

# APPENDICES

- A Summary Results of the St. Kitts Nevis National Marine Zoning Workshop: October 5th & 6th, 2009.....41**
- B Key to the Benthic Habitats of St. Kitts and Nevis .....87**
- C St. Kitts and Nevis Habitat Metadata Compilation .....93**
- D St. Kitts and Nevis Fisheries Uses and Values Project ..... 118**
- E Marxan with Zones Analysis ..... 152**
- F Building a Legal Framework for Marine Zoning in the Federation of St. Kitts and Nevis, Notes for Policymakers..... 242**

# APPENDIX A

**Summary Results of the St. Kitts Nevis National Marine Zoning Workshop:  
October 5th & 6th, 2009**



---

# Summary Results of the St Kitts-Nevis National Marine Zoning Workshop: October 5th & 6th, 2009

---

Visioning a National  
Marine Zoning Plan to  
balance multiple uses for a  
sustainable future

---



Report prepared by  
Shawn W. Margles,  
The Nature Conservancy

---



## **Acknowledgments**

*This report was made possible by the generous support of the American people through the United States Agency for International Development (USAID) under the terms of its Cooperative Agreement Number 538-A-00-09-00100-00 (BIODIVERSITY THREAT ABATEMENT Program implemented by prime recipient The Nature Conservancy and its partners. The Nature Conservancy would like to thank the staff of the Ministry of Physical Planning and Environment, St. Kitts, the Ministry of Communications, Works, Public Utilities, Posts, Physical Planning, Natural Resources and Environment, Nevis, the Ministry of Maritime Affairs, and the Ministries of Fisheries of St Kitts and Nevis . The contents and opinions expressed herein are the responsibility of the BIODIVERSITY THREAT ABATEMENT PROGRAM and do not necessarily reflect the views of USAID.*

## Contents

Executive Summary.....	4
Part 1 Background.....	6
Part 2 Details on the Biodiversity Threat Abatement Program .....	7
Part 3 Summary of the Two-day Project Kick-Off Workshop .....	8
Part 4 Four Components of a Successful Marine Spatial Zoning Plan .....	11
Part 5 Summary of St. Kitts-Nevis Marine Use Goals.....	13
Part 6 Conclusions and Recommendations .....	16
Appendix A: Agenda Kick-off Workshop .....	17
Appendix B: Kick-off Workshop Attendees.....	19
Appendix C: Visioning Exercise Photos and Results.....	20
Appendix D: Goals, Barriers, & Strategies for Success (with priority voting) .....	32

## Executive Summary

Both extractive (e.g. fishing) and non-extractive (e.g. tourism) activities are placing increased and often conflicting demands on the marine waters of St. Kitts and Nevis. Future outlooks show that many of these activities and uses are likely to accelerate in the next few decades. The increasing demand on marine resources along with increasing threats, including climate change, necessitates effective management if these uses are to remain viable in the future. The Federation of St Kitts-Nevis has been chosen as the pilot site for the development of a multiple use marine zoning plan that will address these challenges and create a sustainable foundation for managing multiple marine uses. The outcomes of this project will serve as a model for the Caribbean and small island nations.

On October 5 & 6, 2009 The Nature Conservancy (The Conservancy) along with partner agencies held a “kick-off” stakeholder forum for this pilot project, funded by USAID. The forum brought together representatives of non-government organizations (NGOs), government agencies, and user groups and guided them through a process of mapping a future vision for the federal waters. The results of the forum are summarized in this report.

Approximately 115 ideas for the future management of the marine environment were generated. The ideas generally fell into four major components:

- **Policy & Regulations**
- **Enforcement**
- **Education**
- **Uses**

Six overall *Use* themes emerged and 20 goals pertaining to these *Uses* were identified, with an umbrella theme of Policy, regulation, and enforcement. The identified use themes were:

- **Recreation**
- **Tourism**
- **Fishing**
- **Development & Planning**
- **Conservation, and**
- **Transportation**

These uses will form the basis for the comprehensive National Multiuse Marine Zoning Plan. For these *Uses* the participants identified goals and potential strategies to achieve goals and overcome barriers. The goals identified can be found in Part 3 of this report.

The Kick-Off workshop provided a basis for moving forward with the Biodiversity Threat Abatement Program and identified a number of important next steps including:

- The need for the formation of a steering committee to guide the development of the multiple use zoning plan;
- A government briefing on the program and multiple use zoning for endorsement by Cabinet;
- Gaps in data and resulting necessary data collection efforts (e.g. spatial distribution of fisheries and federation wide benthic habitat maps);
- Outreach and education for communities on multiple use marine zoning;
- Integration of the project with other efforts including Protected Area Systems Planning and Coastal Zone Management; and
- The need for in-country coordination of the program

The Conservancy will utilize the information provided by the participants in development of a multiple use marine zoning plan for St Kitts-Nevis.

## Part 1

### Background

#### **Why Marine Planning & Zoning?**

Marine planning is a place-based holistic management strategy that aims to facilitate sustainable development and use for all activities occurring in a defined marine and coastal area. Both extractive and non-extractive activities are placing increased and often conflicting demands on the Eastern Caribbean's coastal and marine waters. Future outlooks show that many of these activities and uses are likely to accelerate in the next few decades. As a result, important coastal areas are under intense pressure, threatening the biological diversity of the region's beaches, coral reefs, wetlands, mangroves and seagrass beds and the environmental services they provide (e.g. coastal protection, food security, tourism amenities, biodiversity protection, climate change adaptation).

Marine zoning has recently emerged as one of the tools that will help us better address multiple activities taking place in the ocean (e.g. tourism, ports, fisheries, and biodiversity). The outcome of a marine planning process is a comprehensive marine zoning plan that allocates use across space in an integrated fashion by including ecological, economic, and social considerations. Marine zoning is currently being applied worldwide and efforts span a range of spatial scales from large, integrated sea-use management projects (ex. China Sea, Australia's Great Barrier Reef) to smaller-scale examples that essentially apply zoning to networks of marine-protected areas (ex. Soufriere Marine Management Area, St. Lucia, Wakatobi Archipelago in Indonesia). Examples of marine zoning for small island states are unfortunately few and far between and generally have been poorly documented. The marine planning and zoning pilot project for St. Kitts & Nevis could provide a model for the Caribbean and around the world.

St Kitts-Nevis was chosen as the site of this pilot project because of expressed priorities within the country along with the federation's commitment to the Convention on Biological Diversity and other international treaties to which it is signatory. This project supports the St. Kitts-Nevis National Biodiversity Strategic Action Plan and integrates with the Protected Areas Systems Planning process currently underway.



