GRENADA

National Biodiversity Strategy and Action Plan 2016-2020

Spencer Thomas Ph.D

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LIST OF ACRONYMS AND ABBREVIATIONS

CHM	Clearing House Mechanism
CSEGRIN	Caribbean Seed and Germplasm Resources Information Network
GEF	Global Environment Facility
FAO	Food and Agriculture Organisation
NBSAP	National Biodiversity Strategies and Action Plan
SLM	Sustainable Land Management
UNEP	United Nations Environment Programme

Executive Summary:

1. Background

This document constitutes a revision and updating of Grenada's National Biodiversity Strategy and Action Plan pursuant to its obligations under the Convention on Biological diversity.

The Government of Grenada with assistance from the Global Environment Facility (GEF), through the United Nations Environment Programme (UNEP) has elaborated the revised NBSAP in accordance with Article 6 of the Convention and with guidance in Decision IX/9 of the Conference of the Parties and the Aichi targets of the Convention on Biological Diversity. The revised NBSAP is and geared to facilitate the integration of biodiversity conservation and sustainable use into national decision making and mainstreaming across all sectors of the national economy and policy making framework.

Grenada prepared and submitted its first NBSAP in 2000 in light of the 2010 Global Biodiversity Strategy. The revised NBSAP builds on the earlier document and reflects the current socio economic and environmental realities facing the country.

The 2011-2020 Strategic Plan for Biodiversity and the Aichi Targets provided the global backdrop for the revised NBSAP. The NBSAP has been prepared in parallel with Grenada Fifth National Report to the Convention which was submitted to the Secretariat of the Convention in July 2014. The strategy outlined in this document therefore emanates from the status of Grenada's biodiversity contained in the Fifth National Report and covers the period 2015-2020. Thus the key biodiversity information including the status and trends are not repeated or referenced in detail in this document.

2. Assessment of Implementation

The assessment of implementation of Grenada's NBSAP for the period 2000-2005 reveals that in the meanwhile some progress was made there remains must to be accomplished on the two major goals to conserve and sustainably use native biodiversity and to ensure a fair and equitable sharing of the benefits arising out of the utilization of genetic and ecosystem resources. On the activities level implementation ranged from "no action taken" to "fully completed" with the bulk of

activities labeled as “ongoing but requiring further action”. Thus the NBSAP elaborated in 2000 has not been fully implemented to date. Several project related activities were embarked on but in the main the overall implementation rate was just below the satisfactory level. It was noted that several projects were currently ongoing.

The major implementation obstacles identified were as follows:-

- Lack of adequate financial resources
- Dependence on external resources
- Lack of adequate political will and sustained leadership on environmental issues
- Given the state of the economy, the implementation of the NBSAP was not maintained as a priority agenda
- The devastating impacts of hurricanes and other natural disasters
- Inadequate institutional support structures for implementation including specific budgets, data management systems and ongoing analysis monitoring and evaluation.
- Lack of integration of NBSAP priorities in local programming and decision making
- Lack of integration and mainstreaming of NBSAP priorities into national development plans and programmes
- Lack of enforcement of relevant laws and regulations
- Lack of sustained public education and information programming
- Lack of adequate institutional framework and capacities for conservation and linked appreciation of the linkages between biodiversity conservation and socio economic developments

3. Current Status

Grenada possesses a relatively high degree of biodiversity with an environmental profile which is characterized as particularly fragile and vulnerable to external shocks. The socioeconomic conditions particularly in the wake of two devastating Hurricanes in 2004 and 2005, the global economic slowdown from 2008, extreme drought conditions in 2009 and 2010 and macro economy instability from 2008 to 2014 conditioned and influenced the national approach to biodiversity conservation and environmental sustainability.

The success of the home grown structural adjustment programme however provided a more conducive environment for the implementation of the new strategy.

Despite these external shocks, the national commitment and policy responses to environmental sustainability remained steadfast in the recognition that biodiversity conservation remains a practical means to address national social and economic ills and to enhance livelihoods and investments for social and economic transformation.

Grenada natural ecosystems ranges from natural rain forests, dry forests, terrestrial agricultural systems, fresh water systems, mangroves forests and coastal and marine ecosystems. These ecosystems house many endemic, threatened and endangered species and are the source of various ecosystem goods and services which support the livelihood of the Grenadian population.

The national forest cover estimated at 17% consists of four major forest types and provides significant economic, social and cultural benefits. In the aftermath of Hurricane Ivan, 95 percent of Grenada's forest were destroyed and the wildlife population was decimated. Major forest restoration initiatives were embarked on over the years and the forest ecosystems are now classified as recovering ecosystems. The major forest ecosystem in located within a national protected area.

The espoused national policy is to initially restore and maintain the forest cover to the 17 percent level and then gradually to increase the coverage over time.

A significant portion of Grenada's population lives in close proximity to and depends on the forest ecosystem for goods and services as the main source of income.

The main threats to Grenada's forest biodiversity include the impact of natural disasters, fires, pest infestation, clearing of lands for agriculture and tourism development, housing settlements, animal tethering, infrastructure development and commercial activities.

The terrestrial agricultural systems are dominated by permanent crop plantation on relatively small holdings. Small and micro enterprises and backyard cottage activities characterize the temporary crop production systems.

Given the extent of the devastation of these agricultural production systems by extreme natural events in particular during that period 2004 to 2010, a comprehensive agricultural rehabilitation programme was initiated and is currently ongoing. Major ecosystems types and species are now in the recovery phase.

The agricultural sector continues to make a significant contribution to national gross domestic product and constitute the major source of income for much of the Grenadian population especially in the rural economy. The Biodiversity in Grenada's agricultural landscape depends on the intensity of land use changes, chemical fertilizers use, pesticides use and unsustainable agricultural practices. It is generally agreed that population growth, infrastructure development and unsustainable production and consumption decisions drive the demand for, extraction and conversion of natural habitats. At the same time these activities drive the loss of biodiversity and reduce options for enhanced income and livelihood in the medium to longer term.

The main threats to Grenada's agricultural biodiversity includes the impact of natural disasters, habitat degradation and loss, invasive alien species, pesticide use, the use of genetically modified organisms and unsustainable production and consumption systems.

The biodiversity in freshwater ecosystems has been generally in relatively good condition. Freshwater resources are critical for water and food security and are the bedrock for the tourism and agricultural sectors which constitute the main sources of livelihood of the Grenadian population.

The main threats to biodiversity in Grenada's fresh water ecosystems are pollution through waste disposal, unsustainable consumption, unsustainable agricultural practices, saline intrusion, invasive alien species and over exploitation of the resources.

The coastal and marine ecosystems in Grenada can best be described as over exploited, over used and in some cases completed destroyed. For example, 90% of the Country's mangroves forests were destroyed during Hurricane Ivan. The coral reefs and sea grass beds are under severe stress. The coastal ecosystems are prime target for agricultural, energy, tourism and construction activities while at the same time these ecosystems are critical to enhanced income and livelihood.

The main threats to Grenada's biodiversity in coastal and marine ecosystems are pollution, beach sand mining, unsustainable farming, fishing, recreational and cultural practices, habitat destruction for development purposes, invasive alien species and the impacts of climate change and natural disasters.

