

Management Planning Process (2014-2015)

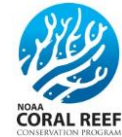
- ▶ Independent Review of existing 2007 SIOBMPA Management Plan (Oct 2014)
- ▶ Review and Prioritization of 2007 Plan Strategies, Development of Conservation Targets and Threats (Oct 2014)
- ▶ Validation of progress (April 2015)
- ▶ Drafting of document and optimization of format/design of plan to facilitate implementation (May–Aug 2015)
- ▶ Draft of Management Plan for review (projected Sept 2015)



Independent Review of 2007 Management Plan

Raised attention to:

- ? Legal basis of SIOBMPA
- ? Ratification/formal adoption of plan
- ? Management structure
- ? Rules and regulations
- ? Goals–objectives–actions disjointed, some redundant and many unclear
- ? Feasibility of implementation of actions?
- ? Lack of stakeholder analysis



Review of Legal Basis

- ▶ The MPA regulations define a **Marine Protected Area (MPA)** as “an area declared as such by the Minister by order under [the Fisheries] Act” (ELI, 2015)
- ▶ SIOBMPA established through Cabinet Conclusion



Legal Frameworks for MPA Enforcement in the Caribbean: Challenges and Opportunities
February 2015



Review of 2007 Mgmt Plan, Conservation Targets, Threats
Hillsborough, October, 2014



SocMon workshop.
GCFI Barbados, November 2014

Review of updates to 2007 Mgmt Plan,
Hillsborough, April, 2015



Photos: E. Doyle

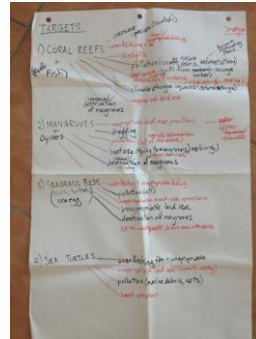




Inspection of Lauriston and Oyster Bed mangroves, April 2015

Photos: E. Doyle

Key Resources (Conservation Targets)



Key Resources
Coral reef communities
Mangroves
Seagrass beds
Sea turtles
Sandy beaches
Offshore islands
Livelihood security

Added in Oct 2014 review

Resources and Threats Added in April 2015 review

Target	Threat
Coral reef communities (includes reef fish)	Overfishing Invasive species Pollution, especially land-based sources Dredging Inappropriate boat use Climate Change
Mangrove forests (includes oysters)	Removal/destruction Inappropriate land use Dredging Pollution Inappropriate boat use (abandonment, tying up) Anticipated higher levels of future use of Tyvel Bay
Seagrass beds (includes conch, sea eggs, sea turtles)	Overfishing Pollution Boat operations Inappropriate land use



Resources and Threats (cont.)

Target	Threat
Sea Turtles	Overfishing/illegal fishing Pollution, especially land-based sources Boat operations (turtle strikes) Inappropriate land use (impacts on nesting)
Sandy beaches	Sand mining Vegetation removal (clearing) Inappropriate land use/infrastructure Pollution
Offshore islands	Clearing vegetation Climate change Over-visitation
Livelihood security (water taxi, cruise ship tender, cruise ship excursion, paradise beach, seine fishing, staff/jobs, tourism, food services, seafood fest)	Vandalism (eg. cutting of moorings) Community perception (including Lack of transparency/fairness/equity)



Condition of Resources – 2014 AGRRA



Achievements from 2007 Plan

- ✓ Install awareness signage
 - ✓ Develop and implement park regulations (via MPA regulations)
 - ✓ Set up monitor (patrol) regime
 - ✓ Address Charter Companies on enforcement powers of rangers
 - ✓ Prevent tying up of boats in the mangroves during non-emergency times
 - ✓ Develop mooring buoy program within the Park, targeting sea grass beds, mangroves and coral reefs, with public consultation
- Identify baseline through survey and existing data and continue monitoring of overall health of reef

Actions **not** achieved from 2007 Plan, that remain **high priority**

- * Develop zoning plan for the Park that includes "no take" areas and other areas that permit non-destructive fishing practices, with public consultation
- * Maintain mooring buoys
- * Enforce Forestry Legislation on mangrove cutting (upon approval of legislation)
- * Create sensitization programs/develop and implement public awareness campaigns
- * Implement adaptive management techniques



Actions **not** achieved from 2007 Plan, that remain **high priority**

- * The park authorities to approve any development that will impact park area
- * Encourage implementation and enforcement of the present Land Use Plan
- * Promote environmentally sound development practices within the park and in Carriacou as a whole, guided by St. George's Declaration ie. voice in EIA process
- * Plant appropriate vegetation



