



A Summary Report for the



**Knowledgebase for Lessons Learned  
Best Practices in Coral Reef Management**

***Applications for Review & Evaluation  
of the Grenadines MarsIS***

**St. Vincent & the Grenadines and Grenada Workshops**

**March 11 – 12, 2009**

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## **Table of Contents**

SUMMARY OF WORKSHOPS .....	3
REVIEW OF MARSIS RESEARCH ACTIVITIES & TIMEFRAME .....	4
GEF LESSONS LEARNED .....	6
REVIEW OF LESSON LEARNED IDENTIFIED AT WORKSHOPS .....	6
MARINE SPATIAL PLANNING SUMMARY .....	7
PLANNING FOR MARSIS IMPLEMENTATION .....	8
STAKEHODLER FEEDBACK SURVEY RESULTS .....	9
APPLYING LESSONS LEARNED TO MARSIS .....	9
ACKNOWLEDGEMENTS .....	10

## **RESEARCH RATIONALE**

Marine resources (including fishing and marine-based tourism) are of vital importance to the people of the Grenadine Islands. A greater understanding of the abundance and distribution of key marine resources, marine resource users and the patterns of use is critical to planning and the sustainable use of the coastal resources of the Grenadines. Effective coastal resource management must balance the sustainable use, resource protection and conservation within the communities' need for food security, livelihood and equitable use of resources. Therefore, multi-sectoral collaboration and strong community participation is required to successfully maximise management efforts.

As such, the Grenadines MarSIS research began in 2005 and has been developed to integrate social, economic, political, cultural and biophysical marine resource information in a single GIS framework to aid effective coastal resource management and sustainable livelihoods. By taking a collaborative research approach and including the social frame of reference and local ecological knowledge together with traditional scientific approaches, it is envisioned that important information gaps can be filled, potential problems can be identified and management priorities focused accordingly. Furthermore, involving a range of stakeholders in the information gathering and research processes allows for a participatory framework for co-management and equity in decision making by meaningfully including and considering all sectoral and community interests.

## **SUMMARY OF WORKSHOPS**

A series of two half-day workshops were held in the islands of St. Vincent and Grenada on March 11-12, 2009 respectively (Workshop agenda can be found in Appendix I). These workshops were hosted on behalf of the University of the West Indies, Cave Hill Campus together with the World Fish Centre in order to review the on-going PhD research - the Grenadines Marine Resource and Space Use Information System (MarSIS) using the Global Environment Facility (GEF) project's toolkit: "Knowledgebase for Lessons Learned and Best Practices in the Management of Coral Reefs". This was done in order to apply the GEF Lessons Learned to review, evaluate and better tailor the remaining MarSIS activities and its' anticipated end-products which can ultimately lead to more informed management of the country's marine resources.

Both workshops were well attended by a variety of marine-related government agencies and allowed for insight from a range of sectors related to the management of the marine environment to allow for adaptive learning in the research. Appendix II lists the participants of both workshops.

## **REVIEW OF MARSIS RESEARCH ACTIVITIES & TIMEFRAME**

First of all, workshop participants were given a series of presentations summarising the Grenadines MarSIS research and its' remaining activities. A short outline is listed below.

1. Background (2005)
  - a. Overview of Study Area
  - b. Review of Current Management
  - c. Initial Development of Research Problem/Question
2. Existing Secondary Data Collection/Compilation/Review (2005 – 2006)
  - a. Hard-Copy: Marine research, management plans, environmental legislation
  - b. GIS datasets: Global, Regional, National
  - c. Maps: Topographic and Nautical
  - d. Socio-economic & Census Information
  - e. Stakeholder information surveys
3. Review of GIS (2005 – 2006)
  - a. Information integration
  - b. Applications in Natural Resource Management
  - c. Applications in Marine Space Use /Planning
4. Review of Participatory Research Methodologies (2005 – 2006)
5. Data Scoping & Stakeholder Identification/Assessment Exercises (2006)
  - a. Formal Government Meetings
  - b. Key Informant Interviews & Information Exchange
  - c. Observation/Informal Conversations for each Island
6. Development of Research Question - Research Proposal (2006 – 2007)
  - a. Marine Resource User Inventory
  - b. Socio-Economic Profiles
  - c. Environmental Profiles
  - d. Space-use Profiles
    - i. Fishers
    - ii. Water-taxis
    - iii. Dive Shops
    - iv. Ships / Ferries
    - v. Yachts
    - vi. Day Tours
7. Geodatabase Structural Design & Compilation (2006 – 2009)
  - a. ArcGIS training
  - b. Database design/development
  - c. Compilation, review & evaluation of existing GIS datasets
  - d. Production of metadata
  - e. Standardisation of existing GIS data
  - f. Identify data gaps