3.1 Lessons Learnt:

The major lessons learnt from the implementation of the Convention in Grenada include the following:

- Political leadership and commitment to biodiversity conservation is necessary.
- Direct linkages between biodiversity conservation and improved livelihood and wellbeing are critical for "buy-in" and ownership for behavioral change to move sustainable production and consumption patterns.
- A recognition that improved macroeconomic and social development conditions directly depend upon biodiversity conservation and effective management.
- There is a need to focus on the direct and indirect drivers of biodiversity loss.
- It is imperative to engender full participation and involvement of all major stakeholders including public, private, civil society and local communities in biodiversity decision making.
- While sectoral approaches are most convenient there is the need to foster collaboration integration and holistic approaches on the national level.
- The necessary institutional structures must be in place with the human resources, financial and technical capacities.
- With the focus on implementation a comprehensive and sustained public education and awareness programme is an imperative.
- There is great importance and utility in adopting regional approaches to biodiversity conservation and management.

4. Biodiversity Strategy

The foundation of the revised NBSAP are as follows:

4.1 Vision

Biodiversity Proactively Conserved for Enhanced National Resilience, Human Wellbeing and Livelihoods.

4.2 Mission

By 2020 targeted nationwide actions, restore and manage key national ecosystems in order to conserve biodiversity and to enhance the provision of ecosystem good and services for human wellbeing.

4.3 Goal

To achieve balanced national sustainable growth and development through proper ecosystem functioning for the benefit of the present and future generations.

4.4 Objectives

To provide a holistic and practical framework for actions on conservation and sustainable use of national biodiversity for enhanced human wellbeing and livelihoods.

4.5 Strategic Plans

1) Enhanced national capacity for biodiversity conservation and sustainable use
2) Key national ecosystems restored and sustainably managed.

4.6 Principles

- Equity and social justice must underpin national interventions and actions
- Participatory governance and holistic approaches must be integral factors
- Specific focus must be placed on sustainable socioeconomic development within the context of national economic transformation

- Public awareness, education and capacity building for biodiversity are national imperatives

- Biodiversity must be perceived as part of the national heritage for benefit of present and future generations.

- Education, information, public awareness, valuation and importance of biodiversity infused in national programming and decision making (Aichi Target 1)

- Integration, mainstreaming and linkages of biodiversity conservation and sustainable use established across all decision making levels (Aichi Target 2)

- Biodiversity knowledge, science and technology shared and applied and national capacity built (Aichi Target 19)

- Adequate resources are made available for biodiversity conservation and sustainable use and the NBSAP is fully implemented (Aichi Targets 20, 17)

- Key national terrestrial and marine ecosystems are restored and sustainably managed. The priority ecosystems are forest, agriculture, fresh water and coastal and marine (Aichi Targets 6, 7, 8, 9, 10, 11, 14)

4.7 Plan

Strategic Priority	**Focus Areas**
1. Enhancing National Capacity	Governance, education and public awareness, knowledge management and capacity building and institutional frameworks.
2. Restoration and Sustainable Management	Forest biodiversity, agriculture biodiversity, freshwater biodiversity and coastal and marine biodiversity.

4.8 Implementation Imperatives

- Ministry of Agriculture – taking the lead for implementation, working collaboratively with other public, private and civil society organizations.

- Environment Unit taking the lead for coordination, monitoring and evaluating and reporting on NBSAP implementation.

- Institutional strengthening and capacity building for enhanced inter and intra ministry and stakeholder coordination is a necessity.

- A thorough mapping of stakeholder engagement, participation and linkages should be elaborated and tied to agreed nation policies including enhanced livelihoods and poverty reduction.

- A sustained targeted and relevant communications policy for enhanced awareness and education demonstrating direct linkages to enhanced livelihoods should be elaborated.

- Enhanced domestic resource mobilization must complement enhanced international resource flows and in this regard there is a need to invest in national capacity to leverage additional financial flows for biodiversity implementation.

- An active monetary, evaluation and reporting framework based on agreed indication in line with the Aichi targets should be commissioned.

- Periodic implementation gap analysis should be conducted with a view to address all implementation deficits.

5. Conclusion

The revised NBSAP highlights the importance of biodiversity conservation and ecosystem services for enhanced livelihood, national development and poverty reduction. The key objective of the revised NBSAP is to enhance and institutionalized the mainstreaming of biodiversity in all national development processes to achieve ague national targets consistent with the Aichi targets and Grenada's obligation under the Convention on Biological Diversity. The revised NBSAP is designed to enhance Grenada's commitment and resolve to consistent and sustained biodiversity programming.

CHAPTER 1

1.0 INTRODUCTION:

1.1 Background:

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The Government of Grenada with assistance from the Global Environment Facility (GEF), through the United Nations Environment Programme (UNEP) has elaborated the revised NBSAP in accordance with Article 6 of the Convention and with guidance in Decision IX/9 of the Conference of the Parties and the Aichi targets of the Convention on Biological Diversity. The revised NBSAP is and geared to facilitate the integration of biodiversity conservation and sustainable use into national decision making and mainstreaming across all sectors of the national economy and policy making framework.

Grenada prepared and submitted its first NBSAP in 2000 in light of the 2010 Global Biodiversity Strategy. The revised NBSAP builds on the earlier document and reflects the current socio economic and environmental realities facing the country.

These include the impacts of climate change and national disasters with the attendant continued environmental degradation; macro economy instability, high debt burden, high unemployment and national budgetary constraints; declining social infrastructure and weak competitiveness.

This strategy is complementary to the objectives of the ongoing Homegrown Economic Programme which seeks, inter alia, to create the enabling environment for private sector development including improving the investment environment and boosting growth; the reform of the energy sector; fiscal consolidation and strengthening of fiscal policy framework; macroeconomic structural reforms including comprehensive debt restructuring and strengthening of financial stability.

The 2011-2020 Strategic Plan for Biodiversity and the Aichi Targets provided the global backdrop for the revised NBSAP. The NBSAP has been prepared in parallel with Grenada Fifth National Report to the Convention which was submitted to the Secretariat of the Convention in July 2014. The strategy outlined in this document therefore emanates from the status of Grenada's biodiversity contained in the Fifth

National Report and covers the period 2016-2020. Thus the key biodiversity information including the status and trends are not repeated or referenced in detail in this document.

1.2 Plan:

The revised NBSAP is divided into six (6) chapters. Chapter 1 provides a brief background and outline of the strategy. Chapter 2 provides the overall context of the strategy including the process of elaboration of the initial NBSAP and a brief synopsis of its implementation. Chapter 3 provides a review of the current status on biodiversity conservation, including lessons learnt so far. Chapter 4 provides the various elements of the strategy including the action plan for implementation. Chapter 5 looks at various requirements for effective NBSAP implementation and Chapter 6 provides concluding perspectives.

CHAPTER 2

2.0 CONTEXT:

2.1 Elaboration of First NBSAP:

Grenada's first National Biodiversity and Action Plan (NBSAP) was completed in 2000 as part of Government's obligations under the Convention and the Government's commitment to sustainable management of the Country's national resources.

During the elaboration of the NBSAP a complete stocktaking and assessment exercise was conducted on the status of biological resources, benefits, threats and loss of biodiversity.

