to the inland side of the bridge. This suggestion has surfaced many times. Need fisheries infrastructure.

Does the cooperative have sufficient members and authority to remain in that location and implement programmes aimed at fisher development?

MoBay experience

There has been outreach and education in MoBay. If there is no authority people will make decisions as they feel fit. Enforcement appears to be a deficit in the system. MoBay used permits and fishers had to be trained to secure their licence. Fishers took part in a three day training programme on fish ecology, MPAs and regulations. MoBay, like NCRPS, did not have the resource capacity but there advocacies in small pockets in the area to help in enforcement. People were educated and became game wardens that would help in enforcement. The game wardens have the authority to take away illegal gears and report violators to managers. They also have the power to arrest.

Undersized trap wire

Ceylon made the park manager and fisheries officer aware that there was a 'made in China' 1¼ inch mesh being sold, but the mesh was actually smaller. This new (cheaper by JA\$500) brand is flooding the market. There needs to be a check on the places selling fish equipment especially regarding the wire mesh. The wire is cheaper than other brands and so fishers may be more prone to buy this wire.

Livelihoods

For MoBay, the alternative livelihoods study turned up about 12 things fishers could do besides fishing. Money was to be invested to support fishers' entry new businesses, but it was not economically feasible. By examining the permit system, it was realised that some fishers were full time and part time fishers. As non-fishing employment opportunities arose, MoBay management would negotiate with companies to place skilled fishers in jobs. Some fishers were even able to secure those jobs and leave fishing. (This does not address the problem of unskilled fishers finding alternatives).

Some value added projects were supposed to be developed at MoBay: the development of a fish market central to the five fishing settlements; fish processing area (community had equipment). However, these projects did not proceed.

The integration of fish purchasing, fish production and consumption was brought up. This kind of activity occurs in other countries in the Caribbean. It may be good for Negril especially with tourism in the area. Malden indicated that telling fishers about these ideas does not help. Fishers need to see other communities doing alternative activities or they must try it out for themselves to see if it can work. One fisher indicated he would like to go and see what other countries do. Also, the other problem is the lack of support. Some fishers who came from the exchange trips were exposed to new ideas but they did not have anyone to support their new ideas. There needs to be a system of support for getting new practices in place after exchange visits.

The fisheries officer indicated that the fishers' spouses cannot be forgotten. If they are employed through alternative e.g. cosmetology etc, they can help their household.

Resource users such as the jet ski operators need to be organized into groups especially to address problems. There are 6 legitimate jet skis? The Negril carrying capacity limit was set at 42 licensed jet skis. The others are illegal (about 30 more); most of the jet skis in Bloody bay are illegal. Some vessels are licensed with the maritime authority and can legally be in the water as they are private but they cannot take any passengers. Regarding enforcement, vessels can only be taken away by an authorised TPDCO official, not the park rangers. However, there is only one such official for the entire island of Jamaica. A more recent carrying capacity study may increase the permitted number of jet skis.

McConney probed the participants for additional suggestions about new actions and initiatives that had not been discussed before, but there were none. Hence the discussion was ended.

New initiatives by NCRPS and CERMES

Patrick McConney distributed a one-page flier on the CERMES regional MPA management effectiveness project that includes Negril. He identified 26-27 January as the dates for the inception training workshop, noting that several of the people in the room may be invited to it.

Closing conclusions and refreshments

McConney said that there would be a mid-January regional meeting in Barbados to close the 4Cs project, but that the Negril close may come at the time of the MPA-ME workshop to briefly present the draft final reports and any other outputs. He and Hanson noted that the new fisheries

policy and legislation may be finished by mid-2006 and the NMP FMP could be ready for implementation by late 2006. However implementation could commence earlier, informally.

