



# Integrated Coastal Zone Management Policy for Grenada, Carriacou and Petite Martinique

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## FOREWORD



Climate change and its impacts have become one of the most pressing environmental issues both on a global level and in Small Island Developing States (SIDS) such as Grenada. The coastal environment, particularly in the SIDS context, is highly vulnerable to such impacts. The effects of storm surges and sea level rise heavily impact our beaches and coastal infrastructure. Likewise, future sea surface temperature increases and ocean acidification threaten to destroy our coral reefs and other important marine habitats. This will have drastic consequences for our commercial fish species and other important marine biodiversity which help to guarantee food security. These are the realities that we must now face. With them, come the tasks of mitigating, adapting to and recovering from such impacts.

Since these impacts are compounded by anthropogenic activities, our coastal areas are continuously under pressure for which Grenada must be adequately equipped to manage. This is particularly important when the country's economy, lifestyle and culture depend extensively on the health of its coastal zone. In order to better optimize Grenada's available resources and capacity Grenada has chosen to pursue an integrated approach for holistic management of its coastal areas. This means leveraging the expertise of all relevant entities that have responsibilities for aspects of coastal management or whose activities have a major impact on the coastal zone. In Grenada this means that collaboration with the Government entities, coastal communities, schools, local and regional research institutions, civil society and the private sector is key for a coordinated approach.

## FOREWORD

Also important is the need for sound scientific research on our coastal dynamics and characteristics to inform the decision-making process. This will be paramount to ensure that our coastal development and infrastructure can withstand future climate impacts without compromising our marine biodiversity and resources. This is especially relevant as Grenada is taking advantage of its Blue Economy through coral reef restoration, innovative approaches to reducing marine pollution, ecotourism, community co-managed marine protected areas, the potential for ocean energy and sustainable aquaculture and mariculture.

The ICZM Policy presented here is an effort towards furnishing Grenada with the necessary guidelines, principles, and tools to effectively manage the activities in its coastal zone whilst providing an environment through which the understanding and appreciation of the importance of coastal resources is strengthened. It is a key step towards the sustainable development of our coasts and will lay the foundation for improved climate resilience of Grenada, our ecosystems and our people.



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## BACKGROUND

This document constitutes the ICZM Policy for the tri-island State of Grenada, Carriacou and Petit Martinique. It provides a vision for the future use, development and protection of the nation's coastal zone by setting out policies to guide relationships among resource users, community facilities and activities, and physical development and infrastructure. Wherever "Grenada" is used, it refers collectively to all of the islands within the jurisdiction of the tri-island state.

### Integrated Coastal Zone Management (ICZM)

Sustainable use of coastal and ocean areas and their resources must involve governance, ecological and socioeconomic dimensions, as well as the interaction between these three (3) aspects. This nexus must form the basis of ICZM programs (United Nations Educational, Scientific and Cultural Organisation [UNESCO], 2006). ICZM may be explained as a continuous, iterative, adaptive and consensus building process comprised of a set of related tasks, all of which must be carried out to achieve a set of goals for the sustainable use of coastal areas (Rughooputh et al., 2005). This explanation incorporates a set of principles generally accepted within the global arena, allowing for comparisons and sharing of best practices among countries. The approach combines, inter alia, planning, management, research and education; and requires integration among different coastal and marine sectors; integration among different levels of government; spatial integration to link land-based activity with coastal impacts; sharing of information among various disciplines and sectors involved in coastal management and; international integration to coordinate action on trans-boundary issues.

ICZM is, therefore, a comprehensive approach to the management of the coastal zone that takes account of all sectorial activities that affect the coastal zone and its resources. It also deals with economic and social issues as well as environmental and ecological concerns.