The exercise included an analysis of the following:-

- Biodiversity resources and cross sectoral issues including socio economic conditions
- Threats and root causes of loss of biodiversity
- Activities with adverse impacts on biodiversity
- Existing measures and programmes to address biodiversity loss
- Technologies for conservation and sustainable use
- Gaps in policy, regulatory, legislative and institutional frameworks
- Institutional strengthening and capacity building
- Existing needs and requirements to achieve desired objectives.

The analysis was concentrated in four major sector clusters.

- Fisheries, marine and coastal areas
- Agriculture, forestry and wildlife
- Land use and environmental planning
- Tourism

Aided by a series of public consultations and engagements the national priorities for biodiversity conservation and sustainable use of biodiversity were determined.

The NBSAP provided an in exhaustive list of policy, legislative and capacity building interventions based on two goals mirrored from the objectives of the Convention. The strategy included a practical and measurable set of objectives and strategies for a five year period. It was envisaged that the 5 year plan will be reviewed and updated in 2005.

2.2 Synopsis and Implementation Level:

A synopsis of this strategy and plan is provided in Table 1.

Table 1 also provides an assessment of the assessed current status of implementation:

Table 1

Synopsis: NBSAP (2000- 2005) Strategy and Action Plan

Goal	Objectives	Strategies	Actions
1. Conserve and sustainably use native biodiversity	• Provide broad-based support for conservation and sustainable use of biodiversity; • Protect key ecosystems from negative human induced impacts; • Develop and encourage sustainable utilization of biological resources that are essential to the livelihood of local communities;	• Greater public awareness on biodiversity issues and participatory planning would be employed to secure commitment for conservation of ecosystems, species and genome; • Set aside representative samples of major ecosystems and establish controls to ensure that further degradation is minimized or stopped; • Build capacity of local institutions and target communities to sustainably manage selected biological resources through partnership arrangements.	• Public discussions. Media programmes, public service announcements, displays and marketing documents on biodiversity conservation in Grenada will be targeted to selected sectors of the public; **Ongoing requiring significant action** • Develop a mechanism for incorporating biodiversity issues into the schools' curriculum; **Ongoing requiring significant action** • Community and public sector consultations will be used to help achieve consensus on biodiversity conservation and sustainable use policies, plans and programmes; **Satisfactory progress** • Prepare, approve and promote a national land use policy that incorporates biodiversity conservation and sustainable use; **Limited action taken**

			• Ecological survey of major ecosystems for conservation and legal status; **Satisfactory progress** • Assessment of past, current and future impacts on these sites; **Completed** • Determine if designated protected areas are adequate for protection of major ecosystems; **Completed** • Identify preferred management options for these ecosystems; **Completed** • Establish a national herbarium as the repository for research on local plant species; **Limited action taken** • Strengthen existing legislation for improved protection of biodiversity; **Ongoing requiring significant action** • Determine the priority habitats and biological resources for utilization; **Limited action taken** • Develop sustainable use plans and programmes for inland and coastal fishery, mangroves, forest resources and wildlife species through community consultations

			and technical expertise. These should be linked to or be part of the National Physical Development Plan; **Ongoing requiring significant action** • Provide relevant support for key groups; **No action taken** • Implement sustainable use plans and programmes. **No action taken**
2. Ensure a fair and equitable sharing of the benefits arising out of the utilization of genetic and ecosystem resources.	• Maintain , recover and promote genetic resources necessary for sustainable agriculture; • Provide information on key ecosystems for incorporation into national accounts and decisions on national development projects; • Develop economic instruments to promote the sustainable use of biological resources.	• Enabling activities will be put in place for national and locally based regional institutions to continue and expand on germplasm research and development, and biological pest control for agriculture; • International, regional and local assistance will be sought for determining the valuation of ecosystems of national importance; • Ensure that resources users bear cost of environmental degradation;	• Policy, legislation and incentives will be developed to support germplasm and biological pest control research and development; **No action taken** • The capacity of key institutions will be enhanced to collect, identify, characterize, store and document plant genetic resources; **No action taken** • A national germplasm programme will be developed, to include awareness, certification and standards for seed exchange; **No action taken** • Biological pest control will be actively promoted through an

			education and awareness programme for farmers; **Ongoing requiring significant action** • Linkages will be strengthened with the FAO and its Global System on Plant Genetic Resources, the Caribbean Seed and Germplasm Resources Information Network (CSEGRIN), and other relevant agencies and networks; **Ongoing requiring significant action** • Identify different ecosystems of national importance through consultations with the major stakeholders; **Completed** • Identify and procure technical assistance for conducting the valuation of these ecosystems; **Completed** • Train personnel from relevant ministries in valuation methodologies; **Ongoing requiring significant action** • Package and present the results of the valuation to selected senior government decision makers; **Completed**

			• Determine and encourage the most appropriate mechanism for incorporation of the valuation results into the national accounts; **Satisfactory progress** • Review the incentives require to promote biodiversity preservation and conservation; **Ongoing requiring significant action** • Develop pollution charges and environmental levies for polluters; **Ongoing requiring significant action** • Impose user fees for resource utilization (eg. recreation areas, national parks); **Limited action taken** • Enforce environmental laws and penalties for violation; **Limited action taken** • Establish a system to monitor the use of biological resources. **Limited action taken**

2.3 Priority Projects 2000-2005:

Eight discrete priority projects for implementation over the 5 year period were agreed. These priority projects are outlined in Table 2 below.

The implementation status of each of these priority projects are also indicated in Table 2 below.

Table 2

Synopsis: NBSAP (2000-2005) Priority Projects

Project Title	Objective	Justification/Scope	Implementation Status: Degree of Integration
1. Building Awareness on Biological Diversity in Grenada	• Provide broad-based support for conservation and sustainable use of biodiversity	• There is insufficient awareness on the benefits of biodiversity and the need for conservation of key habitats among sectors of the public, including senior decision makers. The Project should build on existing public awareness initiatives to conserve biodiversity. • Public discussions, media programmes, public service announcements, displays and marketing documents on biodiversity conservation in Grenada will be targeted to schools and selected sectors of the public. A mechanism for incorporating biodiversity issues into the school curriculum will be developed.	• Largely accomplished • Activities were sporadic, adhoc and uncoordinated • High national awareness on the national level on imperative for conservation
2. Drafting a National Land Use Policy for Grenada	• Provide broad-based support for conservation and sustainable use of Biodiversity	• There is a lack of coherent policy for the management of land and marine resources. Conservation of critical biological resources requires national support and	• Coherent land use policy not in place • Wide ranging consultation completed

		commitment from the political directorate. • Community and public sector consultations will be used to help get consensus on biodiversity conservation and sustainable use policies, plans and programmes within sectors that use biological resources. • Prepare, approve and promote a national land use policy that incorporates biodiversity conservation and sustainable use.	
3. Strengthening Management of Key Ecosystems	• Protect key ecosystems from negative human induced impacts.	• Key ecosystems require baseline information for informing management decisions on protection and sustainable national benefits • Ecological survey of major ecosystems for conservation. • Assessment of past, current and future impacts on these sites. • Determine if designated protected areas are adequate for protection of major ecosystems.	• Significant assessment work completed • National policy statements made • Implementation deficit remains • National herbarium not established • Draft protected areas legislation