List of participants

Name	Organisation
Carl Hanson	Negril Coral reef Preservation Society (NCRPS)
Bridgette Williams	Negril Watersports Association
Anna Reader	Tourism Product Development Commission (TPDCO)
Ceylon Clayton	NCRPS director and Little Bay fisher
Renee Beam	Negril Area Environmental Protection Trust (NEPT)
Lloyd Nelson	NCRPS director and Green Island fisher
Katherine Blackman	UWI CERMES
Patrick McConney	UWI CERMES
Deanne Grant	NCRPS
Ansurd Carey	NCRPS
Vernon Sommerville	NCRPS
Linval Getten	NCRPS
Elsa Hemmings	NCRPS
Malden Miller	Caribbean Regional Environmental Programme (CREP)
Oscar Reckord	NCRPS director and Orange Bay fisher
Tamara Hewitt	Negril Green Island Area Local Planning Agency (NGIALPA)
Martin Hughes	CREP
Susan Mahon	UWI CERMES
Cecil Brown	Negril Watersports Association
William Jackson	Negril fisher
Dennis Evans	Negril Fishermen's Cooperative
Keisha Spencer	NEPT
Karl Salmon	Social Development Commission (SDC)
Bernard Blue	National Environmental Protection Agency (NEPA)
Royan Gayle	NEPA
Brian Zane	Montego Bay Marine Park (MBMP)
June Masters	Fisheries Division

Appendix 5: Salmon Point SocMon and FMP follow-up meeting

Meeting was held on Tuesday 22 Nov 2005 under a tree where 3 fishers were mending China nets near the beach around 3 pm. Among those present were R. Kelly, T. Grant, L. Getten, M. Pena, S. Mahon, K. Blackman, P. McConney, M. Hughes (who took an attendance list of fisher participants). Chief Ranger Linval Getten rounded up a few fishers and asked them each to call more. It took about 15 minutes to get a starting group of about 12 and more (mostly non-fishers) joined later. Presentations were entirely oral, no visual aids.

- Richard Kelly from Fisheries Division gave the fishers context to the meeting and introduced overseas participants.
- 18 fishers from Salmon Point were present, maybe half seemed to be professional fishers.
- Approximately 20-25 Salmon Point fishers existed in the area.
- There were also vocal non-fishers and some boys present. One young woman joined the group briefly and then tended to household duties away while listening a distance away.
- Kelly described the NMP to the fishers, and fishers were aware of the NMP. He emphasised that the park belonged to the fishers, outlined the park boundaries and the agency responsible for running the park (NCRPS).
- He gave a brief description of the three main coastal ecosystems (mangroves, seagrass beds and coral reefs) and asked fishermen if they knew the importance of each. Fishermen were knowledgeable about these ecosystems and their importance.
- The concept of sustainable fishing was explained as well as the main aim of the NCRPS.
- The FMP was discussed and it was emphasised that the aim of the plan was to protect fishers' livelihoods. The plan would be applied to the NMP.
- Kelly continued to explain that the government is preparing laws to ensure that people have 'fish for today and tomorrow'. He stated that to do this fishermen's input is necessary.
- McConney provided feedback from the SocMon survey. He stated that the questionnaires were being used to improve the FMP. He described the findings from the SocMon and asked for confirmation of these results.
- SocMon findings:
 - People reported not hearing about the NMP.
 - Generally dynamiting was an issue.
 - People in Orange Bay and Little Bay did not like seine net fishing. No seine netting occurred in Salmon Point.
 - Spearfishing was found to be an issue. Either there were too many people spearfishing or spearfishermen were taking fish out of fish pots.
 - Most respondents felt that fish pot mesh size should be bigger.
 - 3/4 of respondents reported that they were involved in fishing, while the others had other jobs and were thinking of training.
 - McConney then asked about the situation in Salmon Point. The SP fishers said they do not only fish.
 - Kelly asked whether they had enough training in fishing and fishers said no and they were willing to learn more.

- There is no fishers group in Salmon Point. Kelly emphasised the importance of organised fisher groups for the FMP to be effective. Fishers were encouraged to form such groups since fisheries management policy requires membership of groups in order to obtain licenses. He stated without unity among fishers, the FMP would not work.
- Fishers would not be against the ban of 1 ¼ " mesh size.
- When asked how they play a role in protecting fisheries, fisheries replied that they let go small fish.
- There is no illegal turtle harvest at Salmon Point
- Regarding alternative livelihoods, fishermen said that they would do other jobs, as long as it could provide them with food. Men could not live from the sea alone.