Actions **not** achieved from 2007 Plan, that remain **high priority**

- * Removal of derelict vessels and other debris
- * Initiate policies, via establishment of Park Regulations, that prohibit the abandonment of boats within the Park
- * Initiate, working with the Port Authority and the Fisheries Department, the development of policies for removing abandoned boats, including enforcement issues
- * Encourage more effective Carriacou-wide solid waste collection



Actions **achieved** from 2007 plan, that remain a **priority**

- * Setup monitor (patrol) regime (high)
- * Identify baseline through survey and existing data and continue monitoring of overall health of reef (high)
- * Prevent tying up of boats in the mangroves during non-emergency times (medium)
- * Address Charter Companies on the issue (re. sewage disposal)
- * Install awareness signage



Actions **not** achieved from 2007 plan, that remain **lower priority**

- ▲ Promote sustainable harvesting practices
- ▲ Identify sensitive areas already impacted negatively (for re-vegetation)
- ▲ Establish a park monitoring protocol before operation of MPA (re. sewage disposal)
- ▲ Implement national legislation (re. sewage disposal)
- ▲ Encourage enforcement of existing laws against litter within the Park
- ▲ Provide/upgrade solid waste receptacles and frequency of collection within the Park
- ▲ Establish regulations for anchoring within mangrove areas in the Park during emergencies



Additional Recommended Actions

- * Patrol guidelines (high)
- * Rangers are granted authority to issue tickets re. sewage disposal (high)
- * Plant shade trees on Sandy Island (medium)



Photo: M. Phillips

2007 Management Plan Goals



1. Conserve the coastal and marine ecosystems through effective management for current and future generations.
2. Ensure that all stakeholders/communities are empowered and fully engaged in the management of the park.
3. Ensure that SIOBMPA is an integral part of a marine protected areas network in the Grenadines, the Caribbean and more broadly, the world.
4. Increase socio-economic benefits to the community of Carriacou and the wider Caribbean while preserving the cultural value of the SIOBMPA.
5. Increase awareness and knowledge about the resources of the SIOBMPA.

Draft Updated 2015 Management Goals

1. Conserve the coastal and marine resources of SIOBMPA for current and future generations (ie. **resource management**)
2. Increase awareness and knowledge about SIOBMPA and engage stakeholders/communities in the sustainable use, development and management of coastal and marine resources (ie. **governance**)
3. Provide opportunities for socio-economic benefits to the community of Carriacou and the wider Caribbean while preserving the cultural value of the SIOBMPA (ie. **livelihood security**)
4. Efficiently and effectively coordinate and administer the management of SIOBMPA (ie. **including financial sustainability**)
5. Ensure that SIOBMPA is an integral part of a marine protected areas network in the Grenadines, the Caribbean and more broadly



Focus Areas of 2015 Management Plan

1. Resource Protection
 - Coral Reefs, Mangroves, Seagrasses, Sea Turtles, Sandy Beaches, Offshore Islands, Livelihoods
2. Governance
3. Livelihoods
4. Administration/Financing
5. Networking
 - Monitoring framework from Grenadines Network of MPAs
 - SOPs for Mooring Maintenance
 - SOPs for Enforcement Officers
 - Summary MPA regulations Grenada

Focus 1 – Resource Protection – Coral reefs

Threat	Management Goals/Outcomes	Activities – Next 1-5 years
Overfishing/illegal fishing	Prevent illegal fishing in SIOBMPA	Work with Fisheries Extension Officer to raise awareness of rules and regulations for fishing (eg. strategically located signage, radio interviews and spots, printed media announcements and articles, brochures, visits to schools and stakeholders) Strategic marine and land-based surveillance and shore-based interception by wardens/ police Introduce 24-hour SIOBMPA duty phone for community reporting of illegal activities in SIOBMPA and standard operating procedures for handling calls
Habitat damage by seine nets	Reduce physical damage to coral reefs	First step – face-to-face talk with fishers about seine fishing areas and issues (work towards developing zoning plan)
Invasive species	Encourage removal and commercialisation of lionfish from SIOBMPA	Work with partners to organise programmes for lionfish removal and commercialisation
Pollution, especially land-based sources	(not high priority)	If partner wishes to work on this then encourage study
Dredging	Implement mitigation initiatives for marina development	Encourage use of turbidity/silt screens around development