## Part 2

### Details on the Biodiversity Threat Abatement Program

In April 2009, USAID entered into a cooperative agreement with The Nature Conservancy (The Conservancy) to fund a program titled Biodiversity Threat Abatement in the Eastern Caribbean. A significant part of this project is to develop a general framework and tools that will facilitate the implementation of multiple use marine zoning in the federal waters of St. Kitts-Nevis. The project also includes a component for policy, legal and regulations, and one for marine biodiversity education and outreach that will support the zoning effort. The project is being conducted in partnership with the government agencies of St. Kitts-Nevis including: Physical Planning and Environment, Fisheries and Marine Resources, Tourism, Maritime Affairs, and Finance.

The project duration is from April 15, 2009 to September 30, 2010 and includes funding for data collection, stakeholder outreach, data analysis, capacity building, and imagery and GIS data as needed. In order to reduce the impact on already over-committed staff resources the project has contracted an in-country project coordinator. There are additional funds for the policy and education components.

This project will provide St. Kitts-Nevis with a solid basis for marine zoning and planning including detailed marine biodiversity data, maps, and surveys as well as data on other marine uses (e.g. fisheries, tourism); it will also provide significant capacity building for key in country staff. Specific activities will include:

- **Evaluate enabling conditions for island wide marine zoning and assess data availability**
- **Develop data sets and incorporate into proposed draft zoning plan**
- **Build a decision support framework for the implementation of an island wide marine zoning plan**

## Part 3

### Summary of the Two-day Project Kick-Off Workshop

#### **Day One: Creating a Vision**

In order to achieve multiple use objectives for the federation's waters, representatives from St Kitts and Nevis created a vision that was shared by a variety of constituency groups and stakeholders. The process of creating a vision for multiple uses of the federation's waters under the USAID funded project began on October 5 & 6, 2009 with a "kick-off" stakeholder forum. The agenda for this meeting can be found in Appendix A. A complete participant list can be found in Appendix B. This forum brought together representatives of non-government organizations (NGOs), government agencies, and user groups and guided them through a process of mapping a future for the federal waters. The keystone activity of this forum was the creation of a vision map, which addressed the question, "What do you love about your ocean? What are the changes you would like? What changes do you not want? And how do you picture the uses of the ocean in the future"? Participants generated a wealth of ideas, and a vision for the future of the federation's waters emerged.

This visioning process will serve as the foundation for the USAID funded Marine Zoning Project, and this forum was just the beginning of the work necessary to translate the overall ideas and goals of the federal vision into a specific draft zoning plan. A complete list of vision statements (ideas) can be found in Appendix C. Based on priorities set by the participants, a few of the major (highest priority) ideas from the Vision include:

- Marine protected areas
- Anchoring and mooring areas for commercial and recreational usage
- Marine areas set aside to replenish fish stocks
- Public facilities on beaches
- Green practices used by hotels and restaurants adopted
- Education for tourists on "proper behavior" underwater
- Better enforced regulations
- Protection of marine mammals
- Setbacks from sandy beaches
- Vibrant sports fishing industry
- Turtles for tourism not food
- Fish traps with biodegradable doors
- Alternative livelihoods to fishing available
- Mangroves protected and restored
- Better motor vehicle connectivity between St Kitts and Nevis
- Designated swimming areas

Approximately 115 ideas were generated. The ideas generally fell into four major components:

- **Policy & Regulations**
- **Enforcement**
- **Education**
- **Uses**

These four major components play a vital role in achieving a comprehensive and effective multiple use marine zoning plan.

After the completion of day one activities The Conservancy's staff analyzed the participants' vision statements and identified approximately 56 ideas relating primarily to the component of marine uses (Appendix C). These 56 ideas were further consolidated. Seven overall marine and coastal use themes emerged and 20 goals pertaining to *Uses* were identified. The identified use themes were:

- **Recreation**
- **Tourism**
- **Fishing**
- **Development & Planning**
- **Conservation**
- **Transportation**

In addition, a cross-cutting theme of Policy, regulations, and enforcement was identified.

Some vision statements could be addressed by several of the themes. These cases are indicated in the table in Appendix C. Further cross over between vision statements and multiple themes are likely possible.

### **Day Two: Multiple Marine Uses for St Kitts-Nevis and Barriers to Achieving Marine and Coastal Use Goals with Strategies to Overcome Barriers**

The second day of the two day workshop focused on identifying existing barriers that were in the way of achieving each of the Use goals. To begin the day participants were given a presentation on the Use goals that had emerged from the synthesis of vision statements, which had been prepared the night before by Conservancy staff. Workshop participants then split into groups that aligned with each of the 6 themes (listed above) to first verify the goals and then identify existing barriers to achieving the articulated goals. The Recreation and Tourism themes were combined to form a single group because of the close alignment of goals (see Part 5) and overlap in participant interests. TNC staff facilitated each group in making any necessary adjustments to the articulated goals and in developing strategies and approaches most likely able to address the identified barriers. The final recommendations can be found in Appendix D.

After completing the small group exercise, worksheets were posted in the main workshop hall. Each working group selected a spokesperson to present the barriers they had identified and their strategies to overcome them. Participants were then given time to view the worksheets and indicate their preferred strategies and identify the barriers they felt were most significant. The results of voting are indicated in Appendix D.

## Part 4

### Four Components of a Successful Marine Spatial Zoning Plan

The four major components identified at the Project Kick-off Meeting will all play a vital role in achieving a comprehensive and effective multiple use marine zoning plan for St. Kitts-Nevis. All of these components must work in concert to achieve the overarching goals of a marine zoning plan. These four components were discussed at the October 2009 Kick-off meeting. Goals, objectives, and long terms strategies for each major component should be further developed in order to support a zoning plan. This project will address these issues for the development of a multiple use marine zoning plan and set the foundation for regulation and education. At the kick-off meeting goals and long terms strategies were identified for the themes in the *Use* component and will be summarized in the next section.

**Policy & Regulations** – Harmonized policies and regulations are a vital component needed to support a marine zoning plan. Policies and legislation must be comparable to recognize and address key management issues. Establishment of long-term funding mechanisms to support managed areas and enforcement of regulations are also essential. Policies must be established to meet the overarching objectives inherent to a multiple use zoning plan. Supporting regulations must exist to enact those policies. At the kick-off workshop participants indicated that St. Kitts-Nevis already has a number of appropriate regulations in place that would support a multiple use zoning plan. The greatest challenges expressed largely involved ineffective enforcement.