Issues in Salmon Point

- Fishermen are experiencing decline in fish catch.
- Government is not doing enough for fishermen.
- Fishermen would like government loans for boats and gear.
- Subsidies on fishing equipment can also be provided.
- Dynamiting by fishers from Sav-la-Mar is a major issue.
- Lack of other jobs. There is only minimal farming which occurs year round.
- Lobster harvesting occurs during closed season.
- The road needs to be paved.

List of participants:

Ranold Banton
 Derrick White
 Cecil Clarke
 Kenroy Banton
 Lelechia Brooks
 Earl Evans
 Glenville Evans
 Howard Banton
 Roger Thompson
 Irvin White
 Hartman White
 Theobald Cummings
 Audrey Drummond
 Bryon White

Appendix 6: Negril fishers SocMon and FMP follow-up meeting

The meeting was held at 1400 on Wednesday 23 November 2005 on the bank of the South Negril River in the fisher settlement under a tree, around a boat. Among those present were C. Hanson, D. Grant, L. Getten and the other rangers, M. Pena, K. Blackman, P. McConney and M. Miller. Negril Fishermen's Cooperative vice-president Dennis Evans was an observer. Rangers took an attendance list of fisher participants. The meeting was entirely oral. Approximately 28 persons attended, the majority being fishers. NCRPS staff, the fisher cooperative vice-president, CREP staff, NEPT Peace Corps volunteer and the others were present as part of the general crowd.

Carl Hanson explained the purpose of the meeting and the project background. Patrick McConney reported on the results of the SocMon and FMP studies and consultations. The meeting was opened for discussion of the points presented and anything fishers wanted to add.

Fisheries issues

- A fisher indicated that if fishers (e.g. spearfishers) do not follow the rules, they should be heavily fined or imprisoned. This will encourage these fishers to stop their illegal practices. Fishers and others comply with turtle and wildlife laws that are vigorously enforced and promoted. There needs to be equally serious enforcement of fisheries laws and large fines upon prosecution.
- The rangers are insufficient for enforcement. Fishers can assist. The title of game warden can be assigned but not to only one fisher.
- Regarding fish trap mesh size, some fishers cannot afford the bigger mesh (1.25 or 1.5 inches) and buy the smaller one (1 inch) to use for fishing activities.
- If the Negril Co-operative decides to monitor landings, it will not work because that person will not be respected. The cooperative is not respected. An official must do fish size measurements.
- The average size of fish should be known. There are some fish which grow large and only certain sizes should be caught. Other fish do not grow very large and are suitable to be caught. Research is needed on the sizes of fish at maturity in order to set minimum size laws.
- Poor consumers demand fish at prices below JA\$100/lb, and these are small fish. The regular fish price is JA\$160-200/lb. The only way for fishers to sell larger fish at the lower price is to reduce their operating costs (fuel and gear).
- Some fishers suggested closing an area to fishing and then re-opening it after ~6 months while another area is closed (a rotating and moving area closure systems). Another fisher indicated that closing cannot work because fish travel. Also fishers will harvest illegally from closed areas.

- Fishers agreed infrastructure can be put in place e.g. a fish market. Fishers have no toilet facilities. (Note: currently NGIALPA is considering moving fishers due to the lack of sanitary facilities and other undesirable planning features).
- Regarding management, who should make the decisions on regulations: NCRPS board with 4 fishers on it, an improved Negril Co-op or a Negril informal fishers group? No answer. Some people do not want to join because of a bad experience with the Negril Co-op. Another suggested that the Co-op is needed as fishers are not working together.
- Fishers receptive to the NCRPS holding regular (every other month) meetings in the settlement to get feedback on the proposed FMP and any fisheries issues.
- Fishers agree to a permitting (licensing) system such as done at MoBay Marine Park to exclude fishers who are not from the area and to control fishing effort.
- Apparently most fishers fishing in “Negril waters” were not born in Negril but were from other surrounding areas. One fisher was angry about this and thought that when the license/permit system is introduced, fishers should be licensed for using their port and not others. Thereafter, most fishers agreed that all Negril fishers (including those from outside) can be licensed but new fishers cannot be licensed. Fishers agreed that those with the license will follow the rules and regulations. Another fisher indicated that the boats should be licensed with a number. He writes his license number on pots and so he can tell who steals his pots. Most fishers said that they are licensed.
- Livelihood alternatives. One fisher complained that he works for the whole day and sometimes cannot get enough money. He indicated that fishing is his life and he would not want to go into a new occupation.