Focus 1 – Resource Protection – Coral reefs

Threat	Management Goals/Outcomes	Activities – Next 1-5 years
Inappropriate boat use	Encourage use of moorings	Wardens enforce mooring use
		Targeted communications about moorings
		Establish SOPs for mooring maintenance Ensure regular maintenance conducted (with learning exchange via SusGren and MPA Network)
Climate Change	Prevent groundings of vessels in SIOBMPA	Respond to the impacts of climate change on coral reefs
		Develop coral bleaching response plan
		Check coral reef watch alerts and work with partners to monitor for coral bleaching
		Outplant from coral nursery to strategic areas with increased surveillance

Focus 1 – Resource Protection – Mangroves

Threat	Management Goals/Outcomes	Activities – Next 1-5 years
Removal/destruction	Prevent further destruction of mangroves by incursion of development	Lauriston mangrove – involve police to remove/close down hideout next to grounded vessel * critical (Crown Lands person suggested by Barriteau) Develop zoning plan for Oyster Bed with buffer zone adjacent to inappropriate development Install awareness signage about SIOBMPA, mangroves and importance of mangroves adjacent to inappropriate development (Lauriston mangroves first) Enforce Forestry Legislation on mangrove cutting (upon approval of legislation)
Inappropriate land use	Promote environmentally sound development practices	Seek a voice for SIOBMPA in EIA and development approval processes Develop zoning plan for Oyster Bed with buffer zone adjacent to inappropriate development
Dredging	Implement mitigation initiatives for marina development	Targeted communications to encourage use of turbidity/silt screens around development
Pollution	Prevent dumping of rubbish in mangroves	Educate stakeholders about importance of mangroves and wetlands and no dumping in mangroves (eg. strategically located signage, radio interviews and spots, printed media announcements and articles, brochures, visits to schools and

Focus 1 – Resource Protection – Mangroves

Threat	Management Goals/Outcomes	Activities – Next 1-5 years
Inappropriate boat use	Prevent tying up of boats in the mangroves during non-emergency times Removal of derelict vessels and other debris	Wardens enforce and seek win-win partnership with marina operator to prevent use of Oyster Bed for tying up Seek grant funding for removal/ livelihoods opportunity in scrap metal?
Anticipated higher levels of future use of Tyrrel Bay	Encourage best environmental practices by operators and businesses adjacent to Oyster Bed Prevent negative human impacts by users of facilities and visitors	Targeted outreach program via face-to-face meetings * (dialogue critical) Targeted outreach program via communications efforts (eg. strategically located signage, radio interviews and spots, printed media announcements and articles, brochures, visits to schools and stakeholders)
		Work with marina operator to prevent tying up in Oyster Bed 'Baseline' assessment of Oyster Bed

Focus 1 – Resource Protection – Seagrass

Threat	Management Goals/Outcomes	Activities – Next 1-5 years
Overfishing	as for coral reefs	
Pollution	as for coral reefs	
Boat operations	as for coral reefs	
Inappropriate land use	as for coral reefs	
Inadequate drain maintenance	Encourage regular cleaning of litter from drains feeding into SIOBMPA	Encourage solid waste management authority to clean Hillsborough drains especially near end of dry season

Focus 1 – Resource Protection – Sea turtles

Threat	Management Goals/Outcomes	Activities – Next 1-5 years
Overfishing/illegal fishing	Prevent fishing for sea turtles in SIOBMPA	Work with Fisheries Extension Officer and KIDO to raise awareness of protected status of sea turtles and closed season (eg. strategically located signage, radio interviews and spots, printed media announcements and articles, brochures, visits to schools and stakeholders)
		Strategic marine and land-based surveillance and shore-based interception by wardens/ police
Pollution, especially land-based sources	Encourage regular cleaning of litter from drains feeding into SIOBMPA	Help organise clean-ups with local ministry, Fisheries, local fishers, schools and volunteers, especially near end of dry season
Boat operations (turtle strikes)	Enforce speed restrictions in SIOBMPA eg. 5 knot limit	Educate stakeholders about speed restrictions (eg. on mooring receipt, in targeted communications with fishers) Strategic law enforcement patrols by wardens with police and forestry ranger
	Keep Osprey outside SIOBMPA boundaries	Communicate with Osprey company about designated route around SIOBMPA (also public safety for divers)