**Enforcement** – Enforcement of supporting regulations is essential to the success of a marine zoning plan. Without effective mechanisms in place for enforcement a zoning plan will in essence remain a paper plan. Enforcement responsibilities must be clearly defined and delegated to appropriate agencies. These agencies must also be given an appropriate level of support and resources to achieve enforcement.

**Education** – Public misperception of marine spatial zoning can be a major obstacle for a successful zoning plan. Stakeholders may skeptically view rules and regulations that limit historical uses of marine resources. Not only must stakeholders understand the intent of a zoning plan but government officials and policy makers must understand the economic benefit of a comprehensive multiple use marine zoning approach to managing marine resources. Broad education is therefore needed both within the community and within the government at a local and national level.

**Uses** - A marine zoning plan seeks to incorporate multiple uses in a spatial layout in order to achieve multiple objectives. Both extractive and non-extractive activities are placing increased and often conflicting demands on coastal and marine waters. Recognizing what uses are currently taking place and what uses may occur in the future can help users identify and

anticipate conflicts so that they may be mitigated or avoided. The October Kick-off meeting identified six major areas of uses. Participants articulated specific goals for each of these sectors along with potential barriers and long term solutions.

## Part 5

### Summary of St. Kitts-Nevis Marine Use Goals

Six main marine uses were identified at the Project Kick-off Meeting in October 2009. They were recreation, tourism, fishing, development and planning, conservation, and transportation. These uses will form the basis for the comprehensive National Marine Zoning Plan. At the Kick-off meeting information regarding the goals and potential strategies to overcome barriers and achieve goals was collected. Below the goals for each category of uses has been summarized. Specific information on strategies to overcome barriers to goals with priority voting is located in Appendix D. Additional information pertaining to the spatial distribution and compatibility between uses must be collected and integrated into a final layout for review by stakeholders.

**Recreation** – Having ample opportunities for local recreation is culturally important. It allows residents to stay connected to long standing traditions as well as provides opportunities to build social capital and maintain community health and wellbeing. St Kitts and Nevis have many locations and activities that are long standing and significant to the way of life in these communities. Areas supporting these activities must be maintained and respected in a National Marine Zoning Plan.

#### Goals

- Recreational fishing opportunities (near-shore and game) with large and variable fish species
- Ample facilities for recreational boating (beach and pier access, moorings)
- Clean water, healthy reefs, and clean beaches for swimming, snorkeling, sailing, diving, etc.

**Tourism** – Tourism is a vital part of the St Kitts-Nevis economy. Visitors come to the islands to take pleasure in the pristine beaches and surrounding waters and to enjoy an authentic Caribbean experience. Maintaining and improving the tourists' experience is important to present and future economies. A National Marine Zoning Plan must incorporate present tourism sectors and anticipate future ones in order to support an evolving and adaptable tourism industry.

#### Goals

- Appropriate/Adequate areas for swimming and other tourist activities (such as snorkeling, diving, wind surfing, jet skis, other water sport e.g. sailing)
- Key sites managed for marine tourism (turtle watching, top dive sites)
- Areas designated for future tourism infrastructure (hotels, golf, access roads)/areas where development is not allowed

**Fishing** – Commercial and artisanal fishing is extremely important in St. Kitts-Nevis. Fishing activities supports families, restaurants, local and export markets, and even tourism. In order

for Kitian and Nevtian fisheries to thrive, abundant species of ample size must be available. However, today species are dwindling and smaller and smaller catch size is all that is available. A balance between restocking and adequate opportunities to fish must be reached in order to achieve sustainable fisheries within federation waters.

#### **Goals**

- Unrestricted access to landing and mooring facilities for fishers
- Zoning to include closed areas, open access and other areas where selected gear or access restrictions apply
- Enhanced productivity and ongoing replenishment of target species

**Development & Planning** – Development is essential for a sustainable St. Kitts-Nevis economy. Although it is important to identify critical areas of cultural and environmental importance that should remain free of activities, development opportunities must be made available in order to adapt to future population and market needs. Areas best suited to development must be identified so that activities do not unnecessarily harm important resources that support other uses. Additionally, development best practices should be devised and/or employed in order to minimize impacts of development.

#### **Goals**

- Sufficient space for energy generation and transmission for local consumption and export
- Coastal engineering (including "hard" solutions - sea walls, beach replenishment; and "soft" solutions - mangrove restoration) to be well regulated
- Zoning to include sustainable development and no development

**Conservation** – Conservation is an important tool to insure that future generation in St. Kitts-Nevis can enjoy the same, or better, quality of life as those today do. Conservation supports and improves healthy fisheries, maintenance of sustainable levels of biodiversity, improved tourist experiences, and ample recreational opportunities. Unfettered uses without integrated conservation may threaten stable and long term usage of marine resources.

#### **Goals**

- Protection of key submerged marine resources (critical habitats, species, nursery, feeding, and reproduction areas)
- Culturally important marine areas protected
- Protect terrestrial resources critical for marine health (including watershed protection, 120ft setbacks on beaches)
- Restored critical habitat (mangrove, nursery areas)
- Protect key coastal resources (beaches, mangroves, salt ponds)



**Transportation** – Marine transportation is an important part of daily life in St. Kitts-Nevis. Marine transportation is necessary to connect the islands within the federation and to connect the federation to other countries. Identifying appropriate routes for marine transportation is important for safety and to ensure adequate traffic can be accommodated. Establishing transportation corridors can minimize accidents and improve the efficiency of inter and intra island transport.

**Goals**

- Distinct identification and demarcation of ferry and shipping lanes
- Marina development plan - locations where marinas may be developed in future (to include commercial/recreational/tourist)
- Distinct identification and demarcation of ferry and shipping lanes

## Part 6

### Conclusions and Recommendations

The Biodiversity Threat Abatement Program seeks to assist the government of St Kitts-Nevis to develop a National Multiple Use Marine Zoning Plan. The October 5<sup>th</sup> & 6<sup>th</sup> Kick-off Meeting Workshop was only the beginning of the work needed in order to realize this plan. The Kick-Off workshop provided a basis for moving forward with the Biodiversity Threat Abatement Program and identified a number of important next steps including:

- The need for the formation of a steering committee to guide the development of the multiple use zoning plan;
- A government briefing on the program and multiple use zoning for endorsement by Cabinet;
- Gaps in data and resulting necessary data collection efforts (e.g. spatial distribution of fisheries and federation wide benthic habitat maps);
- Outreach and education for communities on multiple use marine zoning;
- Integration of the project with other efforts including Protected Area Systems Planning and Coastal Zone Management; and
- The need for in-country coordination of the program

Overarching and reemerging themes consistently arose over the course of the two day workshop. Among the most mentioned topics was the need for education and outreach on the importance and timeliness of such an effort. Also, education on how a zoning approach to multiple marine uses could help alleviate current and future conflicts and improve situations so that goals could be more readily achieved. It was expressed that both communities and government officials must be educated on these issues. Concerns were raised about the ability of regulating agencies to enforce new rules and regulation with limited resources. The importance of enforcement and the provision of adequate resources to managing authorities was made clear.