The meeting concluded with McConney explaining the next steps in the FMP process including maybe new fisheries policy and legislation by mid-2006. A new FMP is not likely before the end of 2006. The NCRPS will come back to the settlement to get fishers’ feedback on the draft FMP.

Refreshments were served by NCRPS rangers.

List of participants

Marvin Watson	Lascel Smith	Lloyd Dowdie	Aggri Jackson
Reginald Campbell	Doglace McCloud	Leeton Morris	Junior Swabby
Patrick McKenzie	Owen Robinson	Paulette Hemmings	Mark Philips Kevin
Dowdie	Hartley Campbell	Briggi Connell	Vernon Williams
Len Malcolm	Alttuy Lawn	Stanley Winter	Horace Gottshalk
Livingston Beck	Curtis Jackson	Oral Woolery	Robert Dowdie
Julian McKenzie	Dean Evans	Vernette Connell	Vinton King
Trevor Ebanks	Marshall Campbell	Jeremiah Blake	Lenford King
Carlton Reynolds	Melinda Thompson		

Appendix 7: Little Bay SocMon and FMP follow-up meeting

Meeting was held at the Little Bay All Age School around 3:30 pm on Tuesday 22 November 2005. Among those present were R. Kelly, T. Grant, L. Getten, M. Pena, S. Mahon, K. Blackman, P. McConney, L. Getten and M. Hughes (who took an attendance list of fisher participants).

The presenters arrived later than scheduled, but fishers had to be rounded up as only 3 were on site including NCRPS board member and meeting organiser Ceylon Clayton. Chief Ranger Linval Getten went to get more fishers in the vehicle. Already at the school were three young women who decided to stay for the meeting. Some children were around.

R. Kelly provided an introduction to the meeting and reminded participants that the last time they had a meeting it was to inform them about the NMP and FMP. When asked about the agency responsible for managing the NMP, fishers were unable to identify it. Kelly said that this meeting was to provide fishers with information on the results of the SocMon survey. A slide presentation was made by Patrick McConney on the SocMon results.

Responses from fishers:

- Fishers (about 10, mostly older men) agreed resources were in better shape years ago.
- In LB, farming was also a livelihood but there is no market for the goods, and there is some work in the hotel industry.
- When fish are landed in LB, they are taken to Good Hope and Brighton. People do not come to Little Bay to buy fish.
- There is not enough tourism in LB. There are only two guest houses with a total capacity of 20 guests. LB would like to see the implementation of the programme to develop tourism in the community but there is lack of funding for this. Visitors would be encouraged to buy food and handicraft from appropriately trained locals.
- One issue considered to be significant by fishers was that of land ownership and access to the customarily used beach (recreational events and emergency boat haul out) in Homer's Cove. A land owner is erecting and moving a fence that is increasingly encroaching onto the fishing beach, perhaps beyond his legal boundaries. Issue us just short of open conflict. Fishers want govt. to determine what land is his and what is for public use. Kelly said he would try to have it investigated shortly.
- When asked about the status of the fisher group at LB, it was reported that it is difficult to get the fishers together.
- There are approximately 70 fishermen in LB and a population of 500 people.
- Ceylon requested longer notice of meetings in the future.
- Later (Wed) he added that that lack of piped water to houses and the poor state of the road (track) were also issues there.

List of participants

Percival Campbell	Nicola Murray	Eglin Bernard	Steve Bimmer
Ceylon Clayton	Keisha Clayton	Robert Clayton	Simon Bimmer
Alvis McNeil	Dorothy Shirley	Lloyd Pingling	Brandy

Appendix 8: Orange Bay SocMon and FMP follow-up meeting

The meeting was held at a bar in Orange Bay at 1400 on Thursday 24 November 2005. Among the approximately 15 people present were Carl Hanson, Patrick McConney, Maria Pena, Katherine Blackman, Deanne Grant, Ansurd Carey, Vernon Sommerville and Linval Getten.

