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**Technical Assistance for the Development of Frameworks aimed at
Enhancing Environmental Management**

Regional and Country Issues

Grenada

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**The Organisation of Eastern Caribbean States (OECS) Commission
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Acronyms

CANARI	Caribbean Natural Resources Institute
CARICOM	Caribbean Community
Cartagena Convention	Convention for the Protection and Development of the Marine Environment of the Wider Caribbean Region
CBD	United Nations Convention on Biodiversity
CCCCC	Caribbean Community Climate Change Centre
CCORAL	Caribbean Climate Online Risk and Adaptation Tool
CDEMA	Caribbean Disaster Emergency Management Agency
CEC	Certificate of Environmental Clearance
CEMA	Conservation and Environmental Management Act
CEP	Caribbean Environment Programme under the United Nations Environment Programme
CITES	Convention on International Trade in Endangered Species of Wild Fauna and Flora
ECLAC	UN Economic Commission for Latin America and the Caribbean
EIA	Environmental Impact Assessment
EMB	Environmental Management Bill
EU	European Union
FAO	Food and Agriculture Organisation of the United Nations
GCCA	European Union-funded Global Climate Change Alliance Programme
GDP	Global Domestic Product
GHG	Greenhouse Gas
GOSL	Government of Saint Lucia
IPCC	Intergovernmental Panel on Climate Change
IUCN	International Union for Conservation of Nature

NDCs	Nationally Determined Contributions to the reduction of greenhouse gas emissions under the UNFCCC Paris Agreement
OECS	Organisation of Eastern Caribbean States
PA	Protected Area
Ramsar Convention	International Convention on Wetlands
SAMOA Pathway	Small Island Developing States Accelerated Modalities of Action Pathway
SDGs	Sustainable Development Goals
SIDS	Small Island Developing State
SPAW	Protocol Concerning Specially Protected Areas and Wildlife under the Cartagena Convention
UNCCD	United Nations Convention to Combat Desertification
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UNFCCC	United Nations Framework Convention on Climate Change
UNISDR	United Nations International Strategy for Disaster Reduction

1. INTRODUCTION

This Issues Paper is the 2nd deliverable under the Organisation of Eastern Caribbean States (OECS) Global Climate Change Alliance (GCCA) Project on *Technical Assistance for the Development of Frameworks aimed at Enhancing Environmental Management*. It is one component of the overall European Union (EU) funded OECS GCCA programme which has been branded as *iLAND Resilience - Promoting a Climate of Change*. The overall *iLAND Resilience* programme objective is to contribute to the implementation of the OECS St. George’s Declaration of Principles for Environmental Sustainability, namely the protection and sustained productivity of the OECS countries’ natural resources.

The Caribbean Natural Resources Institute (CANARI) was contracted under this project to provide technical assistance for the development of policy and legislative frameworks towards improved environmental management in four OECS Member States. The specific Member States are Grenada, Montserrat, Saint Lucia and St. Kitts and Nevis. The targeted policies and legislation speak to climate change, forest management and sustainable land management.

The general approach to the project is a parallel four country process including desktop research, interviews with focal government agencies, in country consultations and policy and legislative development. A key emphasis will be on civil society engagement in the policy development process as emphasised by CANARI co-financing to this initiative through the CANARI European Union (EU) grant funded project on “*Civil society and small and micro enterprise innovation for marine and coastal conservation in the Caribbean*”.

The inception meeting for the project was held on the 17th of February 2017 and the project is expected to last eighteen months.

After discussions with the country focal points during the inception phase, CANARI was requested to produce the following deliverables:

Table 1: Summary of key project deliverables

Country	Deliverable
Grenada	National Forest Policy and Strategic Plan
	Revised Environmental Management Act 2014
	Revised Protected Area, Forest and Wildlife Act and supporting Regulations
	Climate Change Bill
Montserrat	Regulations in support of the Conservation and Environmental Management Act 2014
	Action Plan and implementation budget in support of the Conservation and Environmental Management Act 2014 in Montserrat
Saint Lucia	Revised Environmental Management Bill 2014 and supporting Draft Pollution Regulations
	Climate Change Bill
St. Kitts and Nevis	National Climate Change Adaptation Strategy

2. PURPOSE AND METHODOLOGY

2.1 Purpose

This Issues Paper is a synthesis of major concerns relevant to the existing national laws, policies, plans and multilateral environmental agreements in the four project countries to inform development of the deliverables. It outlines key priorities, needs, opportunities and challenges and is meant to serve as the basis for further discussion and analysis during in-country consultations. These consultations will then inform the final design of the relevant legislative and policy frameworks.

Given inter-country geographic, socio-economic and political similarities, plus the fact that this initiative is nested within the regional OECS iLAND Resilience Programme, this Issues Paper presents both regional and national perspectives. It starts with an overview of common regional and international issues then focuses on country and deliverable specific issues in later chapters.