Over the next several months The Nature Conservancy will work with in-country partners to help fill the data gaps and facilitate a planning process for a National Multiple Use Zoning Plan for St Kitts-Nevis.



**USAID**  
FROM THE AMERICAN PEOPLE



**National Marine Zoning Workshop**  
**Visioning a National Marine Zoning Plan to balance multiple uses for a sustainable future**  
**Monday 5<sup>th</sup> to Tuesday 6<sup>th</sup> October, 2009**  
**Ocean Terrace Inn**  
**AGENDA**

**Day 1**

**Meeting Objectives:**

- 1) Introduce marine zoning**
- 2) Present need for marine zoning in St. Kitts & Nevis**
- 3) Describe marine zoning in the context of the Caribbean & the world**
- 4) Introduce the USAID funded marine zoning project**
- 5) Envision St. Kitts & Nevis marine resource use 20-50 years from now**

9:00 AM		Mr. Randolph Edmead, Director of Physical Planning and Environment, St. Kitts & Ms. Ruth Blyther, The Nature Conservancy
	Welcome & Agenda Review	
	Introductions	All
	Past experiences with zoning; Federation objectives; Existing and potential use conflicts	Mr. Joe Simmonds, Dir. of Fisheries, St Kitts Mr. Lemuel Pemberton, Dir. of Fisheries, Nevis Mr. McClean Hobson, Dir. of Maritime Affairs
10:30-10:45 AM	Break	
	Introduction to Marine Zoning	Dr. Vera Agostini, The Nature Conservancy
	The Caribbean Picture	USAID
	St Kitts & Nevis Marine Zoning Project	Ms. Ruth Blyther, The Nature Conservancy
12:30 PM	Lunch	
	Visioning: 20 years from now...how do you envision your marine & coastal areas?	Group Activity Facilitated by Ms. Shawn Margles, The Nature Conservancy
2:45-3:00 PM	Break	
	Prioritizing marine components	Group Activity Facilitated by TNC
4:00 PM	Close	

## Day 2

### Meeting Objectives:

- 1) Reach consensus on marine zoning plan goals & objectives
- 2) Define barriers to achieving those goals & objectives
- 3) Identify potential solutions to identified barriers

---

9:00 AM	Agenda review
Re-cap of day 1	The Nature Conservancy
Discussion/Verification of marine area goals	Group Activity Facilitated by The Nature Conservancy
10:30 – 10:45 AM	Break
Activity: “Barriers, Strategies” What are the major barriers to marine area goals? What are potential strategies to address the barriers to the goals?	Group Activity Facilitated by The Nature Conservancy
12:30 PM	Lunch
Report outs from each group on “Barriers, Strategies”	Group Activity Facilitated by The Nature Conservancy
Prioritization of biggest challenges to zones	Group Activity Facilitated by The Nature Conservancy
Group discussion	Facilitated by The Nature Conservancy
2:45-3:00 PM	Break
Next steps	Eastern Caribbean Director, Mr. James Goggin, United States Agency for International Development (USAID) & Ms. Ruth Blyther, The Nature Conservancy
4:00 PM Close	Permanent Secretary Mr. Ernie Stapleton, Ministry of Communications, Works, Public Utilities, Posts, Physical Planning, Natural Resources and Environment

---



Appendix B: Kick-off Workshop Attendees

<b>Participants</b>		
<b>First Name</b>	<b>Last Name</b>	<b>Organization</b>
Sylvester	Belle	Physical Planning
Lester	Blackett	Nevis Disaster Management
John	Brake	Ross Vet School
Kelvin	Daly	Nevis Fisheries
Paul	Diamond	Nevis Historical & Conservation Society
Karen	Douglas	Sustainable Dev. St. Kitts
Titlon	Douglas	Physical Planning
Jay	Farier	St Kitts Physical Planning
Mackee	France	Four Seasons
John	Guilbert	Nevis Historical & Conservation Society
John	Hanley	Tourism - Nevis
Ellis	Hazel	Christophe Harbour
McClellan	Hobson	Maritime Affairs
Winston	Hobson	Fishermen Co-op Nevis
Janice	Hodge	CADENCO Inc
Cynthia	Hughes	Nevis Historical & Conservation Society
Rawlinson	Isaac	West Indies Power
Devon	Liburd	Tourism - Nevis
Everette	Mason	NASPA
Eduardo	Mattenet	St Kitts Physical Planning
Kerry	McDonald	West Indies Power
Kate	Orchard	St Kitts National Trust
Maria	Pena	Barbados. UWI
Kenneth	Samuels	Dive St Kitts
Joe	Simmond	St Kitts Fisheries
Rene	Walters	Nevis Physical Planning
Barbara	Whitman	Under the Sea
Patrick	Williams	Independent
Nigel	Williams	Coast Guard
Alastair	Yearwood	Oualie Hotel
<b>Observers</b>		
Michael	Taylor	USAID - Barbados
James	Goggin	USAID - Barbados
<b>Facilitators</b>		
Vera	Agostini	TNC Global Marine
Ruth	Blyther	TNC - Caribbean
John	Knowles	TNC - Caribbean
Shawn	Margles	TNC - Caribbean
Steve	Schill	TNC - Caribbean
Mark	Spalding	TNC Global Marine

Appendix C: Visioning Exercise Photos and Results



Figure 1 Photo of St. Kitts-Nevis Vision Map (photo credit: S. Margles)



Figure 2 Prioritization of Vision Map Components (photo credit: S. Schill)

Appendix C: Visioning Exercise Photos and Results

<b>Major Area</b>	<b>Major Component(s)</b>	<b>Vision Statement/Idea</b>	<b>Prioritization</b>
Recreation	Uses/ Policy & Regulations	Public access to all beaches by boat	2 high priority/8 low priority
Recreation	Uses	Recreation fishing	No votes
Recreation	Uses/ Policy & Regulations	Tie up to any pier	14 low priority
Recreation	Uses	Zoning for swimming	3 high priority
Recreation	Uses/Policy & Regulations	Control on disposal of fish waste	1 high priority
Recreation	Uses	Nevis to win a gold medal in sailing!	1 high priority
Recreation	Uses	Launching slips/ramps for small boats	No votes
Recreation	Uses	Establish mooring and anchorage areas for commercial and recreation	See Tourism
Tourism	Uses	Develop and support sports recreational fishing	3 high priority
Tourism	Policy & Regulations/ Education	Green practises from hotels and restaurants	8 high priority
Tourism	Uses/ Education	Turtles for tourism not food / moratorium on all harvesting	3 high priority
Tourism	Education	Classes for tourist divers and snorkelers. Responsible dive operators.	4 high priority/1 low priority