An opening address was given by Carl Hanson and he explained the purpose of the meeting and the PowerPoint presentation which was conducted by McConney.

After the presentation Hanson asked the fishermen if they concurred with the results presented on the SocMon survey. He emphasised that the NCRPS was taking the position of including fishers in the management process and that the information from the fishers will be included in the Negril Marine Park Fisheries Management Plan. McConney explained to the fishers about the various fisheries meetings they were having throughout the week and asking fishers for their feedback. He stated that CERMES was assisting NCRPS with the SocMon survey and the development of a FMP but that the plan belonged to NCRPS and the NMP stakeholders. He emphasised that this was the first time people will be focusing on fisheries management in the park.

McConney made it clear that fishing was not the only reason for decline in fish abundance. Then the fishers were asked if they had any problems in the park.

Some issues in Orange Bay

- There have been numerous meetings but there seems to be no action.
- The main problem in the park causing fishery decline and habitat damage is the pollution from hotels.
- Fishers commented that the fish were getting smaller and there were less fish.
- A fisher stated that the government partially blocked a watercourse leading to the harbour during road construction and it needs to be cleared to increase freshwater flow and restore habitat health. Fishers were stating this for the last twenty years and nothing was being done. They were willing to clear the watercourse, but they needed permission. No governmental or non-governmental agency was assisting.
- Studies had been done by UWI Mona on drainage in the area, but still no action.
- Hanson suggested that NCRPS could facilitate the process of bringing the perceived problem to the attention of the MP for the area but the NCRPS could not take direct action itself. This did not satisfy the fishers. He suggested also that their points would be better listened to if they were to form an organisation. The discussion on the watercourse continued for some time and is clearly an issue that needs to be resolved before fishers will listen to points on park management.
- The line fishermen indicated that they would catch 2 to 6 barracudas per day, if they fished six days a week.

As the meeting proceeded:

- McConney queried about fishing of large pelagics. Large pelagic fishing is at time good and bad. It is not a mainstay of Orange Bay fishers. Most use traps.

- McConney further questioned about what the fishers thought about the responsibility for managing the park. There was no immediate response to this question.
- A fisher stated that the population in Orange Bay was increasing, hence the increase in fishing, and the fish were declining in size and abundance.
- There were more fishermen in Orange Bay, both older and younger fishers.
- Fishers now have more powerful boats, so can fish harder more easily.
- A fisher indicated that not many young men were dependent only on fishing. Fishing does not provide much for a living and many also farm for a living.
- A young fisher stated that young fishers do not want to live solely from fishing as a career, no matter how good it is. They might fish for 2 to 3 years but they usually go looking for a professional job.
- Younger men tend to go into tourism because they cannot catch enough fish to make a good living.
- An older fisherman stated that dolphins (porpoises) were overturning the traps and this was the cause for the decline in fish catch. This caused a major disagreement with the fishers, especially younger ones, which ended the meeting.
- Some other major issues which affected fish decline were the blockage/diversion of the river to build a highway, sedimentation from road construction and pollution from fertilisers. One older fisher pointed out that a resumption of increased water flow into the bay might just bring more pollutants from inland.

Participants were told of the next steps leading up to the finalisation of the FMP in 2006.

List of participants

Lascell Crooks
 Leroy Hines
 Albert Thompson
 Oscar Reckord
 Oswald Hendricks
 Lionel Black
 Aston Nugrave
 Leon Miers
 Octavious Deans
 Kingsley Samuels
 Joel Campbell
 Cecile Todd
 Carlton Sangster
 Radcliff Madison

Appendix 9: Davis Cove & Green Island SocMon and FMP follow-up meeting

The meeting was held on Thursday 24 November, 2005 scheduled for 1600 but starting near 1700, was held at a primary school in Davis Cove for fishers from Davis Cove and Green Island. There were approximately twenty people at the meeting plus children; twenty of these were fishers. Among those present were Carl Hanson, Patrick McConney, Maria Pena, Katherine Blackman, Deanne Grant, Ansurd Carey and Vernon Sommerville. The NCRPS staff helped to collect and transport fishers to the meeting.