**Summary Report for the 'Knowledgebase for Lessons Learned Best Practices in Coral Reef Management - Applications for Review & Evaluation of MarSIS' St. Vincent & the Grenadines and Grenada Workshops**

8. Development of Benthic Classification Schemes & Habitat Mapping (2007 – 2008)
  - a. Inventory/research existing habitat schemes
  - b. Develop MarSIS scientific classification scheme w/ key govt. decision-makers
    - i. Scientific Habitat Map Creation
  - c. Develop MRU Local Knowledge Habitat Maps (w/ fishers & divers)
    - i. Classification scheme development
      1. Learning Exercises
      2. Habitat Flashcards
    - ii. Mapping exercises of known areas
    - iii. Local Knowledge Mapping Exercises of critical areas (MAY 2009)
    - iv. Knowledge of Grenada Bank (deep waters)
9. Update, Review and Evaluate Geodatabase, Participatory Research & Implementation (Adaptive Learning)
  - a. Stakeholder workshops in St. Vincent & Grenada
    - i. Additional Data Collection
    - ii. Applications of MarSIS Geodatabase
    - iii. Planning for Sustainability of MarSIS (post-research)
10. Final Validation Exercises (RESEARCH CRUISE – AUGUST 2009)
  - a. Marine Habitat Map Development
    - i. Deep Water Grenada Bank Modelling - 1 km<sup>2</sup> Grid & Drop-Camera
    - ii. Shallow Habitats – Conventional ground-truthing via diving
  - b. Additional Local Knowledge & Space-use Patterns
  - c. Fill in Information Gaps (scientific & local knowledge)
  - d. Stakeholder Local Knowledge Validation Meetings (during cruise)
11. Finalise Geodatabase & GIS Analyses (SEPTEMBER - OCTOBER 2009)
  - a. Between Marine Resource Users
  - b. Scientific & Local Knowledge
  - c. Between Islands & Countries
  - d. Evaluation of existing MPAs/Conservation Areas
12. Evaluation of Research
  - a. Cost/Benefits of Information Integration
    - i. Interdisciplinary
    - ii. Multi-Knowledge
    - iii. GIS
    - iv. Transboundary
  - b. Stakeholder Evaluation Workshops & Surveys (NOVEMBER 2009)
    - i. Geodatabase – ArcGIS & Google Earth
    - ii. Participation / Methods
13. Final Report (w/Recommendations of further research)      JANUARY 2010

Furthermore a detailed list of the contents of the MarSIS geodatabase was reviewed and is given in Appendix III. Appendix IV provides a list of all written reports in regards to the MarSIS research thus far.

## **GEF LESSONS LEARNED**

Then a presentation was given on the GEF Lessons Learned Toolkit project's findings. The GEF LL Toolkit brings together the experiences and lessons learned from some of the major coral reef GEF and non-GEF projects from around the world and is available online at <http://gefll.reefbase.org>. Workshop participants were then guided through a consensus building exercise in which they were broken into small groups of 4-5 people in order to identify the successes, failures and lessons learned in local projects (including MarSIS) they were familiar with. This was done in order to relate their experiences to the GEF LL Toolkit findings allowing for focused group discussion.

## **REVIEW OF LESSON LEARNED IDENTIFIED AT WORKSHOPS**

At both workshops participants formulated national 'lessons learned' based on past project's successes and failures. This also included a review of the MarSIS project as a case study. Lessons formulated were then grouped into the following 7 themes identified by the GEF LL toolkit. The following table lists the lessons which were formulated at both the St. Vincent and Grenada workshops by government MarSIS stakeholders.