		• Identify preferred management options for these ecosystems. • Develop and establish a national herbarium as the repository for research on local plant species.	
4. Promoting sustainable Use of Biological Resources	• Develop and encourage sustainable utilisation of biological resources that are essential to the livelihood of local communities	• Inadequate management of key biological resources has led to deterioration of habitat quality and productivity, and loss of potential earnings. • Determination of priority habitats and biological resources for utilisation. • Develop sustainable use plans and programmes for inland and coastal fishery, mangroves, forest resources, and wildlife species through community consultations and technical expertise. Need full participation of stakeholders/ users from outset for this to be effective. • Provide relevant training for key groups. • Implement sustainable use plans and programmes	• Several projects executed • Poverty policies elaborated • Several training programmes conducted • Enforcement remains an issue

5. Capacity Building for Germplasm Conservation	• Maintain, recover and promote genetic resources necessary for sustainable Agriculture	• There is no national policy for sustainable use of genetic resources in agriculture and inadequate local capacity to manage genetic resources. • Policy, legislation and incentives will be developed to support germplasm and biological pest control research and development. • The capacity of key institutions will be enhanced to collect, identify, characterise, store and document plant genetic resources. • A national germplasm programme will be developed, to include awareness, certification and standards for seed exchange. • Linkages will be strengthened with the FAO and its Global System on Plant Genetic Resources, the Caribbean Seed and Germplasm Resources Information Network (CSEGRIN), and other relevant agencies and networks.	• No significant activities • Linkages with FAO strengthened

6. Strengthening Biological Pest Control	• Maintain, recover and promote genetic resources necessary for sustainable Agriculture	• Awareness on and use of biological pest control by farmers needs to be strengthened so as to minimise the dependence on polluting pesticides • The Pest Management Unit will be strengthened to actively promote biological pest control through continued awareness and education programme for farmers, including on-farm demonstrations, research and development	• Awareness programme completed in response to specific events • Lack of enforcement remains an issue
7. Incorporating Ecosystem Valuation into National Accounting	• Provide information on key ecosystems for incorporation into national accounts and decisions on national development projects.	• The market value of nationally important ecosystems in terms of the goods and services provided, are unknown to senior government officials and are not included in national accounting process. This leads to further loss of critical coastal woodlands, wetlands and coral reefs in favour of infrastructural development options. • Identify key ecosystems of national importance through consultations with the major stakeholders.	• No significant achievement on incorporation • Key ecosystems identified • Valuation studies completed • Limited valuation training completed

		• Identify and procure technical assistance for conducting the valuation of these ecosystems. • Train personnel from relevant ministries in valuation methodologies so that other areas can be undergo economic valuation for incorporation into national accounts. • Package and present the results of the valuation to selected senior government decision makers. • Determine and encourage the most appropriate mechanism for incorporation of the valuation results into the national accounts.	
8. Strengthening Existing Legislation for Biodiversity Protection	• Protect key ecosystems from negative human induced impacts.	• Key ecosystems and biological resources require legislative support for effective protection so that national benefits can be sustained. • Revise key pieces of legislation to better support biodiversity protection. • Develop regulations for implementation of the legislation	• New legislation enacted • Lack of enforcement remains an issues • Institutional strengthening required

2.4 Summary of the Status of Implementation of NBSAP 2000 – 2005:

The NBSAP elaborated in 2000 has not been fully implemented to date. Several projects related activities were embarked on but in the main the overall implementation rate was just below the satisfactory level. It was noted that several projects were currently ongoing.

The major implementation obstacles identified were as follows:-

- Lack of adequate financial resources
- Dependence on external resources
- Lack of adequate political will and sustained leadership on environmental issues
- Given the state of the economy, the implementation of the NBSAP was not maintained as a priority agenda
- The devastating impacts of hurricanes and other natural disasters
- Inadequate institutional support structures for implementation including specific budgets, data management systems and ongoing analysis monitoring and evaluation.
- Lack of integration of NBSAP priorities in local programming and decision making
- Lack of integration and mainstreaming of NBSAP priorities into national development plans and programmes
- Lack of enforcement of relevant laws and regulations
- Lack of sustained public education and information programming
- Lack of adequate institutional framework and capacities for conservation and linked appreciation of the linkages between biodiversity conservation and socio economic developments

CHAPTER 3

3.0 CURRENT STATUS ON BIODIVERSITY CONSERVATION:

Grenada possesses a relatively high degree of biodiversity with an environmental profile which is characterized as particularly fragile and vulnerable to external shocks. The socioeconomic conditions particularly in the wake of two devastating Hurricanes in 2004 and 2005, the global economic slowdown from 2008, extreme drought conditions in 2009 and 2010 and macro economy instability from 2008 to 2014 conditioned and influenced the national approach to biodiversity conservation and environmental sustainability. The success of the home grown structural adjustment programme however provided a more conducive environment for the implementation of the new strategy

Despite these external shocks, the national commitment and policy responses to environmental sustainability remained steadfast in the recognition that biodiversity conservation remains a practical means to address national social and economic ills and to enhance livelihoods and investments for social and economic transformation.

Grenada natural ecosystems ranges from natural rain forests, dry forests, terrestrial agricultural systems, fresh water systems, mangroves forests and coastal and marine ecosystems. These ecosystems house many endemic, threatened and endangered species and are the source of various ecosystem goods and services which support the livelihood of the Grenadian population.

The national forest cover estimated at 17% consists of four major forest types and provides significant economic, social and cultural benefits. In the aftermath of Hurricane Ivan, 95 percent of Grenada's forest were destroyed and the wildlife population was decimated. Major forest restoration initiatives were embarked on over the years and the forest ecosystems are now classified as recovering ecosystems. The major forest ecosystem in located within a national protected area.

The espoused national policy is to initially restore and maintain the forest cover to the 17 percent level and then gradually to increase the coverage over time.

A significant portion of Grenada's population lives in close proximity to and depends on the forest ecosystem for goods and services as the main source of income.

The main threats to Grenada's forest biodiversity include the impact of natural disasters, fires, pest infestation, clearing of lands for agriculture and tourism

development, housing settlements, animal tethering, infrastructure development and commercial activities.

The terrestrial agricultural systems are dominated by permanent crop plantation on relatively small holdings. Small and micro enterprises and backyard cottage activities characterize the temporary crop production systems.

Given the extent of the devastation of these agricultural production systems by extreme natural events in particular during that period 2004 to 2010, a comprehensive agricultural rehabilitation programme was initiated and is currently ongoing. Major ecosystems types and species are now in the recovery phase.

The agricultural sector continues to make a significant contribution to national gross domestic product and constitute the major source of income for much of the Grenadian population especially in the rural economy. The Biodiversity in Grenada's agricultural landscape depends on the intensity of land use changes, chemical fertilizers use, pesticides use and unsustainable agricultural practices. It is generally agreed that population growth, infrastructure development and unsustainable production and consumption decisions drive the demand for, extraction and conversion of natural habitats. At the same time these activities drive the loss of biodiversity and reduce options for enhanced income and livelihood in the medium to longer term.

The main threats to Grenada's agricultural biodiversity includes the impact of natural disasters, habitat degradation and loss, invasive alien species, pesticide use, the use of genetically modified organisms and unsustainable production and consumption systems.

The biodiversity in freshwater ecosystems has been generally in relatively good condition. Freshwater resources are critical for water and food security and are the bedrock for the tourism and agricultural sectors which constitute the main sources of livelihood of the Grenadian population.