## BACKGROUND

### The Policy Preparation Process

The ICZM Policy is the result of a highly participatory approach which included:

- Review of background documentation related to the existing policy framework as well as institutional arrangements and responsibilities for any aspects of ICZM in Grenada. The documents were compiled in collaboration with The Environment Division of the Government of Grenada and in consultation with key stakeholder agencies.
- A field tour of the coast of mainland Grenada led by the Officer in the Environment Division of the The Environment Division of the Government of Grenada who has responsibility for coastal zone matters.
- A second field tour encompassing the coastal areas of the sister islands of Carriacou and Petit Martinique.

The outputs of the preparatory process also include two (2) documents that contain essential background information to this policy.<sup>1</sup>

<sup>1</sup> A Position Paper and Road Map to "the Coast Grenada Wants:" Imperatives, Initiatives, Successes, Challenges and Opportunities; (2) A Concept Paper on the Positioning of a Coastal Zone Policy within the Existing Policy Frameworks and Institutional Systems. The Position Paper contains an assessment of the state of coastal and marine habitats and the Concept Paper on the Positioning of a Coastal Zone Policy within the Existing Policy Frameworks and Institutional Systems presents the contextual framework of the Integrated Coastal Zone Policy.



## INTRODUCTION

The tri-island state of Grenada is located at 12 07 N, 61 40 W between the Caribbean Sea and the Atlantic Ocean. These three (3) main inhabited islands have a total land area of 344 km<sup>2</sup> and a coastline of 121 km. There are also a number of smaller uninhabited islands. The island of Grenada is volcanic in origin, forming part of the chain of volcanic islands of the Lesser Antilles. The smaller island of Carriacou is comprised of limestone in the eastern part while the remaining two-thirds (2/3) is comprised of volcanic material (CCA/GOG/USAID, 1991). Carriacou and Petit Martinique form part of the chain of islands known as the Grenadines that lie between Grenada and the island of St. Vincent.

The coast in Grenada is a naturally variable and dynamic interface between the land and the sea. Generally, the country's coastal zone is characterised by clear waters and several marine ecosystems, such as coral reefs, beaches, sea grass beds, mangrove swamps and coastal lagoons. These combined ecosystems are inhabited by approximately 70 marine or brackish water species, and more than 15 species of fresh water fish (CDB, 2014). There is almost continuous urban development along the west coast of mainland Grenada.

### Climate Change in Grenada

Grenada, as a SIDS, must deal with the current and possible future impacts of global climate change that threaten sustainable economic development and social cohesion. Observed sea level rise over the past years has been significantly higher than the projections from the Fourth Assessment Report (2007) produced by the United Nations Intergovernmental Panel on Climate Change (IPCC). All indications from the Fifth Assessment Report (2014) are consistent with this trend. Ocean acidification is also increasing, leading to decreased oceanic food production as well as stressed and damaged coral reefs affecting biodiversity, tourism and sustainable fisheries. Grenada is disproportionately affected by these impacts.

According to the Climate Risk Atlas for Grenada (CCCRA, 2012), the country has already experienced significant losses to infrastructure and coastal resources due to sea level rise, elevated sea surface temperatures and increasing intensity of storms and hurricanes as evidenced by the widespread destruction and loss of life caused by Hurricanes Ivan and Emily in 2004 and 2005 respectively. As these impacts worsen, there is an ever-increasing risk of Grenada losing its remaining natural resources (CARIBSAVE, 2010). To reverse this trend, there must be an immediate national response of adaptation so as to improve and increase the resilience of key marine ecosystems and also to ensure that habitats and species are preserved.



## INTRODUCTION

Adaptive capacity is a system's capacity to adjust to changes, or, to widen the range of vulnerability within which it can cope (IPCC, n.d.). Grenada and other SIDS have relatively low adaptive capacities to continental states. Whilst there are a number of national actions that can be taken to reduce vulnerability while building resilience to climate change, high adaptation costs relative to these islands' GDP precludes implementing many of these actions. There are several reasons for low adaptive capacity including small physical size, shortage of human and financial resources and limited access to capital and technologies. According to all reports and consultations, the tri-island state of Grenada experiences all of the above. ICZM will contribute to the national adaptation response to climate change.