### **Project Design**

Need for succession planning  
 Awareness of funding conditionalities is necessary prior to project commencement  
 Allow for flexibility in project design  
 Stakeholders must be identified and involved from the inception  
 Need for communications strategies  
 Policy makers/decisions should not be externally driven

### **Project Management**

Provide clear objectives and roles  
 Encourage better coordination between agencies  
 Realise limitations with available resources  
 Appropriate timeframe is significant in project planning & implementation  
 Need for money to sustain project is critical for project success  
 Multiple funding sources

### **Community Participation**

Need to have more community-based involvement  
 Include all relevant stakeholders from inception- keep them updated  
 Consultation is time consuming and complicated process but important  
 Incentives for alternative livelihoods must be adequate  
 Gender issues must be considered  
 Continuous and proper information (community) awareness needed

### **Partnership and Linkages**

Need for buy-in of all levels of stakeholders  
 Stakeholder roles need to be clearly defined  
 Need for institutional linkages  
 Wider consultation with stakeholders  
 Provide open door policy for conflict management  
 Ensure equitable spread of benefits  
 Better linkages (formal, intersectoral) is needed

### **Policy, legislation and enforcement**

Need for clear objectives and support for post-implementation  
 Policy level support needed  
 Formalise agreements & transboundary policies

### **Ecosystem Based Management**

Need for longterm focus dictated by resource ministries

### **Capacity**

Assess capacity & human resources  
 Education and awareness is needed  
 Provide training of staff

These identified lessons learned will be used where possible to improve the remaining activities of the MarSIS research. Furthermore, these lessons should be taken into consideration and applied to better plan the implementation of the MarSIS and allow for the sustainability of the project after the conclusion of the research. As such, these workshops have resulted in the MarSIS research project becoming a demonstration site of the GEF Lessons Learnt Toolkit.

## MARINE SPATIAL PLANNING SUMMARY

A review of the practical uses of MarSIS, in particular the concept of marine spatial planning (MSP) was presented. It was explained that MSP is a holistic planning process that enables integrated, forward looking, and consistent decision-making on human uses of the sea. Marine spatial planning was defined as *'A way of improving decision making & delivering an ecosystem-based approach to managing human activities in the marine environment'*. MSP can provide an integrated process that can deal effectively with the management of marine resources and is a key tool in making Ecosystem Based Management (EBM) and sea use management a reality. EBM as defined by the Convention on Biodiversity is *'Strategy for the integrated management of land, water, and living resources that promotes conservation and sustainable use in an equitable way'*. Therefore EBM focuses on the functional relationships within ecosystems, use of adaptive management practices and the need to carry out management at multiple scales with inter-sectoral cooperation.

One way to achieve better and more effective implementation of EBM in the marine environment is through the use of MSP. It was noted that a lack of such a planning framework often results in: spatial & temporal overlap of activities causing conflicts, lack of coordination between authorities, disconnect between offshore activities, resource use & communities, lack of conservation of ecologically sensitive areas and a lack of investment certainty for marine developers and resource users. MSP is an 'area or place-based' management tool, whereas sectoral management implies each sector manages a single species, activity or concern. MSP defines sustainable development in that use is established for *all activities* in a whole area. Therefore MSP can better address the complexity of marine ecosystems in a practical manner by: influencing human behavior and activities, providing a management framework for scientific information, making conflicts and compatibilities among human uses visible and guide single sector management towards integrative decision-making.

Two practical examples of utilizing MarSIS in regards to MSP were given. The use of MarSIS as a tool in assisting in the possible designation of the Grenadine Islands as a transboundary World Heritage Site was given. It was noted that *'the protection, management, authenticity and integrity of properties are important considerations for designation'* and the MarSIS provides a foundation for the inventory and management of marine resources of the Grenadines. In regards to the use of MarSIS as a decision support tool, a new online Google Earth application called 'MarineMap' was demonstrated ([www.marinemap.org](http://www.marinemap.org)). The 'MarineMap' initiative is currently in use within the California Marine Life Protection Act Initiative and provides public access to a variety of marine resource information via the internet and a user password system. 'MarineMap' allows a range of stakeholders to collaboratively participate in the planning and designation of marine protected areas in the state. Moreover, the possibility of the transboundary Grenadines MarSIS project as a future 'MarineMap' global demonstration site was introduced to stakeholders.

## **PLANNING FOR MARSIS IMPLEMENTATION**

After the presenting the benefits of marine spatial planning and its' practical application, the issues of future access to the MarSIS, the required on-going maintenance of the geodatabase and planning for the sustainability of the project after the conclusion of the PhD research was addressed.