Appendix C: Visioning Exercise Photos and Results

Tourism	Policy & Regulation	Community based tourism	1 high priority
Tourism	Uses	Pump out stations for yachts	1 high priority
Tourism	Uses	Zoning for future hotel planning	1 high priority
Tourism	Uses/ Education	Responsible cruise industry (including waste disposal, no ballast dumping)	1 high priority
Tourism	Uses	Zoning for swimming (see also Recreation)	1 high priority
Tourism	Policy & Regulations	Invasive species	See Conservation
Fishing	Uses	Commercial fishing	1 high priority/1 low priority
Fishing	Education	Education of fishers	3 high priority
Fishing	Policy & regulation	Provision of alternative livelihood to get fishers out	4 high priority
Fishing	Uses	Diversify fishing (e.g. to pelagic)	1 high priority
Fishing	Education	Good relations between fishers and coastguard	1 high priority
Fishing	Uses	Aquaculture	2 high priority
Fishing	Uses/ Policy & Regulations	Mariculture leases with associated policy framework	See Policy/Regulation/Enforcement



Appendix C: Visioning Exercise Photos and Results

Fishing	Uses/ Education	Reduction of bycatch	3 high priority
Fishing	Uses/ Policy & Regulations	Restrictions on certain fishing methods – small mesh seines (when pulled on shore), gill-netting (high-bycatch – turtle, shark, sting-ray), dynamite, poison	3 high priority
Fishing	Uses/ Policy & Regulations	Allow traditional methods, but continue monitoring (e.g. mesh size)	1 low priority
Fishing	Policy & Regulations	Want a shark fishery	5 low priority
Fishing	Uses/ Policy & Regulations/ Enforcement	Spear fishing controls – outright ban, licensing, no scuba, spatial restrictions, ban for tourists	2 high priority/1 low priority
Fishing	Policy & Regulations	Fish-traps with biodegradable panels	4 high priority
Fishing	Enforcement	Enforcement of existing regulations including stiffer penalties	2 high priority
Fishing	Uses/ Policy & Regulations	Set aside areas to replenish fish stocks	8 high priority
Fishing	Education/ Policy & Regulations	Ciguatera awareness, control and response planning	No votes
Fishing	Uses	Multiple water-front locations to provide access to fishers	2 high priority
Fishing	Uses/ Policy & Regulations	No pots in shipping lanes	No votes

Appendix C: Visioning Exercise Photos and Results

Development/ planning	Uses	Reclamation of land lost by erosion sea wall and back filling	1 high priority/7 low priority
Development/ planning	Uses	Minimise sediment release and employ sediment trapping during development (e.g. around Great Salt Pond)	2 high priority
Development/ planning	Uses	Elimination of septic effluent	1 high priority
Development/ planning	Uses	Elimination of sand-mining and regulation of rock quarries. Shut down all quarries that fail to clean up	2 high priority
Development/ planning	Enforcement/ Policy & Regulation	Removal of construction waste from beaches	3 high priority
Development/ planning	Uses	Designated areas for energy development	3 low priority
Development/ planning	Uses	Zones for permitted hard engineering vs soft engineering	1 high priority
Development/ planning	Uses	Armouring – very strict monitoring/planning/engineering / not to block public access	1 high priority
Development/ planning	Uses	Government to acquire property on all beaches with provision of facilities (parking, conveniences...). Trash collection from beaches.	5 high priority
Conservation	Uses	Protection of marine habitats e.g. Narrows	1 high priority
Conservation	Uses/ Policy & Regulations	Marine protected areas	8 high priority

Appendix C: Visioning Exercise Photos and Results

Conservation	Uses	Keep beaches the way they are	No votes
Conservation	Uses/ Policy & Regulations	Protect areas for a limited time	3 low priority
Conservation	Uses	Christina (wreck) national park. Christina no-dive zone	2 high priority/2 low priority
Conservation	Uses/ Policy & Regulations	No building within 120ft of beaches coast (aesthetics, tourist, hazard reduction)	3 high priority/3 low priority
Conservation	Uses	Littoral forest restoration W coast Nevis	2 high priority
Conservation	Uses/Policy & Regulations/ Enforcement	Banishment of all vehicles from beaches (either regulation or enforcement)	1 high priority/1 low priority
Conservation	Uses	Allow seagrass to remain on beaches (don't over-rake) – habitat, food-chain, sand-binding.	3 low priority
Conservation	Policy & regulations	Ban on plastic bottles	4 low priority
Conservation	Uses	Research, management and preservation of culturally important sites and artefacts.	2 high priority
Conservation	Uses	Built nursery facilities for stock enhancement	2 low priority
Conservation	Uses	Habitat protection or restoration to act as nursery areas	1 high priority

Appendix C: Visioning Exercise Photos and Results

Conservation	Uses	Protection of seagrass beds in Narrows, Grass Bay, Ballast Bay (restore), Major's Bay	1 high priority
Conservation	Uses	Certain critical land areas set aside in perpetuity because their important role in the watershed	1 high priority
Conservation	Uses	Reclamation of land lost by erosion sea wall and back filling	See Development/ planning
Conservation	Uses	Map, identify and protect all wrecks	2 high priority
Conservation	Uses	Protect / restore do not ignore mangroves	3 high priority
Conservation	Policy & Regulations	Baseline information on marine habitats	1 high priority
Conservation	Education/ Policy & Regulations	Invasive species	No votes
Conservation	Uses	Birds – sea, coastal, ponds, migratory species – better protection	1 high priority
Conservation	Uses	International recognition – Ramsar, UNESCO Biosphere Reserve	1 high priority
Conservation	Policy & Regulations	Marine mammals – no harvest	4 high priority/1 low priority
Transportation	Uses	Commercial routes mapped out (shipping lanes)	1 high priority
Transportation	Uses	Zones for ferry routes	2 high priority