### The Status of Coastal Zone Management in Grenada

Grenada is at an early stage of integrated planning and management of its coastal resources. The overarching national policy framework for development is the National Strategic Development Plan (NSDP) (2007)<sup>2</sup>. This Plan was prepared in the aftermath of Hurricane Ivan, which caused extensive damage to the country in 2004. This included considerable damage to coastal resources, low lying coastal areas and infrastructure. The NSDP defines Grenada's ambitions for national development. It offers broad guidance to the development work of core agencies. One (1) of the twelve (12) programme areas it identifies is Sustainable Environment and Physical Development, the goal of which is to have environmental considerations integrally linked to national development (NSDP 2007, Goal 7). This provides policy guidance for ICZM in Grenada.

- Absence of an over-arching coordinating mechanism to ensure the integration of coastal zone issues into all national and sectorial policies, plans and programmes.
- Limited human and technical capacity for ICZM.
- Fragmentation of institutional responsibility for various types of coastal zone management functions.
- The need for scientific research on various aspects of coastal dynamics and characteristics to inform decision making for ICZM.

## INTRODUCTION

In addition, successful ICZM requires three (3) pillars to be in place: (1) an ICZM policy that gives high level direction to development interventions in the coastal zone; (2) a comprehensive Coastal Zone Management Plan that guides on-the-ground interventions in the coastal zone, and (3) supporting national legislation. Fundamental to all of these documents is a geographically defined coastal zone that is approved at the level of Cabinet and/or articulated in national law, such as a Coastal Zone Management Act. Grenada is starting to build this ICZM structure with the preparation of this ICZM Policy.



<sup>2</sup> Grenada is in the process of developing the National Sustainable Development Plan 2030. Climate change and environment play an important role in that plan.

## DEFINING GRENADA'S COASTAL ZONE

The first priority Grenada needs to address in the ICZM policy is to define the geographical area to which the policy will apply. There is an increasingly popular view that for island countries the entire island is a coastal zone. This is based on the fact that the relatively short distances from interior to coast mean that land-based activities have their impacts manifested in coastal areas over short temporal and spatial scales. Notwithstanding this view, a clear set of parameters have been identified and used to define an area to which coastal management activities apply. **The following is a list of criteria which were used in defining the coastal zone:**

- i) All of the smaller islands surrounding the tri-island state are included in the national jurisdiction;
- ii) A seaward boundary for Grenada, Carriacou and Petit Martinique that extends to the exclusive economic zone;
- iii) A landward boundary for Grenada, Carriacou and Petit Martinique that is guided by the 150ft contours and the 100ft and 75ft contour elevation lines, taking into account areas of high importance and vulnerability;
- iv) All coral reefs (both near-shore and barrier reefs), reef flats, sea-grass beds, beaches, sand dunes, estuaries, mangroves, wetlands, other coastal vegetation and coastal cliffs;
- v) All Coastal Protected Areas (marine and terrestrial), in their entirety;
- vi) Major socio-economic activities located in coastal areas;
- vii) Major coastal development that has the potential to cause negative environmental impacts should be governed by the framework and is therefore included in defining the coastal zone. Such development includes; ports, marinas, distilleries, oil refinery, landfills and land reclamation;
- viii) Future marine-based economic activity must also be considered (e.g. off-shore oil and gas exploration and development);
- ix) All peninsulas in their entirety given their size and proximity to the coast.

## DEFINING GRENADA'S COASTAL ZONE

This list of parameters is not exhaustive and is intended as a guide, based on what are considered to be important aspects of the coast of Grenada now; and in the future (for example, future offshore oil and gas or renewable energy potential). Taking this list into consideration, specific geographical coordinates have been established to encompass those aspects that the GoG deems appropriate for national development purposes. Thus, the ultimate description of Grenada's coastal zone from a legal perspective makes use of a combination of geographical coordinates and land features and will be informed by available scientific studies of the coastal characteristics of the country.