End products that will result from the PhD research include:

- ArcGIS – MarSIS Geodatabase
- Google Earth (.kml) files
- Hard Copy Maps / Atlases
- Four Primary Scientific Journal Publications
  - Topics will include:
    - *Stakeholder Engagement*
    - *Benthic Habitat Map Development*
    - *GIS Analyses of Marine Space Use*
    - *Information Integration & Marine Policy Implications*

Considerations in regards to the implementation of MarSIS were presented, namely:

### **Who should have access to MarSIS?**

- Government
- Local communities
- NGOs
- General Public

### **How will MarSIS be made available?**

- Website Access
- Google Earth Interface
- DVDs
- Maps / Atlas Book
- Dedicated GIS Computers

### **Who will be responsible for maintenance?**

- Government of SVG & GND
- NGO – Sustainable Grenadine Project
- Educational Institution - UWI

### **Planning for the sustainability of the MarSIS beyond the research must consider:**

- Capacity/Infrastructure Needs
- Political Commitment
- Policy Harmonization (Sectoral & Transboundary)
- Partnerships/Coordination
- Community Context/Engagement
- Financing Mechanisms



## **STAKEHODLER FEEDBACK SURVEY RESULTS**

At the conclusion of the workshop, participants were asked to complete a short survey (Appendix V) in order to collaboratively think and obtain feedback on the most effective end-products of the research as well as gain insight on some of the issues highlighted in relation to the implementation, access and sustainability of the MarSIS beyond the PhD research. A total of 33 surveys from 17 organisations were completed.

Ninety seven percent of respondents believe that MarSIS will be of use for their work in regards to the integration of and access to information thus allowing for more informed decision-making in regards to the management and planning of coastal and marine resources. Respondents identified 25 upcoming coastal projects in which MarSIS could be used as a decision-making tool. Nevertheless only three departments in each country actually own ArcGIS software (Fisheries, Forestry and Planning Departments) and it was found that only 10 people in total were identified (within both countries) to currently be using ArcGIS. Therefore the need for capacity in regards to ArcGIS training is identified.

On the other hand, 80% of respondents are familiar with and have used the GoogleEarth application on the internet. In regards to MarSIS data type, the majority (67%) believe that GoogleEarth (.kml) files would be of the most use to stakeholders yet 57% desire ArcGIS files and 53% prefer to have hard copy maps of information as well. Overwhelmingly, 84% of respondents believe that the MarSIS should be accessible via the internet whereas 16% prefer a DVD of the geodatabase and 6% desire access through a dedicated GIS computer.

Most respondents suggested a collaborative institutional network approach to maintaining the MarSIS information base. Approximately 70% suggested that government be responsible, 60% believe the University of the West Indies should be involved and 30% foresee a NGO such as the Sustainable Grenadines Project should be involved in overseeing this responsibility. Interestingly financing, in terms of the maintenance of the MarSIS information and the sustainability of the project after the research, was the biggest concern identified by 70% of respondents.

Ninety percent of respondents envisioned the MarSIS being utilised for Marine Spatial Planning in the Grenadines, 67% were interested in pursuing the 'MarineMap' application and 47% supported the World Heritage Site Designation as implementation activities.

## **APPLYING LESSONS LEARNED TO MARSIS**

Both workshops utilised the GEF LL Toolkit results to guide focused discussion resulting in the development of local lessons learned that can be applied to the MarSIS to allow for more successful project design and management in terms of the implementation and ultimately aid the sustainability of the project. Furthermore, surveys were also utilised to obtain individual feedback. As a result, many core issues were identified in relation to the continuity and sustainability of the MarSIS after the conclusion of the PhD research.

Key issues identified by stakeholders include the need for mechanisms to:

1. Obtain political will and commitment
2. The need for a long-term vision, objectives and roles to allow for the practical application of ecosystem-based management
3. Increase the coordination and linkages amongst agencies, stakeholders, countries and policies
4. Provide capacity building
5. Plan for community involvement, education and buy-in
6. Obtain financial commitments needed for maintenance of information

These issues will be taken into consideration and applied to remaining activities in hopes of planning a successful project implementation and provide for the future sustainability of the MarSIS project.