The main threats to biodiversity in Grenada's fresh water ecosystems are pollution through waste disposal, unsustainable consumption, unsustainable agricultural practices, saline intrusion, invasive alien species and over exploitation of the resources.

The coastal and marine ecosystems in Grenada can best be described as over exploited, over used and in some cases completed destroyed. For example, 90% of the Country's mangroves forests were destroyed during Hurricane Ivan. The coral reefs and sea grass beds are under severe stress. The coastal ecosystems are prime

target for agricultural, energy, tourism and construction activities while at the same time these ecosystems are critical to enhanced income and livelihood.

The main threats to Grenada's biodiversity in coastal and marine ecosystems are pollution, beach sand mining, unsustainable farming, fishing, recreational and cultural practices, habitat destruction for development purposes, invasive alien species and the impacts of climate change and natural disasters.

3.1 Lessons Learnt:

The major lessons learnt from the implementation of the Convention in Grenada include the following:

- Political leadership and commitment to biodiversity conservation is necessary.
- Direct linkages between biodiversity conservation and improved livelihood and wellbeing are critical for "buy-in" and ownership for behavioral change to move sustainable production and consumption patterns.
- A recognition that improved macroeconomic and social development conditions directly depend upon biodiversity conservation and effective management.
- There is a need to focus on the direct and indirect drivers of biodiversity loss.
- It is imperative to engender full participation and involvement of all major stakeholders including public, private, civil society and local communities in biodiversity decision making.
- While sectoral approaches are most convenient there is the need to foster collaboration integration and holistic approaches on the national level.
- The necessary institutional structures must be in place with the human resources, financial and technical capacities.
- With the focus on implementation a comprehensive and sustained public education and awareness programme is an imperative.
- There is great importance and utility in adopting regional approaches to biodiversity conservation and management.

3.2 Process of Elaborating the Revised NBSAP:

The revised NBSAP was prepared in conjunction with the fifth National Report during which period a comprehensive engagement of the key stakeholders was conducted. Community based consultations in particular local and rural communities, sector based practitioners and civil society organisations were integrally involved in determining the scope and direction of travel for the revised NBSAP in accordance with the guidelines in Decision IX/9 of the Conference of the Parties and the Aichi targets. The ensuing national biodiversity strategy has been endorsed by the stakeholder groups prior to its finalization and endorsement by the Government of Grenada for onward submission to the Secretariat to the Convention on Biological Diversity.

CHAPTER 4

4.0 BIODIVERSITY CONSERVATION STRATEGY:

4.1 Vision, Mission, Goal and Objective

4.1.1 Vision

The national vision for biodiversity conservation and sustainable use is rooted in the need for the determination of its linkages with national growth, income generation, poverty alleviation and enhanced livelihoods for present and future generations

The agreed articulated vision with a 2050 time horizon is as follows:

Biodiversity Proactively Conserved for Enhanced National Resilience, Human Wellbeing and Livelihoods.

4.1.2 Mission

The mission for Grenada's biodiversity strategy with time horizon of 2020 is underpinned by two major factors.

- The need for restoration of key natural ecosystems to efficiently functioning units for the provision of ecosystem goods and services in the wake of the devastation caused by extreme weather events.

- The need for biodiversity conservation to be an integral part of the solution to macroeconomic stability and socioeconomic transformation of the Grenadian economy under the Home Grown Economic Programme.

The articulated mission is as follows:

By 2020 targeted nationwide actions, restore and manage key national ecosystems in order to conserve biodiversity and to enhance the provision of ecosystem good and services for human wellbeing.

4.1.3 Goal:

The primary goal of the strategy is to achieve balanced national sustainable growth and development through proper ecosystem functioning for the benefit of the present and future generations.

4.1.4 Objective:

The objective of the strategy is to provide a holistic and practical framework for actions on conservation and sustainable use of national biodiversity for enhanced human wellbeing and livelihoods.

4.2 Strategic Priorities:

The strategic priorities to achieve the goal and objective are as follows:-

1) Enhanced national capacity for biodiversity conservation and sustainable use
2) Key national ecosystems restored and sustainably managed

4.3 Principles:

The overachieving principles of the strategy are as follows:-

- Equity and social justice must underpin national interventions and actions
- Participatory governance and holistic approaches must be integral factors
- Specific focus must be placed on sustainable socioeconomic development within the context of national economic transformation
- Public awareness, education and capacity building for biodiversity are national imperatives
- Biodiversity must be perceived as part of the national heritage for benefit of present and future generations.

4.4 National Priority Targets

The elaboration of the national targets for biodiversity conservation and sustainable use took the twenty globally agreed Achi Targets and the timeframe of 2020 as the starting points. The key criteria employed in determining the national priority targets were the current state of biodiversity in key ecosystems, the availability of

resources, the relevance to national resource endowment and culture and the linkages to income generation priority alleviation and enhanced livelihoods.

While the national commitment to implement each of the twenty Aichi Targets was not to be reduced, it was agreed that the globally agreed Aichi Targets were very important, interconnected, crosscutting and relevant on the national level.

Prioritization of targets was therefore seen as a strategic element in itself based on nationally agreed criteria and capacity to implement in the referenced time frame.

The national priority targets were as follows:-

- Education, information, public awareness, valuation and importance of biodiversity infused in national programming and decision making (Aichi Target 1)

- Integration, mainstreaming and linkages of biodiversity conservation and sustainable use established across all decision making levels (Aichi Target 2)

- Biodiversity knowledge, science and technology shared and applied and national capacity built (Aichi Target 19)

- Adequate resources are made available for biodiversity conservation and sustainable use and the NBSAP is fully implemented (Aichi Targets 20, 17)

- Key national terrestrial and marine ecosystems are restored and sustainably managed. The priority ecosystems are forest, agriculture, fresh water and coastal and marine (Aichi Targets 6,7,8,9,10,11,14)

4.5 Action Plan:

Based on above strategic elements and action plan for 2015-2020 implementation was elaborated. In order to avoid a wish list approach, the plan focused on four priority areas within each strategic priority. For strategic priority one (1) on enhancing national capacity, the focus areas are governance, education and public awareness, knowledge management and capacity building and institutional frameworks.

For strategic priority number two (2) on restoration and sustainable management of key ecosystems, the focus areas took a sectoral dimension based on national level circumstances and in line with the Aichi Targets. The priority focus areas are forest biodiversity, agriculture biodiversity, freshwater biodiversity and coastal and marine biodiversity.

The priority actions were formulated in a manner which allows the lead agency the agility and flexibility to be more granular on the practical level. The timeframe for all priority actions identified are for the implementation period to 2020 recognizing of course that some activities will be ongoing beyond the 5- year time horizon.

The action plan 2016-2020 took on board the major implementation obstacles identified in the implementation of the NBSAP 2000-2005 and the lessons learnt from the implementation of the Convention over the years 2000-2015.