Appendix C: Visioning Exercise Photos and Results

Transportation	Policy & Regulations	Coastguard on Nevis	9 high priority
Transportation	Policy & Regulations	Search and Rescue in Nevis	2 high priority
Transportation	Uses	Land bridge between the islands	4 high priority/5 low priority
Transportation	Uses	No bridge between the islands	2 high priority/10 low priority
Transportation	Uses	No solid structure (causeway) between the islands	3 high priority/4 low priority
Transportation	Uses	Establish mooring and anchorage areas for commercial and recreation	4 high priority
Transportation	Uses	Aids to navigation throughout water (e.g. light on Cowes, Booby Island)	3 high priority
Transportation	Uses	Dumping of ballast banned in regional waters – enforcement	See Tourism
Transportation	Uses	No pots in shipping lanes	No votes
Transportation	Uses	Commercial marina	1 high priority/1 low priority
Transportation	Policy & Regulation	Green certification of building new boats and of existing boats	1 high priority

Appendix C: Visioning Exercise Photos and Results

Policy/ regulation/ enforcement	Enforcement	<p>Enforcement of existing regulations</p> <ul style="list-style-type: none"> <li>○ land-based activities that impinge on marine environment</li> <li>○ discharge into ocean</li> <li>○ safety regulations</li> </ul>	8 high priority
Policy/ regulation/ enforcement	Policy & Regulations	Judicial system in place and educated to support enforcement	No votes
Policy/ regulation/ enforcement	Education	Youth seeing the ocean as a source of recreation, and employment/careers	1 high priority
Policy/ regulation/ enforcement	Education	Sensitised politicians and rule of law	1 high priority
Policy/ regulation/ enforcement	Policy & Regulations/ Uses	Development of emergency and disaster plans	2 high priority
Policy/ regulation/ enforcement	Enforcement	Coastguard more active and more powerful more boats, more manpower	2 high priority
Policy/ regulation/ enforcement	Policy & Regulations	Establishment of maritime training centre	2 high priority

Appendix C: Visioning Exercise Photos and Results

Policy/ regulation/ enforcement	Policy & Regulations	Setting down of hydrographic service (keep updated and improve charts)	4 high priority/1 low priority
Policy/ regulation/ enforcement	Education	Sensitised people to holistic nature of island nations	No votes
Policy/ regulation/ enforcement	Education	Education – what goes in the sea stays in the sea	No votes
Policy/ regulation/ enforcement	Policy & Regulations	Policy framework for mariculture/aquaculture (leases)	1 low priority
Policy/ regulation/ enforcement	Education	Citizens have a sense of ownership and value	1 high priority
Policy/ regulation/ enforcement	Policy & Regulations/ Education	Community service component to education	No votes
Policy/ regulation/ enforcement	Education	Society becomes so environmentally aware that behaviour becomes less damaging	1 high priority
Policy/ regulation/ enforcement	Policy & Regulations/ Education	Successful fisheries exchange programme	1 high priority

Appendix C: Visioning Exercise Photos and Results

Policy/ regulation/ enforcement	Policy & Regulations/ Enforcement	Control of manmade discharge	1 high priority
Policy/ regulation/ enforcement	Enforcement/ Education	Self-enforcement	2 high priority
Policy/ regulation/ enforcement	Enforcement/ Education	Safe use of environment (reduced number of accidents)	No votes
Policy/ regulation/ enforcement	Policy & Regulations	New regulations	2 high priority
Policy/ regulation/ enforcement	Policy & Regulations	Strategies must tie into political systems and timescales	No votes
Policy/ regulation/ enforcement	Policy & Regulations	Set timeline for approval and completion of zoning plan	No votes
Policy/ regulation/ enforcement	Policy & Regulations	Climate change modelling particularly for SLR	No votes
Policy/ regulation/ enforcement	Policy & Regulations/ Education	Better use of science to inform decisions	1 high priority



Appendix C: Visioning Exercise Photos and Results

Policy/ regulation/ enforcement	Policy & Regulations/ Education	Better use of sociology and behavioural expertise to modify human behaviour	No votes
Policy/ regulation/ enforcement	Policy & Regulations	Ongoing scientific monitoring	2 high priority
Policy/ regulation/ enforcement	Policy & Regulations	Adaptive management	No votes

**Additional Overarching Ideas**

- No restriction at all of marine uses following successful recovery – 2 low priority
- Marine environment that provides for all –no votes
- Good fish available to feed families and pay bills –no votes (overarching Fishing idea)
- Healthy reefs, corals and large fish. 3 high priority (overarching Conservation & Recreation/Tourism idea)

Appendix D: Goals, Barriers, & Strategies for Success (with priority voting)

<b>Recreation</b>				
<b>Goals</b>	<b>Barriers</b>	<b>Votes</b>	<b>Strategies</b>	<b>Votes</b>
Recreational fishing opportunities (near-shore and game) with large and variable fish species	Overfishing		No fishing zone for stock replenishment, mangroves planting/restoration	
	Inappropriate fishing activities (gill net, gear)		Enforcement of appropriate regulation and appropriate placement of fishing activities	
	Damage to coral reef, sea grass (human activities - yachting)		Anchorage sites, moorings in place	
	No limit/regulation in fish size		Regulation for fish size	
	Natural disaster damaging habitat		Resiliency	
Ample facilities for recreational boating (beach and pier access, moorings)	Perception of public service that piers are evil (smuggling is why perception persists)	High priority = 1 vote Low priority = 1 vote	Education of department about piers, changing public sector attitude about pier	High priority = 2 votes
	Natural disasters	High priority = 2 votes	Effective disaster plan & construction	High priority = 2 votes

	Haul-out facilities	Low priority = 2 votes	Engineering design and location for longevity	
Clean water, healthy reefs, and clean beaches for swimming, snorkeling, sailing, and diving	Runoff from golf course, ag. Land, over grazing	High priority = 2 votes Low priority = 1 vote	Mitigation practices for construction and BMP --> and changing chemicals in golf course	
	Litter and dumping in water and on beach (perception of the sea taking waste away)	High priority = 4 votes	Trash collection and bin placement education	High priority = 2 votes
	Eutrophication (N, P) from hotel/big development/domestic waste	High priority = 1 vote	Regulations for large sized development sites have aerobic sewage plant	
	Not enough info/data on water quality	High priority = 2 votes	Water testing & adequate baseline established	High priority = 2 votes
	Inappropriate disposal of dead fish	High priority = 1 vote	Designate disposal techniques & areas	
	Fueling boats (drum, siphon)	High priority = 1 vote Low priority = 1 vote	Designated proper fueling areas and techniques	High priority = 3 votes
	Incompatible adjacent land use			

Appendix D: Goals, Barriers, & Strategies for Success (with priority voting)