## **ACKNOWLEDGEMENTS**

I gratefully acknowledge the support of the Global Environment Fund's 'Lessons Learned Toolkit Project' in collaboration with the WorldFish Center, ReefBase and the United Nations Environment Programme for providing financial assistance in order to hold these two workshops. Moreover, I believe the use of the GEF LL Toolkit has helped our project better understand the reasons for success and failure of coral reef projects' globally and has allowed us to utilise these lessons learned locally in order to anticipate and better plan the remaining activities of the Grenadines MarSIS. In particular I'd like to extend a special thanks to David Gill of MECA for making this collaboration between the two projects possible. Last but definitely not least, I'd like to thank all of the various stakeholders who have been participating in the Grenadines MarSIS research project since 2005. Without your support and encouragement none of this research would be possible.



APPENDICIES

**Appendix I. Workshop Agenda**

Welcome & Introductions

Introduction to the Caribbean Challenge/ Local Government Commitments  
(GEF Operational Focal Point)

Review of MarSIS Research and Activities Update

Introduction to GEF Lessons Learned Project

Discussion/Questions

Small Groups :

- Identification of major GEF/non-GEF projects within country/region (preferably MarSIS as case study)
- Discussion on major successes, failures and lessons learned

Presentation & Discussion of MarSIS Lessons Identified in Small Groups

Lunch

Introduction/Demonstration of Toolkit and Other Resources

Large Group Discussion:

- Possible benefits of toolkit and its local application
- Suggestions for improvement in effectiveness of MarSIS

The Way Forward for MarSIS

- Marine Spatial Planning
- Grenadines World Heritage Site Designation
- Implementation / Access of MarSIS (Nationally & Transboundary)
- Sustainability / Maintenance of MarSIS Information

Set Goals for Implementing MarSIS Lessons Learned

Closing Remarks and Vote of Thanks

**Summary Report for the 'Knowledgebase for Lessons Learned Best Practices in Coral Reef Management - Applications for Review & Evaluation of MarSIS' St. Vincent & the Grenadines and Grenada Workshops**

**Appendix II. Workshop Participant Lists**

**St Vincent Workshop**      Wednesday - March 11, 2009

<b>Name</b>	<b>Organization</b>
Raquel J Hamlet	Ministry of Tourism
Hayden Billingy	National Parks, Rivers and Beaches Authority
Dornet Hall	Physical Planning Unit
Corliss Murray	Physical Planning Unit
Cornelius Lyttle	Forestry Department
Samuel Harry	Forestry Department
Edwin Durrant	St. Vincent and the Grenadines Coast Guard Service
Krista Kavanaugh	Sustainable Grenadines Project
Terrence Phillips	Caribbean Regional Fisheries Mechanism (CRFM) Secretariat
Shermine Glynn-Johnson	Fisheries Division
Martin Barriteau	Sustainable Grenadines Project
Kris Isaacs	Fisheries Division
Maren Headley	CRFM Secretariat
Susan Singh-Renton	CRFM Secretariat
Edmund Jackson	Ministry of Health and Environment
Niquette Ballanlyn	St. Vincent and the Grenadines Tourism Authority
FitzGerald Providence	IFMDP Forestry Department
Nadia Cazaubon	Soufriere Marine Management Association, St. Lucia
Brian Johnson	Forestry Department
Ottis Joslyn	Caribbean Planning for Adaptation to Climate Change (CPACC)
Raymond Ryan	Fisheries Division
Leslie Straker	Fisheries Division

**Summary Report for the 'Knowledgebase for Lessons Learned Best Practices in Coral Reef Management - Applications for Review & Evaluation of MarSIS' St. Vincent & the Grenadines and Grenada Workshops**

**Grenada Workshop**      Thursday - March 12, 2009

<b>Name</b>	<b>Organization</b>
Jillian St. Benard	Environmental Affairs Division
Lisa Chetram	Fisheries Division
Ron Simon	Fisheries Division
Crafton Isaac	Fisheries Division
Airdlin	Fisheries Division
Tracy Augustine	Fisheries Division
Watson Edwards	Grenada Coast Guard
Wilbur Francis	Grenada Coast Guard
John J. Charles	Grenada Coast Guard
Roland A. Baldeo	Fisheries Division
Ronald A. Haywood	Grenada Ports Authority
Ian Noel	Grenada Ports Authority
Gordon Paterson	Forestry Department
Valgine B. Francis	Sustainable Grenadines Project
Johnson St. Louis	Fisheries Division
Aden Forteau	Forestry Department
Anthony Jeremiah	Forestry Department
Paul E. Phillip	Fisheries Division
Michael Jessamy	Ministry of Tourism
Timothy	Forestry Department
Asquith Duncan	Grenada Board of Tourism
Steve Nimrod	St. George's University
Gemma Bain Thomas	P.S. Agriculture