Table 3

Action Plan: 2015 – 2020 Implementation

Strategic Priority1: Enhanced National Capacity for Biodiversity Conservation and Sustainable Use			
Priority Areas	**Priority Actions**	**Agency**	
		Lead	**Support**

1. Governance	• Review and update policy, legislative institutional and governance frameworks for biodiversity management, climate change, Sustainable Land Management and disaster risk reduction in keeping with national and international obligations in particular environmental convention obligations, domestic risk reduction, financing for development and sustainable development goals
	
	• The priorities included the following:
	  • National Parks and Protected Areas
	  • Physical Planning and Development Control
	  • Climate change, forestry and fisheries.
		Ministry of Legal Affairs
		
		Ministry of Agriculture, Lands, Forestry, Fisheries & Environment
			Ministry of Finance, Planning, Economic Development, Trade, Energy & Cooperatives
			
			Ministry of External Affairs
			
			Office of the Prime Minister

	• Establish inclusive, participatory and collaborative mechanisms among key biodiversity stakeholders based on a stakeholder mapping exercise for enhanced efficiency and effectiveness.
	
	• These include:
	  • Social Partnership Protocol
	  • Establishment of Parish and Village Committees and Organizations
		Ministry of Agriculture, Lands, Forestry, Fisheries & Environment	Ministry of Finance Planning, Economic Development, Trade, Energy & Cooperatives
			
			Committee on Social Protocol

	• Develop and elaborate a comprehensive land use and land management strategy and strategy for mainstreaming the management of ecosystem functioning, goods and services into developmental planning
	
	• Priorities includes:
	  • National land use policies including zoning
	  • National coastal zone management policy
	  • UNCCD Action Plan
	  • Forestry Policy and Protected Areas Plan
		Ministry of Agriculture, Lands, Forestry, Fisheries & Environment
		
		Physical Planning Unit
			Ministry of Finance, Planning, Economic Development, Trade, Energy & Cooperatives

	• Ratify the protocol on access and benefit sharing arising out of the utilization of genetic and ecosystem resources; sign the supplementary protocol on liability and redress to the Cartagena Protocol on biodiversity and establish the requisite governance and institutional frameworks	Ministry of Foreign Affairs Ministry of Legal Affairs	Ministry of Tourism, Civil Aviation & Culture Office of the Prime Minister Ministry of Agriculture, Lands, Forestry, Fisheries & Environment
	• Develop regional and sub-regional approaches and initiatives for sustainable use and management of biodiversity with active participation in international processes • Enhanced collaboration with regional and sub-regional institutions like CARICOM and OECS on environmental management.	Ministry of Agriculture, Lands, Forestry, Fisheries & Environment	Ministry of Finance, Planning, Economic Development, Trade, Energy & Cooperatives Ministry of Finance, Planning, Economic

			Development, Trade, Energy & Cooperatives Office of the Prime Minister
2. Education and Public Awareness	• Establish a sustained, comprehensive education and public awareness programme to focus on community development and sustainable livelihoods, leadership, advocacy, applied demonstration, valuation, synergies, linkages and national capacity for the management of biodiversity. • This includes a series of focused campaigns targeting specific audiences on selected issues of biodiversity.	Ministry of Agriculture, Lands, Forestry, Fisheries & Environment	Ministry of Finance, Planning, Economic Development, Trade, Energy & Cooperatives Social Protocol Partners Ministry of Education and Human Resource Development Civil society

	• Build capacity of local institutions for sustained biodiversity programming, enhanced collaboration, integration, mainstreaming and participatory planning and decision making
	
	• The priority institutions are:
	  • Community Based Organizations
	  • Sustainable Development Committees
	  • National Non-Government Organizations
	  • National Sector Based Organizations and Clubs
		Ministry of Agriculture, Lands, Forestry, Fisheries & Environment
		
		Ministry of Education and Human Resource Development
			Sustainable Development Council
			
			Ministry of Finance, Planning, Economic Development, Trade, Energy & Cooperatives
			
			Ministry of Tourism, Civil Aviation & Culture

			Social Protocol Partners Sustainable Development Council
3. Knowledge Management	• Develop a local repository of representative samples of biodiversity and mechanisms for maintenance and promotion of genetic and ecosystem resources. The priority is a national Germ Plasm Bank	Ministry of Agriculture, Lands, Forestry, Fisheries & Environment	Ministry of Finance, Planning, Economic Development, Trade, Energy & Cooperatives
	• Build national capacity for technology and taxonomic knowledge with systematic and standardized methods and protocols for biodiversity data and information management	Ministry of Agriculture, Lands, Forestry, Fisheries & Environment	Ministry of Finance, Planning, Economic Development, Trade, Energy & Cooperatives St. George's University
	• Prioritize research and development, biodiversity indicators development, environmental and social impact assessments and demonstration projects for adoption and replication of sustainable use and management of biodiversity	Ministry of Agriculture, Lands, Forestry, Fisheries & Environment Ministry of Education and Human Resource Development	Ministry of Finance, Planning, Economic Development, Trade, Energy & Cooperatives Ministry of Tourism, Civil Aviation & Culture St. George's University

		T.A Marryshow Community College	
4. Capacity and Institutional Framework	• Develop sustained financial mechanisms for biodiversity conservation and management through inter alia enhanced resource mobilization and national budget allocations	Ministry of Agriculture, Lands, Forestry, Fisheries & Environment Ministry of Finance, Planning, Economic Development, Trade, Energy & Cooperatives	Social Protocol Partners Ministry of Foreign Affairs
	• Strengthened the capacity of local institutions through inter alia, human resources capacities, established processes, procedures and protocols and indicators for monitoring the status and trends in biodiversity.	Ministry of Agriculture, Lands, Forestry, Fisheries & Environment Ministry of Finance, Planning, Economic Development, Trade, Energy & Cooperatives	Social Protocol Partners Sustainable Development Council Ministry of Education and Human Resource Development

	• Build capacities of farmers, fisher folks, community activists and leaders in soil and water conservation, biodiversity knowledge, food and nutrition security, sustainable livelihoods and sustainable production and consumption practices.	Ministry of Agriculture, Lands, Forestry, Fisheries & Environment	Ministry of Finance, Planning, Economic Development, Trade, Energy & Cooperatives Social Protocol Partners Sustainable Development Council
Strategic Priority 2: Key National Ecosystems Restored and Sustainably Managed			
Focus Area	**Priority Actions**	**Agency**	
		Lead	**Support**
5. Forest Biodiversity	• Extend and consolidate forest replanting, rehabilitation and restoration programme and mangrove forest replanting programme.	Ministry of Agriculture, Lands, Forestry, Fisheries & Environment Forestry Division Pest Control Unit	Ministry of Finance, Planning, Economic Development, Trade, Energy & Cooperatives
		Ministry of Agriculture, Lands, Forestry,	Ministry of Legal Affairs

	• Maintain protected areas status on the national forest ecosystem and extend forest cover beyond 17% while ensuring same is sustainably managed • Strengthen regulatory framework for National Parkes and Protected Areas • Enhanced management of designated Ramsar site and document lessons learnt for designation of future sites • Protect terrestrial biodiversity, wildlife and endangered species through active enforcement of legislation on natural resource extraction, species introduction and land use change.	Fisheries & Environment Ministry of Finance, Planning, Economic Development, Trade, Energy & Cooperatives Physical Planning Unit Ministry of Agriculture, Lands, Forestry, Fisheries & Environment	Royal Grenada Police Force Ministry of Finance, Planning, Economic Development, Trade, Energy & Cooperatives Ministry of Legal Affairs Royal Grenada Police Force
6. Agricultural Biodiversity	• Implement the national land use policy and sustainable land management plan to avert unsustainable land use change and land use intensification • Ensure that biodiversity conservation issues are mainstreamed in national land policies and related legislation.	Ministry of Agriculture, Lands, Forestry, Fisheries & Environment	Physical Planning Unit Ministry of Finance, Planning, Economic Development, Trade, Energy & Cooperatives