## COASTAL ZONE MANAGEMENT ISSUES

Grenada's coastal environmental assets create important national revenue, especially through its coastal-based tourism industry. These assets, however, are subject to degradation, the key drivers of which are climate change and the concentration of the population in coastal areas.

According to the GoG (2000), growing coastal populations place increasing demands on ecosystem provisioning services to support food and livelihood needs. Anthropogenic activities such as the over-use of agro-chemicals and other land-based activities, overfishing, inadequate solid waste disposal and non-treatment of wastewater also threaten the sustainability of coastal assets. In addition, infrastructure development activities associated with tourism and urbanisation have been observed to negatively impact on crucial ecosystems in the coastal zone. The result has been severe and continual degradation of coastal ecosystems such as coral reefs, sea-grass beds and mangroves as well as extensive beach erosion that is caused by both natural and human-induced activities, resulting in the loss of valuable coastal lands (GoG, 2000).



## COASTAL ZONE MANAGEMENT ISSUES

While there is evidence of physical degradation, many areas along Grenada's coastline and within its ecosystems, still remain healthy and vibrant. This condition presents opportunities for sustainable economic development in the coastal zone. However, the information needed to optimise uses and ecosystem conservation, maintain resource health and well-being, as well as to ensure consistent economic returns from coastal resources is not readily available. The document review, stakeholder consultations and field observations highlighted a series of other coastal zone management issues facing Grenada. These are detailed in the Position Paper and Road Map to "the Coast Grenada Wants:" Imperatives, Initiatives, Successes, Challenges and Opportunities.

A summary of these issues are featured in the text box below.

### COASTAL ZONE MANAGEMENT ISSUES

- Marine pollution from land-based, marine-based and atmospheric sources, runoff from watersheds.
- Degradation of coastal mangroves due to inappropriate disposal of solid waste.
- Ecosystem degradation and increased coastal erosion due to beach sand mining.
- User conflicts in coastal areas.
- Inappropriate and/or unplanned installation of coastal protection structures or beach enhancement programmes.
- Removal of coastal vegetation, including sea grasses, that binds sediments and assists in prevention of beach erosion.
- Introduction of invasive species that have devastating effects on coastal ecosystems and fisheries, (such as the lionfish which has currently invaded Grenada and much of the Caribbean region).
- Back-filling, dredging and land reclamation especially in mangrove areas to make way for commercial and residential development, and use of mangrove trees for fuel and other human requirements.
- Destabilisation of coastal cliffs by inappropriate infrastructure.

## POLICY VISION, PRINCIPLES AND GOALS

The purpose of the ICZM Policy for Grenada is to facilitate integrative planning and management processes, with the view to preserving and enhancing coastal ecosystems and the services they provide, while enabling social and economic development. The policy will involve all relevant national agencies in implementation by incorporating coastal zone issues into all national and sectoral policies, plans and programmes. These include the Fisheries Policy, the Forestry Policy, the Marine Protected Areas Programme, the National Parks System, Physical Development Plans and the overarching National Strategic Plan for Grenada, among others.



## The Vision

The ICZM Policy seeks to achieve a vision of the coast of Grenada as:

“A coastal zone that is well-managed, sustains livelihoods, supports the country’s socio-economic development, contributes to ecological sustainability and is resilient to environmental risks.”

## Guiding Principles

The following principles underlie the policies which will guide the future management of the coastal zone of Grenada:

- **Sustainability** of the coastal zone, to be achieved through ICZM, heightened environmental awareness, and community stewardship.
- Application of the **Precautionary Principle** in the management of the coast. The precautionary principle holds that, faced with the threat of serious or irreversible damage, lack of scientific certainty should not constitute a reason for not taking action to protect coastal resources and ecosystems.<sup>3</sup>
- **Good Governance**, reflecting transparency in management, participation, integration of all sectors, regulations to avoid user conflicts and an understanding of the value of Grenada’s coast.
- **Equity** as manifested by transparency and fairness in decision making and provision of access to public coastal spaces including all beaches.