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## Appendix III. MarSIS Geodatabase Structure

### 8 Feature Classes (Sub-Classes)

1. Bathymetry
  - a. Isobaths (Contour Lines) {CRIS (0, 20m), GEBCO (200m), FAO (100m)}
  - b. DEM (Shaded Relief for Depth)
2. Infrastructure
  - a. Coastlines
  - b. Roads
  - c. Hotels
  - d. Airports
  - e. Ports
  - f. Marinas
  - g. Jetties
  - h. Land Use
  - i. Enumeration Districts (population)
3. Imagery/Maps
  - a. Digital Globe {>1 metre}
  - b. IKONOS {4 metre}
  - c. LandSat {30 metre}
  - d. Google Earth {1 – 4 metre}
  - e. Aerial Photos {Black and White – SVG only}
  - f. Nautical Charts {Imary}
  - g. Topographic Maps {1:25,000}
4. Marine Habitats
  - a. Benthic Habitat (Shallow, Deep)
  - b. Geomorphology {TNC – Millennium Mapping Project}
  - c. Biophysical Data (Salinity, Temp, Currents) {NOAA}
  - d. Upwelling Zones
  - e. Shorelines (rocky, white sand, black sand)
  - f. Turtle Nesting Beaches\* {& OBIS SeaMap - WIDECAST}
  - g. Seabird Roosting Areas\* {& West Indian Sea Bird Atlas}
  - h. Mangrove\*
  - i. Seagrass\*
5. Marine Resource Users
  - a. Day-tour Operators
  - b. Water-taxi Operators
  - c. Ferries
  - d. Ships
  - e. Dive Shops
  - f. Artisanal Fishers (by Type & Landing Site)
  - g. Yacht Charter Companies
6. Space Use Patterns
  - a. Anchorages\*
  - b. Ship/Ferry Routes\*
  - c. Dive Sites\*
  - d. Fishing Grounds & Intensity\*
  - e. Recreational Areas\*
  - f. Historical/Cultural Areas\*
  - g. Potential Livelihood/Community Conservation Areas\*
7. Threats
  - a. Sand-mining\*
  - b. Dumps\*
  - c. Quarries\*
  - d. Land-Based Sources of Pollution (Points)\*
8. Other
  - a. Protected Areas
  - b. Exclusive Economic Zones
  - c. Fishing Critical Habitat Areas (Nursery Areas / Breeding Grounds / Baitfish)\*
  - d. Marine Monitoring Sites (Reef Check & Sandwatch Beach Profile Data)
  - e. Geographical Scope of MarSIS (maximum of 200 metre depth on the Grenada Bank in Grenadines)

**Appendix IV.** List of publications related to the MarSIS research.

- 2008 Baldwin, K. and S. Punnett. *A Preliminary Investigation of the Queen Conch Fishery in St. Vincent & the Grenadines*. Poster presentation. 61<sup>st</sup> Gulf and Caribbean Fisheries Institute, Guadalupe. November 2008.
- 2007 Baldwin, K., R. Mahon, P. McConney, and H.A. Oxenford. Student Travel Award Winner. *Stakeholder engagement in the development of a participatory GIS for the Grenadine Islands*. In press. 60<sup>th</sup> Gulf and Caribbean Fisheries Institute. Punta Cana, Dominican Republic. 11 pp.
- 2007 Baldwin, K., R. Mahon & H.A. Oxenford. *Participatory Mapping for the Grenadines Marine Resource Space-use Information System*. 45<sup>th</sup> Annual Urban and Regional Information Systems Association (URISA) GIS Conference. Washington D.C. August 20-23, 2007. 18 pp.
- 2007 Baldwin, K. *A marine space-use information system for the Grenadine Islands: a basis for collaborative planning and management*. PhD Seminar Proposal. Centre for Resource Management and Environmental Studies (CERMES), University of the West Indies, Cave Hill Campus, Barbados. 26 pp.
- 2007 Baldwin, K. *Participatory Mapping for the Grenadines Marine Resource Space-use Information System*. Presented at the ESRI International Users GIS Conference. San Diego, California. June 17-22, 2007.
- 2007 Baldwin, K., D. Gill, A. Cooke, T. Staskiewicz, D. Lizama, R. Mahon, P. McConney and H.A. Oxenford. *A socio-economic and space-use profile of Grenadine marine resource users*. A technical report for the Nature Conservancy. CERMES, University of the West Indies, Cave Hill Campus, Barbados. 116 pp.
- 2006 Baldwin, K., R. Mahon, H. Oxenford, A. Cooke, D. Gill, T. Staskiewicz. *A profile of marine resource users in the Grenadines*. 59<sup>th</sup> Gulf and Caribbean Fisheries Institute. Belize City, Belize. 9 pp.
- 2006 Baldwin, K. *Summary Report for the Stakeholder Meetings and Space-use Mapping Exercises of the Grenadines Marine Space Use Information System (MarSIS)*. MarSIS Stakeholder Summary Report, October 2006. 21 pp.
- 2006 Baldwin, K. *Grenadines Marine Space-use Information System (MarSIS)*. Presented at the 3rd Caribbean Environmental Forum & Exhibition (CEF-3), Antigua, June 5-9<sup>th</sup>.