Focus 1 – Resource Protection – Sandy beaches

Threat	Management Goals/Outcomes	Activities – Next 1-5 years
Sand mining	Prevent illegal sand mining in SIOBMPA (lower priority compared with overfishing, mangroves)	Educate local stakeholders about the importance of beach stabilization Enforce rules against illegal sand mining in SIOBMPA Engage police prosecutor and judiciary to support enforcement of SIOBMPA rules and regulations
Vegetation removal (clearing) refer to Lauriston mangrove squatters	Prevent illegal removal of vegetation in SIOBMPA	Educate local stakeholders about the importance of beach vegetation Enforce rules against illegal vegetation clearing in SIOBMPA Engage police prosecutor and judiciary to support enforcement of SIOBMPA rules and regulations
Inappropriate land use/infrastructure	Promote environmentally sound development practices Prevent installation of fixed infrastructure in SIOBMPA	Seek a voice for SIOBMPA in EIA and development approval processes Seek a voice for SIOBMPA in EIA and development approval processes
Climate Change	Respond effectively to the impacts of climate change on beaches	Baseline beach profiling (maybe through a project?)
Pollution	Encourage regular cleaning of litter from drains feeding into SIOBMPA	Help organise clean-ups with local ministry, Fisheries, local fishers, schools and volunteers, especially end of dry season

Focus 1 – Resource Protection – Offshore islands

Threat	Management Goals/Outcomes	Activities – Next 1-5 years
Clearing vegetation	as for sandy beaches	
Climate change	as for sandy beaches	
Over-visitation (not big issue)	Promote environmentally sound behaviour by visitors to islands	Develop targeted communications materials with visitor etiquette

Focus 1 – Livelihoods

Threat	Management Goals/Outcomes	Activities – Next 1-5 years
Vandalism, cutting of moorings	Seek to build community support for SIOBMPA Prevent acts of vandalism and illegal activities in SIOBMPA	Develop an outreach campaign to educate local fishers and youth about the importance of marine protected areas Strategic marine and land-based surveillance and shore-based interception by wardens/ police
Community perception (including Lack of transparency/fairness/equity)	Seek to build community support for SIOBMPA	Develop an outreach campaign to educate local fishers and youth about the importance of marine protected areas

Add from April 2015 review

- Junior Rangers
- Community researchers (with stipend)
- Revolving line of credit for fishers/sustainable livelihoods

Focus 2 – Governance

Management Goals/Outcomes	Activities – Next 1-5 years
Strengthen governance foundation for SIOBMPA	Clarify status of SIOBMPA as MPA/LAMA and management structure re. roles and responsibilities
Enhance stakeholder engagement according to opportunities for participation under Objective 1	Work with partners to organise programmes for lionfish removal and commercialisation Help organise clean-ups of drains emptying into SIOBMPA with local ministry, Fisheries, local fishers, schools and volunteers, especially near end of dry season Work with Fisheries Extension Officer to raise awareness of rules and regulations for fishing (eg. strategically located signage, radio interviews and spots, printed media announcements and articles, brochures, visits to schools and stakeholders) Involve SIOBMPA in projects and programmes including expert advice related to water quality monitoring and appropriate data collection, analysis and interpretation Work with Fisheries Extension Officer and KIDO to raise awareness of protected status of sea turtles and closed season (eg. strategically located signage, radio interviews and spots, printed media announcements and articles, brochures, visits to schools and stakeholders)
Build engagement and buy-in from stakeholders that have significant impact on SIOBMPA management success	Prepare updated list of SIOBMPA stakeholders with contact information Develop and implement public awareness campaigns as per Objective 1 and Junior Rangers

Focus 3 – Livelihoods

Threat	Management Goals/Outcomes	Activities – Next 1-5 years
Unsustainable and illegal resource use	On a continuous basis, promote alternative livelihoods options for local communities associated with SIOBMPA	Seek opportunities for funding to assist with development of alternative livelihoods options for local communities associated with SIOBMPA Establish a revolving line of credit for fishers and their families to help encourage the development of sustainable alternatives to fishing
	Encourage groups previously trained to apply their skills (eg. FAD fishing)	Help facilitate meetings for local stakeholders and potential partners/purchasers
	Incorporate community members (with stipend) into SIOBMPA activities eg. monitoring work	Determine funding for stipend? Grants? Ministry?

Focus 4 – Admin/financing

Management Goals/Outcomes	Activities – Next 1-5 years
Ensure law enforcement in support of SIOBMPA is strategic and continually responds to changing threats	Summarize enforcement records related to SIOBMPA into a joint quarterly SIOBMPA compliance report that includes indicators under Objective 1 Review and compare reports on warnings issued by enforcement partners and condition of natural resources and re-direct enforcement effort and communications according to need
Continually build capacity of SIOBMPA staff, Board and partners for MPA management	Fill key staff positions Pursue training opportunities for SIOBMPA staff, Board and stakeholder representatives as opportunities arise Pursue joint training for law enforcement partners as under objective 1 Involve SIOBMPA in partner and expert programmes that assist with achievement of management objectives
Each year, review achievement of targets and acceptable ranges for indicators for objectives 1-4 and update management activities as needed	Review and report on how many and which indicators are on or outside target Review and update prioritisation and resourcing of management activities according to results