<b>Tourism</b>				
<b>Goals</b>	<b>Barriers</b>	<b>Votes</b>	<b>Strategies</b>	<b>Votes</b>
Appropriate/Adequate areas for swimming + other tourist activities (snorkeling, diving, wind surfing, other water sport e.g. sailing)	Push back from operators if zones are isolated		Appropriate clustering of zones	High priority = 1 vote
	Additional costs to launch at isolated + distance zones			
	Noise pollutions	High priority = 4 votes		
	Inadequate enforcement and capacity		Having trained personnel and adequate equipment	High priority = 4 votes Low priority = 1 vote
	Designated areas for activities that lack the necessary conditions		Zoning matches the activity	
	Negative impacting adjacent activities - pollution (solid, silt)	Low priority = 1 vote		
	Untrained operator	High priority = 1 vote Low priority = 4 vote	Boat safety course and/or license	High priority = 3 votes
	Land-based operations that restrict water activities (airport and fly zone)			
Key sites managed for marine tourism (turtles, top dive sites)	Traditional uses (fishing)	High priority = 2 votes	Education, social studies, & incorporate traditional use as much as possible into zoning plan	High priority = 2 votes
	Conflict of interests			
	Ignorance			
	Emotional attachment (Cristina site)	Low priority = 1 vote		

Appendix D: Goals, Barriers, & Strategies for Success (with priority voting)

	Further distance between key sites and associated costs (fishers, water taxi, dive operators)			
	Runoff, blocked currents, light pollution, abandoned fishing gear	High priority = 2 votes	Clean habitat	
	Economic feasibility		Fees	High priority = 2 votes
	Destruction of turtle nests (dogs, mongroose, human consumption)	High priority = 3 votes	Patrol by turtle program, enforcement of law, eyes on the beach	High priority = 1 vote
Areas designated for future tourism infrastructure (hotels, golf, access roads)/areas where development is not allowed	Limited land space and limited suitability for development	High priority = 2 votes Low priority = 4 votes	Selected zoning to capture prioritization of development placement & type	High priority = 3 votes Low priority = 1 vote
	Attitudes of people for where not to develop		Education on development and conservation	High priority = 1 vote
	Short-term political goals	High priority = 3 votes	Clear legislation	High priority = 1 vote
			Broad education	
			Strong pressure group	
	Zoning effort of land values	Low priority = 2 votes	Other mechanisms to make land viable economically (easement, ecotourism)	
Pressure of waterfront by various groups (fishers, tourist, water sports)	High priority = 1 vote Low priority = 1 vote			

Appendix D: Goals, Barriers, & Strategies for Success (with priority voting)

<b>Fishing</b>				
<b>Goals</b>	<b>Barriers</b>	<b>Votes</b>	<b>Strategies</b>	<b>Votes</b>
Unrestricted access to landing and mooring facilities for fishers	Rapidly increasing coastal development	High priority = 3 votes	Regulate coastal development	High priority = 3 votes
	Inadequate # of landing facilities	High priority = 3 votes	Provide more landing facilities, government purchase	High priority = 3 votes
	Lack of sheltered areas	High priority = 2 votes	Construction of marinas for fishing vessels	High priority = 1 vote Low priority = 1 Vote
	Potential conflict between tourism and fishing RE use of/constraint of marinas	High priority = 3 votes	Marinas should include areas for fishers and tourism	
Zoning to include closed areas, open access and other areas where selected gear or access restrictions apply	Lack of enforcement of current regulations	High priority = 8 votes	Self enforcement by fishers, establish and fund marine police	High priority = 6 votes
	Lack of political will to enforce the law		Targeted education of the political directorate, est. non political bodies to regulate fishing	High priority = 4 votes
	Lack of fisher involvement/engagement at all levels	High priority = 9 votes	Engage fishers early in process. Fisher exchange program	High priority = 6 votes
	Conflicting interests between dive operators and fishermen	High priority = 1 vote Low priority = 1 Vote	Establish specific	
	Boats interfering with fishing operations	High priority = 2 votes	Areas for dive operations and boat traffic	High priority = 3 votes

Appendix D: Goals, Barriers, & Strategies for Success (with priority voting)

	Unwillingness of fishers to accept gear restrictions and closed areas	High priority = 6 votes	Establish incentives program. Outreach to fishers and consumers. Alternatives livelihoods.	High priority = 5 votes
Enhanced productivity and ongoing replenishment of target species	Use of inappropriate gear	High priority = 4 votes	Education/outreach for fishers, provide fishers with alt. gear/incentives; diversify target species/markets	High priority = 4 votes
	Sedimentation/pollution from land based activities	High priority = 4 votes	Regulate/enforce land based activities	High priority = 4 votes
	Lack of stock assessment/research	High priority = 4 votes	Fund Stock assessment research	High priority = 16 votes

Appendix D: Goals, Barriers, & Strategies for Success (with priority voting)

<b>Development &amp; Planning</b>				
<b>Goals</b>	<b>Barriers</b>	<b>Votes</b>	<b>Strategies</b>	<b>Votes</b>
Sufficient space for energy generation and transmission for local consumption and export	Location of cable for the transmission from Nevis to SK, need to avoid sensitive habitats	High priority = 2 votes	EIA	High priority = 2 votes
	Where do you bring cable on the land --> private lands		Proper studies	
	Unknown where or what kind of energy would be developed	High priority = 1 vote Low priority = 1 Vote		
	For geothermal - Location of fault lines --> Earthquake concerns. -->		Proper silting and studies	
Coastal engineering (including "hard" solutions - sea walls, beach replenishment; and "soft" solutions - mangrove restoration) to be well regulated	Size of islands --> not much room for soft project	High priority = 1 vote Low priority = 1 Vote	Adopt Nevis - Marine building code + coastal development plan	
	Expertise is not available			
	\$ - it is expensive			
	Climate change --> sea level rise	High priority = 1 vote	Funding from international conventions	High priority = 3 votes
	Disasters - Hurricanes storm surge --> swells -->	High priority = 2 votes	Good info - mapping - do not allow development in the high risk areas	
	People are just doing work to protect property --> w/no control		Gov't needs to acquire properties that are in direct threat - relocation from high threat areas	High priority = 1 vote



Appendix D: Goals, Barriers, & Strategies for Success (with priority voting)

	Need coherent and clear info on where hazards are: some info but need in a coherent plan for coastal development		Need to have a coastal hazards study + have coastal/national disaster mitigation project - 2001 DINE. Fill gaps from this project - need better contour maps + lidar coverage --> then can do proper models	
	EIA + Natural hazard impact assessments CDB website	High priority = 2 votes	Training via CDB -->	High priority = 1 vote
Zoning to include sustainable development and no development	Climate change - sea level rise		Proper modeling + information - look at long term plan for redevelopment involvement at international climate change talks	High priority = 2 votes
	Natural land form - no natural embayment		Require mitigations -- > in impact assessment -- EIAs required - Need strengthen law + training for rewards	High priority = 5 votes
	Coastline alteration will be needed	High priority = 1 vote		
	Conflicting use/livelihoods	High priority = 1 vote	Training for government staff - capacity building	High priority = 4 votes
	Marine zoning - or spatial planning			