<sup>3</sup> Adopted from Principle #15 of the Rio Declaration produced at the “Earth Summit,” 1992.



## Policy Goals

### *Goal 1 - Governance; holistic decision making for coastal sustainability*

Provide the administrative framework for development, regulation and protection of the coastal zone in order to optimise all benefits (historic, cultural, religious, health and well-being, aesthetic and socio-economic), to be derived from use of the coastal zone without compromising the coastal zone or its ability to provide these benefits for future generations.

### *Goal 2 - Sustainability; preserving ecosystems and promoting sustainable livelihoods*

To enable ecosystems to continue to contribute to the social and economic development in Grenada by protecting these ecosystems from over-exploitation, degradation due to inappropriate and unsustainable use and from extreme events and other negative influences.

### *Goal 3 - Capacity development at all levels and in all areas: institutional, technical and sectorial*

To create a culture that is cognisant of: (1) coastal zone and ecosystem management and preservation and; (2) the importance of ensuring equitable and sustainable use and development of coastal resources; by educating the citizenry about the integrated approach to coastal zone management.

## POLICY OBJECTIVES

**Goal 1 - Governance; holistic decision making for coastal sustainability**

Objectives -

- 1.1 To ensure good governance through a coordinated and integrated approach to the management of Grenada's coasts.
- 1.2 To ensure adequate levels of consultation with relevant Government technical agencies, public and private sector agencies, academia and other non-governmental agencies and stakeholders, regarding proposed developments in the coastal zone.
- 1.3 To encourage public participation and stakeholder involvement in the management and stewardship of the coastal zone.
- 1.4 To fulfill international and trans-boundary obligations related to the coastal zone.



## POLICY OBJECTIVES

### *Goal 2 - Sustainability; preserving ecosystems and promoting sustainable livelihoods*

#### Objectives -

- 2.1 To preserve and enhance the quality and health of coastal processes and ecosystems, ensuring that they can continue to perform ecosystem functions that are critical for sustaining livelihoods, preserving biodiversity (including protected and/or endangered flora and fauna) and protecting the coastal zone.
- 2.2 To facilitate optimal conditions for ecosystem restoration, rehabilitation and recovery.
- 2.3 To plan and manage development in the coastal zone in a way that reduces vulnerability and risk associated with coastal hazards such as tsunamis, hurricanes and coastal inundation, and to build resilience by introducing vulnerability and risk reduction measures into the coastal management process. Tsunamis are relevant to Grenada due to the seismically active Caribbean area, as well as the undersea volcano "Kick 'em Jenny" north of the mainland.
- 2.4 To prevent, reduce, or mitigate the discharge of pollutants into near-shore areas due to human activities.

## POLICY OBJECTIVES

**Goal 3** - *Capacity development at all levels and in all areas: institutional, technical and sectorial*

Objectives -

- 3.1 To develop the institutional, professional and technical capacity for ICZM.
- 3.2 To achieve a high level of public awareness and education about ICZM, planning and resource use.
- 3.3 To use a systematic approach in promoting education and awareness of the importance of coastal resources and encourage the use of best practices.
- 3.4 To minimise the potential for user conflicts in the coastal zone.



## STRATEGIES

**Goal 1 - Governance; holistic decision making for coastal sustainability**

**Objective 1.1 - To ensure a coordinated and integrated approach to the management of Grenada's coasts.**

**Strategies -**

1. Establish a national coordination agency for ICZM taking into account both the terrestrial and marine responsibilities.
2. Enact enabling legislation for ICZM, incorporating the roles and responsibilities of the future national coordination agency for ICZM.
3. Clarify the roles and responsibilities of all government agencies involved in coastal zone management.
4. Acquire suitably qualified staff for the ICZM coordinating agency and provide training opportunities to increase capacity where needed.
5. Streamline all relevant national and sectoral policies, legislation and programmes to incorporate the goals and objectives of the ICZM policy.
6. Incorporate ICZM into national plans and budgets.