The meeting began with an address by Carl Hanson. He informed the fishers about the Negril Marine Park, the role of NCRPS and explained the need for co-management. Fishers agreed that fish catches have declined. Patrick McConney delivered the PowerPoint presentation which showed the results of the SocMon survey.

Fishers' responses on SocMon results:

- The fishers stated that fishing is bad and confirmed that the resources were in a better condition years ago.
- Fishers concurred with the results that fishers can work together to solve problems in the NMP.
- Fishers seemed not aware of the Social Development Commission (SDC) as an agency that assisted with training and livelihood diversification. McConney explained that the SDC worked with people to find jobs.

Fisheries issues

- Fishers agreed that taking small fish was not good. Seine nets' mesh size should be increased as the mesh size was too small.
- Fishers indicated that seine nets were not used in the area. Others come from outside the area to seine but the people from Davis Cove stopped it. Most of the seine netters were from Green Island.
- Most fishers from DC harvested fish outside the park, to the north. Pot fishing was mostly done in the NMP.
- Fishers stated that the mesh size of 1 ½'' was not good for inshore traps and that it was mainly suitable for catching lobster. People are currently using 1 ¼'' mesh size. One fisher stated that they would soak 1 ½'' mesh traps for one month and still do not catch any fish. Baiting the traps made little difference.
- Another problem was that fishermen were drawing other fishers' traps.
- Fishermen do not catch small fish in DC, especially not inside the bay. Fishers claim that 1 ¼'' mesh lets the small fish out.
- The fishers agreed that there were not catching the size and quantity of fish as they did before. One fisher recommended that to improve the situation, they could put half the pot in 1 ½'' and the other half in 1 ¼'' mesh. The fishing ground here is so poor, so 1 ½ '' mesh would not be suitable for fishing.
- Mesh size should be dependent on the fishing ground: larger mesh where there were already larger fish.

Recommendations and views

- Carl Hanson stated that spearfishing was illegal in the park.
- Fishers indicated that professional spearfishing was not harming the reef fishery but the occasional and part-time spearfishermen should be excluded from fishing in the park since they were less responsible and caught anything.
- An NCRPS ranger suggested that fisher licences could be given to spearfishermen who met certain criteria which would be determined by fishermen and NCRPS. Fishers agreed to this suggestion. However, one lady indicated that spearfishing should be completely banned.
- McConney stated that a permit system could be applied to all types of fishing. Fishers agreed this could be a good idea.
- There is a lack of enforcement in the area. A fisher stated that to improve this, each fisher should be his brother's keeper. He also said that fishers could get on the phone and call the NCRPS. He suggested having a meeting once a month to educate the people about park management and related matters.
- Other fishers stated that they cannot deal with the idea of being the enforcers because it will cause hatred and conflict among the fishers. Instead, fishers should call the police and let the police deal with the issue.
- Fishers were asked if appointing some of them as park wardens will work. Fishers agreed it would work. Carl asked if the community cannot be the enforcers. Some emphasised that they cannot deal with it personally. No consensus on this.
- Fishers stated that the inshore breeding grounds need to be protected and that size restrictions on fish catches should be applied to spearfishermen.
- A fisher stated that spearfishers were hard to curtail. Restrictions on mesh size would work in the day for traps, but not for those who fish at night.
- Carl queried if closing certain areas to protect fish was acceptable. People were fishing in the harbour at Davis Cove and they were taking too many small fish. Fishers supported the idea of closing the coves as the nursery areas.
- At this time of the year, there are a lot of small fish in the harbour. The fishers of DC were asking for protection of the nursery area.
- Oscar Reckord made a plea that all fishermen should police the area. Fishers were given an example about what is being done in Orange Bay. The fishers enforced the rules and confronted any fisher caught fishing in the protected area. Fishers agreed with this.

McConney concluded the meeting by informing the group about the draft of the FMP in January and that there were certain recommendations that may require further meetings.

List of fisher participants

Keith Jackson	George Nelson	Stanford Guthrie	Edward Jackson
Elie Clarke	Lenrick Atkins	Lloyd Nelson	Daniel Scarlet
Lenard Stewart	William Spencer	Donald Karr	Uriah Brissett
Lumel Holeness	Graham Swell	F. Williams	Lebert Mott
Horace Crooks	Chester Smister	Dennis Crooks	

Appendix 10: Fisheries Enforcement Meeting to address Dynamite Fishing.