			Ministry of Tourism, Civil Aviation & Culture Ministry of Communications, Works, Physical Development, Public Utilities, ICT & Community Development Infrastructure
	• Embark on sustainable agricultural production systems including restricted use of inorganic fertilizers insecticides and pesticides, genetically modified organisms, introduction of alien species managing nutrient discharge and pollution, combating soil erosion and land degradation and safeguarding genetic diversity.	Ministry of Agriculture, Lands, Forestry, Fisheries & Environment Pest Management Unit	Ministry of Finance, Planning, Economic Development, Trade, Energy & Cooperatives Customs Department Royal Grenada Police Force
7. Fresh Water Biodiversity	• Establish, implement and monitor protocols for nutrient discharge and pollution, introduction of alien species, water extraction, unsustainable agricultural practices, saline intrusion and over exploitation of freshwater species.	Ministry of Agriculture, Lands, Forestry, Fisheries & Environment	Ministry of Finance, Planning, Economic Development, Trade, Energy & Cooperatives Customs Department

		Pest Management Unit National Water sewerage Authority	Royal Grenada Police Force Ministry of Tourism, Civil Aviation & Culture
	• Elaborate and implement a comprehensive watershed management plan and water harvesting distribution and utilization programme	Ministry of Agriculture, Lands, Forestry, Fisheries & Environment Forestry Department National Water and Sewerage Authority	Ministry of Finance, Planning, Economic Development, Trade, Energy & Cooperatives Ministry of Tourism, Civil Aviation & Culture
8. Coastal and Marine Biodiversity	• Double the current coverage of marine protected areas and establish systems for sustainable management of marine protected areas. • Develop national coastal zones policy and mainstream biodiversity conservation issues.	Ministry of Agriculture, Lands, Forestry, Fisheries & Environment	Ministry of Finance, Planning, Economic Development, Trade, Energy & Cooperatives
	• Monitor, report and enforce legislation on unsustainable terrestrial practices, coastal infrastructure development, tourism	Ministry of Agriculture,	Ministry of Tourism, Civil Aviation & Culture Ministry of Finance, Planning, Economic

	development, mangrove distinction, pollution and waste management, illegal extraction (in particular sand mining) and species, over exploitation and introductions.	Lands, Forestry, Fisheries & Environment	Development, Trade, Energy & Cooperatives Royal Grenada Police Force Customs Department Ministry of Tourism, Civil Aviation & Culture Social Protocol Partners
	• Embark on initiatives to build national resilience to mitigate the impacts of climate change and national disasters in the marine and coastal ecosystems	Ministry of Agriculture, Lands, Forestry, Fisheries & Environment Office of the Prime Minister National Disaster Management Agency	Ministry of Finance, Planning, Economic Development, Trade, Energy & Cooperatives PPU, Energy Division Ministry of Communications, Works, Physical Development, Public Utilities, ICT & Community Development

			Ministry of Tourism, Civil Aviation & Culture Social Protocol Partners
	• Consolidate the mangrove replanting and rehabilitation programme; establish a coral reef rehabilitation programme and sustainable recreational and tourism development programme	Ministry of Agriculture, Lands, Forestry, Fisheries & Environment Ministry of Tourism, Civil Aviation & Culture	Ministry of Finance, Planning, Economic Development, Trade, Energy & Cooperatives Social Protocol Partners Ministry of Education and Human Resource Development

CHAPTER 5

5.0 NBSAP IMPLEMENTATION:

5.1 Institutional Arrangement:

The effective implementation of the revised NBSAP depends on a plethora of national institutions working collaboratively involving public, private and civil society institutions with the public sector taking the lead responsibility. The key public sector institution is the Ministry of Agriculture, Lands, Forestry, Fisheries and the Environment, which also serves as the focal point for biodiversity related conventions.

Strengthening of this ministry in particular the Environment Unit to carry out the principal lead roles of coordination, monitoring and evaluation of NBSAP implementation is necessary and particular focus in this regard is an imperative.

Several subsidiary bodies within the lead Ministry are expected to shoulder the NBSAP implementation agenda in accordance with their specific mandates. These subsidiary bodies include the Forestry Division, the Fisheries Division, the Pest Management Unit, the National Watershed Management and Water Resources Unit, the Protected Areas Unit, the Agricultural Extension Unit and the Livestock Management Unit.

In addition, there are several statutory bodies established under the lead Ministry which have critical roles to play in NBSAP implementation. These include the Bureau of Standards, the National Science and Technology Council and the Food and Nutrition Council.

It is therefore imperative that an enhanced intra Ministry coordination group focus on NBSAP implementation constitutes a definitive way forward. This coordination focus must then extend outwards to other supporting ministries, quasi government bodies, private sector and civil society organization.

The key supporting institutions are as follows:-

- Ministry of Finance, Planning, Economic Development, Trade, Energy & Cooperatives

- Ministry of Tourism, Civil Aviation & Culture

- Ministry of Education and Human Resource Development
- Ministry of Communications, Works, Physical Development, Public Utilities, ICT & Community Development
- Ministry of Legal Affairs
- Ministry of Foreign Affairs
- Office of the Prime Minister
- National Disaster Management Agency
- The Social Protocol Committee
- The Sustainable Development Council
- The National Disaster Management Unit
- The National Climate Change Committee
- The Non State Actors Panel
- Industry Associations (Farmers, Fisher folks, Hunters, Tourism Entrepreneurs)
- Special Interest Groups (Academics, Community Groups, NGOs, Professional Associations, Faith Based Organizations)

Another key institutional consideration is the need for enhanced coordination among the various projects and initiatives relating to and impacting on biodiversity management. The various project management units must integrate their biodiversity related programming in line with the NBSAP implementation.

5.2 Stakeholder Engagement:

The Stakeholder engagement profile must include a thorough mapping of the potential roles and responsibilities of each major stakeholder listed above and an inclusive, dynamic and participatory protocol for engagement must be elaborated.

The issue of competing priorities among stakeholders were evident thus stakeholder engagement must address conflict resolution issues in particular conflicts within the biodiversity mainstreaming agenda and the biodiversity and livelihood nexus.

The fundamental thread of the stakeholder engagement policy is the direct linkages to livelihoods enhancements, income generation and poverty reduction. NBSAP implementation must be embedded and mainstreamed into macroeconomic and socioeconomic planning and development including infrastructure development on the economy wide level and must but also be part of the civil society programming. Each stakeholder must be afforded effective participation and involvement in all stages of the life cycle of NBSAP implementation initiatives. Each stakeholder must be made comfortable to facilitate data, information and knowledge sharing; cooperation and collaboration and the development of synergetic relationships and partnerships. The old adage of "what in it for me" must be the stakeholder engagement mantra.

5.3 Communication:

In line with the national priority targets and Aichi Target 1, NBSAP implementation must be facilitated by the elaboration of a communication strategy involving all key stakeholders and targeting the Grenadian public as a whole.