**Summary Report for the 'Knowledgebase for Lessons Learned Best Practices in Coral Reef Management - Applications for Review & Evaluation of MarSIS' St. Vincent & the Grenadines and Grenada Workshops**

- 2006 Baldwin, K. *Data scoping of the Grenadines Marine Space Use Information System (MarSIS): A summary of preliminary observations and key informant interviews from Grenada, St. Vincent and the Grenadine Islands*. MarSIS Stakeholder Summary Report, May 2006. 11 pp.
- 2006 Blackman, K., R. Mahon, M. Pena and B. Simmons. *Annotated Bibliographic Information on the Grenadines*. CERMES Technical Report, University of the West Indies, Cave Hill Campus, Barbados. 64 pp.

All relevant documents, maps & surveys can be found on the MarSIS Yahoo E-group webpage:

<http://tech.groups.yahoo.com/group/grenadinesMarSIS/>



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**Appendix V. Stakeholder Feedback Survey**

**Grenadines MarSIS - Questionnaire**

Name \_\_\_\_\_  
 Organisation \_\_\_\_\_  
 Position \_\_\_\_\_  
 Phone # \_\_\_\_\_  
 Fax # \_\_\_\_\_  
 Email \_\_\_\_\_



Does your department have ArcGIS?                      yes      no

Does anyone in your Department regularly use GIS?                      yes      no      How many people?

Have you used Google Earth?                      yes      no

Do you think MarSIS will be useful for your work?                      yes      no

How? \_\_\_\_\_

Please list any upcoming marine/coastal projects or decisions that are to be made?  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

*- Of those listed above please mark (\*) which could use the MarSIS as a decision-making tool*

What type of data will be of the *most* use for your purposes?                      (Tick one)

ArcGIS files \_\_\_\_\_ GoogleEarth files \_\_\_\_\_ Printed Maps \_\_\_\_\_ Other \_\_\_\_\_

What type of *access* to MarSIS data do you feel will be the most useful?                      (Tick one)

Internet \_\_\_\_\_ DVD \_\_\_\_\_ Dedicated Computer \_\_\_\_\_

Who should be responsible for maintaining MarSIS?                      (Tick all that apply)

Govt. \_\_\_\_\_ NGO (Susgren) \_\_\_\_\_ UWI \_\_\_\_\_ Other \_\_\_\_\_

How do you envision MarSIS being used in the future?  
 \_\_\_\_\_  
 \_\_\_\_\_

What implementation activities would you like to see planned for MarSIS?                      (Tick all that apply)

Marine Space Use Plan \_\_\_\_\_ World Heritage Site \_\_\_\_\_ MarineMap \_\_\_\_\_

Other \_\_\_\_\_

What is your biggest concern in regards to MarSIS?  
 \_\_\_\_\_  
 \_\_\_\_\_

Do you have any other relevant information for inclusion in the MarSIS?  
 (i.e. Spatial/GIS Data, Ecological Data, Socio-Economic Data, Statistics, etc.)  
 \_\_\_\_\_  
 \_\_\_\_\_

Suggestions for Additional Information to be included in MarSIS:  
 \_\_\_\_\_  
 \_\_\_\_\_

Would you be willing to participate in the final evaluation workshop for MarSIS?      yes                      no

Any Other Suggestions      \_\_\_\_\_

Do you want to join an email group to receive updates on MarSIS?      \_\_\_\_\_

*Thank you for your feedback and taking the time to attend this meeting*