## STRATEGIES

**Objective 1.2** - *To ensure adequate levels of consultation with relevant governmental technical agencies, public and private sector agencies and other non-governmental agencies and stakeholders, regarding proposed developments in the coastal zone.*

### Strategies -

1. Create a mechanism for multi-stakeholder consultation on all proposals and applications for development in the coastal zone.
2. Establish a mechanism for public advocacy and participation of civil society in decision making regarding coastal zone management.
3. Establish a mechanism to facilitate the resolution of user conflicts.

**Objective 1.3** - *To encourage public participation and stakeholder involvement in the management and stewardship of the coastal zone.*

### Strategies -

1. Establish a multi-stakeholder system (government and civil society) for collaboration in planning, monitoring and evaluation for ecosystem management.
2. Promote training in relevant aspects of integrated management of coastal resources and ecosystems, among a cross section of civil society.
3. Establish a mechanism for incorporating community-based coastal management initiatives.

## STRATEGIES

**Objective 1.4** - *To fulfill international and trans-boundary obligations related to the coastal zone.*

Strategies -

1. Identify and implement national actions required by multilateral environmental agreements (MEAs), ratified by Grenada that are relevant to coastal zone protection and management.
2. Identify and apply any internationally agreed best practices in coastal zone management of SIDS.



## STRATEGIES

### *Goal 2 - Sustainability; preserving ecosystems and promoting sustainable livelihoods*

**Objective 2.1** - *To preserve and enhance the quality and health of coastal processes and ecosystems, ensuring that they can continue to perform ecosystem functions that are critical for sustaining livelihoods and protecting the coastal zone.*

#### Strategies -

1. Progressively study, and record information on, coastal dynamics (wave, currents, water circulation, sea level rise, wind, sediment budgets etc.).
2. Develop a database on all ecosystems and natural processes, including parameters such as species richness, canopy cover, beach and sediment dynamics; sand transport processes and sources; wave, current and wind circulation patterns; bathymetry and changes in sea level.
3. Update the data map of the coastal area of Grenada, Carriacou and Petit Martinique to capture the changes due to natural processes and human activities in tandem with the review of the ICZM Policy every five (5) years.
4. Ensure the conversion of the data into information that can be used holistically by both terrestrial land management as well as integrated management of the coastal zone to ensure a coordinated 'ridge to reef' approach.



## STRATEGIES

**Objective 2.2** - *To facilitate optimal conditions for ecosystem restoration, rehabilitation and recovery.*

### Strategies -

1. Establish programmes for monitoring coastal ecosystems and the effects of human activities including ecological and both hard and soft engineering solutions to coastal zone management issues.
2. Implement a system to monitor the impacts of extreme events such as hurricanes, storm surge, tsunamis and prolonged sea swells, thereby identifying the most vulnerable areas.
3. Establish a mechanism for involving local communities and interest groups in monitoring coastal ecosystems, including provision for training in ecosystem monitoring and management.
4. Enforce relevant provisions of existing legislation related to the coastal zone, including the Beach Protection Act, drafted to end the harmful practice of sand mining.
5. Develop and implement strategies to identify and manage or eradicate invasive species.
6. Implement a system for routinely monitoring coastal water quality, including inputs of pollutants from both marine and land-based sources.

## STRATEGIES

**Objective 2.3** - *To plan and manage development in the coastal zone in a way that reduces vulnerability and risk associated with coastal hazards, and to build resilience by introducing vulnerability and risk reduction measures into the coastal management process*

### Strategies -

1. Establish and enforce standards for construction in coastal areas (buildings, roads, revetments and other shoreline stabilisation measures), incorporating the impacts of coastal hazard events such as storm surge and sea level rise.
2. Assess apparent or potential vulnerable areas along the coast and identify appropriate solutions to stabilise these areas.
3. Evaluate all stabilisation solutions for their suitability to resolve the presenting vulnerability problem and to minimise or mitigate any potential negative impacts, both on site and downstream.
4. Develop guidelines and procedures for the design, installation and monitoring of coastal stabilisation measures by public and private entities.
5. Establish a database from which information can be extracted, analysed and used to inform and enhance planning, decision making and preparedness in order to minimise the impacts of all types of coastal hazards.
6. Develop and implement early warning systems for coastal hazards.
7. Terminate or mitigate activities that will directly exacerbate the negative impacts of coastal hazards by directly damaging coastal ecosystems and weakening the resilience of the coastal zone.