The meeting was held at Russia-Savanna-La-Mar on August 30, 2005 and began at 3:00pm. Among those present were Constable Clive Smith, Inspector Cyric Brisett (Savanna-La-Mar Police), Corporal Neville Powell, Constable Charles Campbell (Negril Marine Police), Mr. Gary Isaacs-Senior Fisheries Instructors, Mr. Junior Johnson-Senior Fisheries Instructors, (MOA, Fisheries Division), Mr. Carl Hanson (NCRPS Project Manager) and Ms. Elsa Hemmings (NCRPS Administrative/Data Manager), Ms. Deanne Grant-Education Officer (US Peace Corps Volunteer), Mr. Linval Getten (Chief Marine Park Ranger), Mr. Ansurd Carey and Mr. Vernon Summerville (Marine Park Rangers) and Mr. Martin Hughes (CREP Community Liaison Officer).

The main purpose of the meeting was to discuss the problem of dynamite fishing that is very prevalent in the Savanna-La-Mar area, causing severe damage to fisheries, their habitats and also affecting the local people within the area. Further, to work with the community in developing a strategy to curb the problem of dynamite fishing, which is an illegal practice.

The meeting commenced with an opening prayer by Mr. Gary Issacs-Senior Fisheries Officer from the Fisheries Division-Ministry of Agriculture. Mr. Carl Hanson then extended welcome to everyone in attendance especially the fishers who took the time out to attend the meeting. He went on to introduce each member of the visiting team to the Fisher folks. In return, the Fishers welcome the visitors to their community. A brief overview of the Negril Coral Reef Preservation Society (NCRPS) was given, including the daily duties and importance of NCRPS in managing the Negril Marine Park. Mr. Hanson also emphasised the purpose of having the meeting (as stated above).

Mr. Gary Issacs then took the floor and lamented on the objective, aim and importance of the Fisheries Division. He stated that fisheries account for the highest number of persons employed in the agriculture sector. He then explained that the Fisheries Act that was passed in 1975 was outdated and as such, a new draft was being produced. He further added that the low fines and penalties for breaches committed under the old act is one of the main reasons for the difficulties experienced with regards to enforcement of the Fisheries Act. Mr. Issacs also stated that the new draft was being done through consultation with the Fisheries Division and all relevant stakeholders including fishers. This new draft will be largely concentrated on enforcement and sustainable fishing in an attempt to address the problems within the fishing industry. The concept of sustainable fishing was discussed and it was made aware that all actions by the Fisheries Division are geared towards viability and sustainability of the Industry.

As stated (Gary Isaacs), "In the new draft no fine for breaches goes below JA\$500,000 and goes as high as JA\$2,000,000". Examples of new enforcement measures to be implemented in the new bill are:

- Dynamite or the use of any chemical to fish will attract a fine of up to JA\$ 2,000,000 or 12 months in prison.
- Illegal fishing practices will attract a fine of up to JA\$1,000,000.
- Fishing in a designated no fishing area can attract a fine of up to JA\$1,000,000 or 12 months in prison.

- Persons caught with juvenile fish will face a fine of up to JA\$ ½ million dollars.
- Restrictions on some fishing gear e.g. seine net.
- Gradual phasing out of 1 ¼ mesh size with 1 ½ size mesh the alternative.
- Predial larceny will attract a fine of up to JA\$ 1,000,000 or 12 months in prison.

In addition, the Fisheries Division will be appointing different entities as management organizations and establishing satellite offices of the Fisheries Division manned by Fisheries Officers to assist in enforcing the “new” Fisheries Act. Mr. Isaacs also said that they are currently looking at additional closed seasons for different species other than conch and lobster. There will be an Island-wide sensitisation programme to inform consumers and Fishers of the new Fisheries Act in addition to how to identify fish caught using dynamite from those caught otherwise etc. He further explained that fishes caught using dynamite is less sturdy; hence, much more flexible when bent, they also have bulged eyes in comparison to fish caught by other means.