The local media will be critical to this exercise. The various media houses managers must be engaged on a strategic level to be convinced on the key role of media practitioners in communicating the virtues of NBSAP implementation. In addition, the engagement of traditional media, (Radio, TV, Print etc.) social media initiatives and other innovative information communications and technology systems must be employed. The educational institutions must be on board where initiatives must be targeted to reach the younger generations. The public education and awareness programme must be sustained throughout the period and must be targeted to reach the various publics for enhanced implementation action and for behavioral changes for a more responsible citizenry.

The public awareness and education programme must be simple and carry targeted group relevant messages and linked to sustainable livelihoods.

The Grenada Clearing House Mechanism (CHM) must be reactivated. The National CHM has been established and populated but within recent times there was a lull in CHM activities. The CHM is a most useful national level biodiversity planning and management tool. CHM linkages with stakeholders' portals, websites and other communication applications must be actively promoted.

5.4 Resource Mobilization Strategy:

Implementation of biodiversity conservation initiatives has been largely dependent on externally generated resources.

Enhanced domestic resource mobilization must complement international resource flows in the implementation of the revised NBSAP. A review of the national budget allocations for NBSAP implementation revealed that while limited specific allocations were made that components of NBSAP implementation were funded within related project specific allocations. The resource mobilization strategy calls for specific national budget line item allocation as an important signal of the priority for NBSAP implementation. Domestic resource mobilization efforts must take as a point of departure the key messages and recommendations coming out of the ecosystem valuation studies and the willingness to pay studies that have been completed. Levies, taxes, incentives, subsidies, user fees have been contemplated but these were not specifically geared for direct NBSAP implementation but for related activities.

For example, the environmental levy on importation of select goods are used for general national budget support for the environment. The proposed levy under the Caribbean Biodiversity Fund is targeted for enhanced management effectiveness of protected areas.

Domestic resource mobilization for NBSAP implementation must include innovative ways to generate local philanthropy, local private sector involvement, NBSAP implementation must be infused and integrated within various related projects implementation, related private sector and civil society programming with an explicit national budget allocation for capacity building, institutional strengthening and operational activities.

The resource mobilization strategy must also call for enhanced international resources for NBSAP implementation from multiple sources (bilateral, multilateral, philanthropy).

The capacity building and institutional strengthening especially within the projects units must bolster the national capacity to leverage additional financial resources. The national capacity and conditions precedent for accessing funds from the Green Climate Fund, the Adaptation Fund, the Clean Development Mechanism, the Technology Mechanism, the World Bank and the multitude of sources for developmental finance must be clearly established.

Grenada must continue to demonstrate leadership in environmental diplomacy on the international level, this coupled with national level biodiversity conservation actions and best practices to a low carbon future, are to be key elements of Grenada's resource mobilization strategy. Direct linkages must be made to the implementation of the sustainable development goals, the financing for development, climate change financing, disaster risk reduction and the global resource mobilization strategy for biodiversity management.

Another element of the resource mobilization strategy is the creation of an active system of cooperation and collaboration principally among the focal points of biodiversity related conventions and focal points for all developmental finance programmes. This system must extend beyond the national boundaries and linked to sub regional, regional and international initiatives.

Given the resource mobilization framework the specific cost and budget for each priority activity in particular the biodiversity component within the priority area will be elaborated by the lead implementing agency based on an agreed scope of works.

5.5 Implementation Timeline:

The timeline for implementation of the revised NBSAP is 2016 to 2020 to coincide with the Strategic Plan for Biodiversity and the Aichi Targets. A midterm review of the revised NBSAP implementation will be conducted at the end of 2017. It is envisaged that a new plan will be commissioned to cover the period 2020 to 2025.

5.6 Monitoring and Evaluation:

Consistent with the strategy outlined in this paper, the implementation of the revised NBSAP requires enhanced collaboration, cooperation and information sharing among the key implementing entities. These entities must be enabled to monitor, evaluate and report on status and trends in biodiversity conservation based on agreed national level indicators. The indicators provided in the initial NBSAP are still relevant for the revised NBSAP. After adjusting for the changed environment, the Aichi Targets and developments in biodiversity indicators piloted by the Biodiversity Indicators Partnership, the agreed national indicators are as follows:-

- Land Use Changes in hectares (annually)
    - Forest
    - Wetlands

    - Coral Reef, Sea Grass Beds, Mangroves
    - Agriculture
    - Residential, Industrial, Commercial, Tourism

- Habitat Conversion in hectares (annually)
    - Natural area converted by development
    - Number of native floral and faunal species
    - Number of endemic floral and faunal species
    - Number of threatened ecosystem and endangered floral and faunal species
    - Number and size of terrestrial and marine protected areas.

- Agro Chemical Usage (annually)
    - Pesticide importation and usage
    - Fertilizer importation and usage
    - Effluent discharge

- National Expenditure (annually)
    - National budget allocation
    - National expenditure on plan implementation broken down by sectors, habitats, initiatives and species

- Public Education, Awareness, and Outreach (annually)
    - Number of media events, school initiatives, community initiatives, consultations and other outreach activities

- Mainstreaming
    - Number of legislation revised and updated
    - Number of ecological survey and management plans of major ecosystem completed
    - Number of training initiatives completed
    - Number of valuation of key ecosystems completed
    - Number of ratification, accessing, signing of biodiversity related conventions
    - Number of policy, legislative and fiscal and operational initiatives completed
    - Number of private sector and civil society groups actively involved in biodiversity conservation
    - Number of Aichi Targets completed

The monitoring and evaluation system must be sufficiently agile to include all stakeholders to report and adapt priorities based on objective analyses and changing conditions. Each national target must be broken down in more granular manner to allow for local level participation with specific local level performance indicators and means of verification within the 2020 time frame.

5.7 Knowledge Gaps and Capacity Needs:

Several knowledge gaps and attendant capacity needs have been identified for implementation of the revised NBSAP. These include the following:-

- Spatial technologies data and mapping of the extent, distribution and changes of areas under sustainable management in forestry, fisheries, freshwater, mangroves, coral reefs, agriculture and other relevant sectors, species and ecosystems due to inter alia limited access to data, poor quality data, limited human resources, infrastructure and equipment.

- Limited access for management and use of bio technologies for plant genetic resources and animal genetic resources and the associated human and financial capacities.

- Limited access to technologies for climate change adaptation and mitigation, disaster risk reduction and marine and coastal zone management

- Limited access and use of technologies, infrastructure and capacity for testing, control and management of genetically modified organism

- Limited access to and use of technologies for accessing status and trends of key ecosystems and species

- Limited access to and use of technologies for management of invasive alien species and pests

The knowledge gaps and capacity needs will be reviewed and analyzed over the period of implementation of the revised NBSAP and external resources will be leveraged, engaged and contracted as appropriate to address these gaps.

CHAPTER 6

6.0 Conclusion:

The revised NBSAP was designed to achieve the further integration and mainstreaming of biodiversity conservation into national development planning. The lessons learnt during the implementation of the initial NBSAP and emerging national status and trends in biodiversity provided the platform for the revised NBSAP. This was framed in the context of Grenada's commitment and capacity to deliver on its obligations emanating from the Strategic Plan for Biodiversity and its Aichi Targets. Furthermore the revised NBSAP is reflective of and sensitive to the national socio-economic conditions and the linkages to biodiversity conservation and mainstreaming. The revised NBSAP complements Grenada's Fifth National Report on Biodiversity.

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