## STRATEGIES

**Objective 2.4** - *To prevent, reduce, or mitigate the discharge of pollutants into nearshore areas, that are derived from human activities within the coastal zone.*

### Strategies -

1. Conduct an inventory of land-based and marine-based sources of coastal pollution.
2. Implement management activities to control and reduce pollution from watersheds which is then transmitted to the coast via rivers and estuaries.
3. Incorporate the control of pollution from land-based activities, (for example, agriculture and residential development) into land use planning and management.
4. Establish and enforce standards and guidelines for the disposal of waste water and other discharges from buildings, industrial, domestic and other activities into the coastal zone.
5. Enforce all pollution standards to maintain coastal water quality that is consistent with international standards for both human and ecosystem health.

## STRATEGIES

**Goal 3** - *Capacity development at all levels and in all areas: institutional, technical and sectorial*

**Objective 3.1** - *To develop the institutional, professional and technical capacity for ICZM.*

Strategies -

1. Conduct a capacity needs assessment for ICZM within relevant government institutions.
2. Recruit and/or train persons for an ICZM coordinating agency that will take the lead in ICZM.
3. Develop and implement appropriate training programmes for policy makers and senior managers in public and private sector entities that have interests in the coastal zone.
4. Develop and implement appropriate training for middle management personnel in relevant public and private sector agencies (e.g. agriculture, fisheries, tourism, construction, utilities).



## STRATEGIES

**Objective 3.2** - *To achieve a high level of public awareness and education about ICZM, planning and resource use.*

### Strategies -

1. Systematically promote education and awareness of the importance of coastal resources.
2. Develop and implement comprehensive mass media public educational programmes on the value of the coastal zone.
3. Incorporate the value and sustainable use of coastal resources in the schools' curriculum.
4. Develop and implement training programmes which will be available at the community level.
5. Encourage use of best practices.

**Objective 3.3** - *To minimise the potential for user conflicts and manage all aspects of human behaviour that is deleterious to a healthy coastal zone.*

### Strategies -

1. Train personnel in strategies for conflict resolution including training and capacity for enforcement.
2. Ensure public and stakeholder educational programmes incorporate the sustainable use and management of coastal resources.
3. Where necessary and appropriate, introduce spatial coastal planning in the absence of a detailed coastal zone management plan, and educate coastal resource users about the same.

## MONITORING AND EVALUATION OF THE ICZM POLICY

This ICZM Policy details a series of objectives and strategies to guide ICZM in Grenada. Successful implementation of the Policy requires that an implementation plan be developed that would include a strategy for monitoring and evaluation. In this regard, this ICZM Policy should be independently reviewed every five (5) years. **The review should comprise the following:**

1. **Compliance review** – assess decisions taken during the implementation period that matched or did not match the policy objectives: has Grenada taken the policy into account in decision making?
2. **Implementation review** – assess the overall progress towards achieving goals and objectives: has Grenada done what was required by the policy?
3. **Performance review** – has implementation of the policy resulted in improved ICZM and consequently, a healthier coastal zone, a more educated citizenry, etc.; was the policy wrong to begin with (gaps, wrong concepts, right concepts but wrong recommendations, etc.)?

The outcome of the policy review will be a revised policy that takes account of past achievements and plans for future challenges in managing the coasts of Grenada. It is further recommended that policy implementation and monitoring and evaluation, be initially combined with the process of implementing the Preliminary Roadmap for ICZM, as the two (2) are intended to be closely integrated until an ICZM Plan is completed.

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