Focus 5 – Networking

Management Goals/Outcomes	Activities – Next 1-5 years
Participate in the Grenadines Network of MPAs	Seek position for SIOBMPA representative on SusGren board Attend annual meeting Encourage staff involvement in activities and exchanges
	Subscribe to groups such as CaMPAM-L and GCFINet
Stay connected with regional MPA network	Ensure Carriacou Fisherfolk rep in touch with CNFFO
Stay connected with international MPA network	Subscribe to groups such as IUCN

Not updated in review of management plan and still needed:

1. Updated stakeholder analysis
2. Updated financial plan

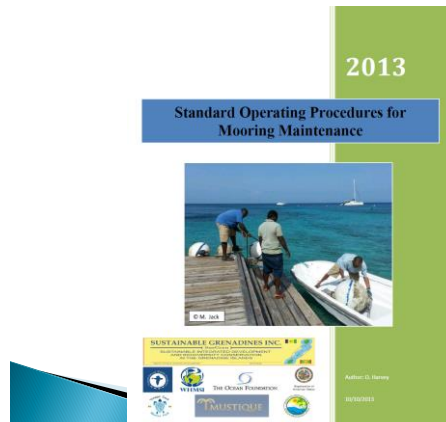
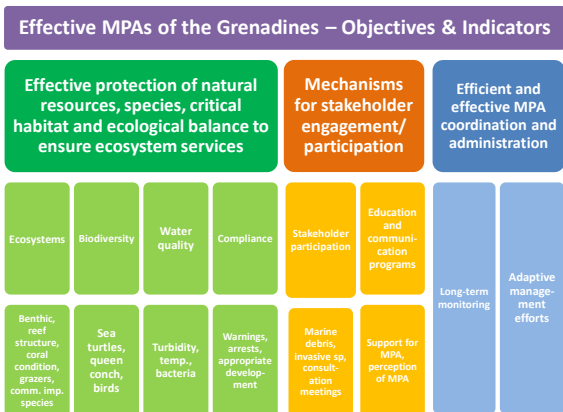
Note:

A key need for the new MPA manager is strong communications skills to lead outreach, education and build stakeholder relations in support of increased compliance



Photo: E. Doyle, removal of illegal fishing trap in SIOBMPA, April 2015

Existing support/materials that can be incorporated into SIOBMPA management



FISHERIES DIVISION



MINISTRY of AGRICULTURE, LANDS, FISHERIES and ENVIRONMENT

GRENADA MARINE PROTECTED AREAS RANGERS'

STANDARD OPERATION PROCEDURES MANUAL

MPA Rangers' Standard Operating Procedures Manual

Table of Contents

TABLE OF CONTENTS.....	2
ARTICLE I. EMPLOYEE EXPECTATIONS.....	6
ARTICLE II. OFFICER AND PUBLIC SAFETY PROCEDURES.....	15
ARTICLE III. VESSEL SAFETY GEAR.....	16
ARTICLE IV. VESSEL OPERATIONS PROCEDURES.....	16
ARTICLE V. PREVENTATIVE MAINTENANCE/CARE OF FISHERIES DIVISION EQUIPMENT/LOGS.....	17
ARTICLE VI. RESPONDING TO VIOLATIONS.....	18
ARTICLE VII. ARREST AND TRANSPORT PROCEDURES.....	19
ARTICLE VIII. JUVENILES IN POLICE CUSTODY.....	20
ARTICLE IX. USE OF FORCE.....	20
ARTICLE X. EXHIBITS, CHAIN OF CUSTODY.....	22
ARTICLE XI. REPORT WRITING AND CASE PACKAGE PREPARATION.....	23
ARTICLE XII. COURT APPEARANCE AND TESTIMONY.....	23
ARTICLE XIII. CHAIN OF COMMAND.....	25
ARTICLE XIV. DISCIPLINARY HEARINGS.....	25
ARTICLE XV. UNIFORMS, PERSONAL APPEARANCE AND DRESS CODE.....	26

Next Steps

1. Revision of text in management plan and optimization of format
2. Prepare supporting materials
3. Circulate for comments and revise accordingly
4. Present for approval



Photos: M. Morton/Durrell Wildlife Conservation Trust

Thank You

Please refer any questions to:

Emma Doyle
 Project Manager – MPA Support
 Gulf and Caribbean Fisheries Institute
emma.doyle@gcfi.org

Anne Marie Hoffman
 Coastal Conservation Project Manager
 The Nature Conservancy
ahoffman@tnc.org