Appendix D: Goals, Barriers, & Strategies for Success (with priority voting)

			External influence on parent company to mitigate - and prevent impacts --> work with developers	
Private SK lands no fully under government code --> S.E. Peninsula	High priority = 2 votes		Expand code - to include private lands	
Political will --> short-term vs. long-term, no continuity - 5-year horizon			Plans with specific timelines --> + adaptive --> revise each 5 years	
			SK + National landuse plan -	
\$ drive development -- jobs are priority			Job creation - in natural resource management, restoration	
Integration with land based activity not easy --> CZM needs to be done at same time	High priority = 1 vote		Adopt/approve the Nevis land use plan/ coastal plan + marine building code use draft to inform marine zoning process. Adopt protected area plan	High priority = 1 vote
Lack of data /information --> or not well consolidated or analyzed	High priority = 1 vote			
Cost implications of marine zoning plan/implementation	High priority = 1 vote			
Location of critical/sensitive habitats	High priority = 1 vote			

Appendix D: Goals, Barriers, & Strategies for Success (with priority voting)

	Lack of awareness (development plans) - about resource --> values - political/people - all		Education for public - Develop political education	High priority = 4 votes
			Target each sector of population Holistic -	

Appendix D: Goals, Barriers, & Strategies for Success (with priority voting)

<b>Conservation</b>				
<b>Goals</b>	<b>Barriers</b>	<b>Votes</b>	<b>Strategies</b>	<b>Votes</b>
Protection of key submerged marine resources (critical habitats, species, nursery, feeding, reproduction areas)	Lack of enforcements of existing law	High priority = 4 votes	Better enforcement	High priority = 3 votes
	Lack of legal framework (NCEPA)		Integrated planning	High priority = 6 votes
	Lack of co-ordination between agencies	High priority = 4 votes Low priority = 1 vote	Integrated planning	High priority = 6 votes
	Poor maps of natural resources	Low priority = 1 vote	Better Natural Res. Inventory	
			Remote Sensing	High priority = 1 vote Low priority = 1 Vote
			Field Survey/in water/fisheries stats/local knowledge	
	Distrust by fishers	Low priority = 1 vote	Education/dissemination	High priority = 3 votes
			Government intervention/involve	
			Learn from other fishers in other countries	
			Demonstration sites	
Self enforcement				
Lack of full engagement of stakeholders				
Funding				
Culturally important marine areas protected	Lack of knowledge	High priority = 4 votes	Better map + inventory	High priority = 1 vote
	Fishers want to use	Low priority = 1 vote	Compromise	Low priority = 1 vote
Protect terrestrial resources critical for marine health (including	Traditional uses on upland/steep slopes (charcoal, illegal clearance) over-grazing	High priority = 4 votes	Alternative uses/livelihoods	
			Enforcement	High priority = 1 vote

Appendix D: Goals, Barriers, & Strategies for Success (with priority voting)

watershed protection, 120ft setbacks on beaches)			New regulation	
	Insufficient or non-functional sewage treatment	High priority = 1 vote Low priority = 2 votes	Infrastructure planning	
	Competing demand for coastal (1km from shore) lands	High priority = 2 votes	Planning + zoning	High priority = 2 votes
Restored critical habitat (mangrove, nursery areas)	Seagrass - competing uses		Compromise	High priority = 1 vote Low priority = 2 votes
	Mangrove	High priority = 6 votes Low priority = 2 votes	Maximum/use/loss threshold Mitigation + offset	
Protect key coastal resources (beaches, mangroves, salt ponds)	Non-adherence to existing policy/regulation (Ministerial over-ride)	High priority = 3 votes	Increase transparency	High priority = 1 vote
	Piecemeal approach to planning + EIA - lack of holistic vision (St. Kitts)	High priority = 2 votes Low priority = 1 vote	Policy change, close loop-holes	High priority = 3 votes Low priority = 1 vote
			Tie-in environmental standards to international funding	
	Existing penalties insufficient	High priority = 7 votes Low priority = 1 vote		
	Pushback from big developers		Compromise	
			Maximum loss threshold	
Mitigation + offset				
Local resistance (jobs, \$\$\$)		Education		
		Community leaders (long-term vision, full natural resource accounting)	High priority = 1 vote	

Appendix D: Goals, Barriers, & Strategies for Success (with priority voting)

<b>Transportation</b>				
<b>Goals</b>	<b>Barriers</b>	<b>Votes</b>	<b>Strategies</b>	<b>Votes</b>
Distinct identification and demarcation of ferry and shipping lanes	Funding		Effective marketing	High priority = 3 votes
			Lobbying	
			User fee/tax	
	Education/planning	High priority = 2 votes	Outreach/ awareness	
			Workshop	Low priority = 1 vote
	Conflict with fishermen	High priority = 1 vote	Workshops to map areas	
Identification of appropriate areas		Mapping of sandy bottom/demarcation on charts	High priority = 1 vote	
Enforcement		Funding for ranger patrol - collect user fees	High priority = 1 vote	
Marina development plan - locations where marinas may be developed in future (to include commercial/recreational/tourist)	Funding	High priority = 3 votes	Effective marketing	
			Lobbying	
			Slip fees	
	Environmental concerns	High priority = 1 vote Low priority = 1 vote	Identify (through EIAs) optimal areas with minimum impact	High priority = 3 votes
			Enforcement	High priority = 3 votes
	Limited land space	High priority = 2 votes Low priority = 1 vote	Reclamation/creation	Low priority = 1 vote
			Good use/Efficient use of current land	
Governmental/politics	High priority = 1 vote Low priority = 1 vote	Effective lobbying		
		Citizen involvement community	High priority = 1 vote	

Appendix D: Goals, Barriers, & Strategies for Success (with priority voting)

			Education	
Distinct identification and demarcation of ferry and shipping lanes	Education		Outreach, communication program, town hall/workshop	High priority = 4 votes
	Consultation	High priority = 2 votes	Meetings with ferry operators and passenger/stake holders	High priority = 4 votes Low priority = 1 vote
	Conflict with fishermen	High priority = 2 votes	Effective communication - meetings with fishermen (final demarcation in charts)	High priority = 4 votes