Corporal Powell added that there was a relentless effort by the Marine Police to eliminate the illegal practice of dynamite. He further added that, “it seems that they (dynamite fishermen) are informed of when the police will be carrying out an operation, as the last operation conducted in the area was unsuccessful”. Corporal Powell appealed to the residents to assist the police in curbing this problem by giving them the necessary information. Inspector Brissett supported this appeal. Both Inspector Brissett and Corporal Powell publicly issued their contact telephone numbers to the resident/fishers.

Mr. Junior Johnson informed the Police Officers (those in attendance) of some of the laws governing Jamaica’s Fisheries. He highlighted that seine nets are not illegal; however it is the size of the net that matters. In addition he mentioned that if consumers can identify where they purchased fish caught using dynamite the fish vendor and or the fisherman can and should be arrested.

Fishers’ issues and concerns

As expressed by the Fisher, their day-to-day difficulties and concerns were as follows:

- The use of the “fine net” is a major problem as it catches out the small fish
- Some Fishermen continues to catch ‘breeding’ lobster
- Harvesting of coral reefs to be marketed in the resort towns of Negril and Ocho Rios.
- Continuous use of dynamite to catch fish, henceforth killing excess fish (not all the fishes killed are caught) and damaging reefs
- Government not doing enough to assist fishermen in terms of benefits and compensation. They argued that persons who are not fishermen gain from relief efforts and benefits while legitimate fishermen are left out e.g. after hurricane Ivan.
- Regular threats to life and property (boat, house etc) by dynamite fishermen if they inform on them.
- Predial thieves at sea, stealing other’s fish pots.
- Scarcity of fish i.e. not enough fish in the sea as before
- 1 ½ inches mesh size is too big and if implemented fishers and their families will suffer. (No fish will be caught)

- Sometimes the fish caught in traps also appear to be caught by dynamite due to the widespread explosive effect of the dynamite.
- Dynamite destroys the fish breeding ground, therefore they move further out to sea.

Other comments and suggestions made (Fishers/residents):

- Residents/fishers reluctant to give the police information because of fear for life and property.
- Some dynamite fishers use the dynamite in such a way that minimal damage is caused.
- The dynamite fishermen got dynamite from men who operate quarries.
- A meeting with the dynamite fishers should be arranged and an alternative fishing method given to encourage them to stop using dynamite e.g. give them mesh wires to make pots so that they change to pot/trap fishing.
- Dynamite fishers are well informed of when the police will be patrolling the area

Characteristics of dynamite fishing and fishers

- Qu.: (Corporal Powell) “What time of day the dynamite fishers fish”?
Ans.: (Fishers) “Anytime, but they are mostly seen between 5am-8am in the early morning”.
- Qu.:(Carl Hanson) “How many dynamite fishers are in the area”?
Ans.: (Fishers) “Quite a few, they sometimes use as much as five boats with as many as seven persons on each boat”.
- Qu.: (Corporal Powell) “Which area do these dynamite fishers mostly fish using dynamite”?
Ans.:
Qu.: (Carl Hanson) “Where are these Fishers (dynamite) from”?
Ans.: (Fishers/residents) “All around the area, but mostly between Savanna-la-mar and Whitehouse”.
- Qu: (Fisherwoman) “What size fish is classified as juvenile or baby fish”?
Ans.: (Gary Isaacs) “Fish size varies from species to species, henceforth there is not a general size to categorise juveniles from adults, moreover fishermen are well experienced and are capable of determining adults from juveniles of the different kind of fish”.

Meeting adjourned at 4:36pm

List of participants

Mr. Ephraim Ricketts	Mr. Enel Roy Blake
Mr. Donovan Reid	Mr. Eldemire Barrett
Mr. Dufton Delisser	Mr. Mario Reid
Mr. Winston Grey	Mr. Clifford Smith
Mr. Dudley Gipul	Mr. Fitzroy Jaekis
Ms. Jefta Lyons	Mr. Aron Wallace
Mr. Clive Headley	Mr. Randall Bahadure
Mr. Simon Brown	Mr. Tony Hines
Mr. Dennis Hill	Mr. Merrick Foster
Mr. Christopher Matts	Mr. Eric Grant
Mr. Ruben Foster	Mr. Peter Murdock
Mr. Patrick Johnson	