The Issues Paper is written in laypersons language with a view to facilitate the engagement of a broad range of stakeholders, given that stakeholder input is the most critical element of this policy development process. Too often, stakeholders, especially civil society stakeholders, are not provided with enough opportunity to contribute and participate effectively in policy decision making. This then results in weak policies, strategies and laws which are not supported, implemented or enforced. It is hoped that through the wide and deep consultation and participation in this policy development initiative there will be greater buy-in, support and uptake of the policies, strategies and legislation produced.

2.2 Methodology

CANARI initially did a comprehensive desk review of relevant national policy frameworks provided by the countries and the OECS Commission. International and regional frameworks were also reviewed as national commitments are shaped by these. Reference legislation from other countries and international environmental framework trends were also reviewed. In this Issues Paper, frameworks are considered to include:

- formal agreements that countries sign on to and thereby commit to implementation (for example international conventions and associated protocols);
- formal policies and agreements adopted by groups of which countries are part and thereby countries commit to implementation (e.g. regional and sub-regional declarations and policies);
- strategies or plans that identify priorities for implementation (e.g. outcomes of international or regional processes); and
- national policies, laws and associated regulations.

CANARI also conducted targeted preliminary interviews with key stakeholders to understand the context and key issues for development of the required deliverables (policies, laws, regulations, plans, etc.). These stakeholders included the relevant government departments and civil society stakeholders. Discussions were held via telephone and online (email exchanges and skype calls). In-person consultations were also utilised (e.g. meetings in Grenada during attendance at the OECS Fourth Council of Environmental Ministers in April 2017). Key regional and international organisations were also targeted for interviews to get a better sense of regional trends and synergistic initiatives which may inform or enhance the development of the national level policies. This, of course, included the OECS Commission as well as organisations like the Food and Agricultural Organisation of the United Nations (FAO).

Given that the iLAND Resilience Programme has both a climate and a land management focus, these aspects were explored in the analysis used. For example, regional climate screening tools such as the Caribbean

Community Climate Change Centre's Caribbean Climate Online Risk and Adaptation tool (CCORAL) were utilised to inform preliminary recommendations. Further, given CANARI's participatory approach and focus on civil society participation in policy formulation, this civil society lens was also used in the analysis. This is especially important given that CANARI is bringing co-financing to this initiative to facilitate civil society participation through the EU grant funded project on "Civil society and small and micro enterprise innovation for marine and coastal conservation in the Caribbean".

3. REGIONAL AND INTERNATIONAL CONTEXT

This GCCA project seeks to improve the environmental framework of four countries: Grenada, Montserrat, Saint Lucia and St. Christopher (St. Kitts) and Nevis. It is noted that all the countries are independent states, except Montserrat which is an overseas British Territory, and full members of the OECS. All the countries are also Small Island Developing States (SIDS), with comparable geography, history and resulting socio-economic conditions. For instance, all the islands are volcanic in nature with a central mountain range and steep topography. There are similar terrestrial and coastal ecosystems across the islands with some similarity in species composition yet a substantial degree of endemism. Settlement and infrastructure are largely concentrated in the coastal areas. The islands have all had a history of European colonization, including a legacy of mono-cultural agricultural cultivation. Currently all are English speaking states and follow the British Westminster system of Government.

Given the focus on tourism and general low economic diversity, the OECS target countries have faced limited economic growth since the global economic recession of 2008 which has led to a deep regional recession. Against this backdrop the countries have also had to cope with several natural disasters leading to further economic stress. The regional dependence on external food markets and fuel imports further increases the region's economic vulnerability. Montserrat presents has a more unique economic situation associated with volcanic eruptions in the recent past and its status as a British Territory. In particular, it is heavily dependent on European aid packages which are further linked to public sector development and construction on the island.

Economic reliance on tourism and agriculture means that all the islands are heavily dependent on natural resources. They are therefore highly vulnerable to factors which impact these natural resources and share similar environmental concerns. Critical environmental issues include deforestation, soil erosion, biodiversity loss, land degradation and coastal pollution. These are coupled with expanding populations and limited land space. Climate variability and change are also concerns given ensuing effects such as temperature increase, sea level rise, decreasing rainfall and altered rainfall patterns. Given this, there have been several initiatives geared towards addressing the impacts of climate change, including the iLAND Resilience programme which this project falls under. Of note, is a quick climate screening exercise conducted by CANARI countries which indicated that climate change is key aspect to be factored into the respective policies, strategies and legislation under development. This analysis was done using the CCCCC online CCORAL tool¹, focusing including both the general screening exercise and a detailed vulnerability assessment for technical users.

Given the similar environmental threats, history, socio economic conditions and geographic parameters, this section of the Issues Paper attempts to provide an overview of the regional and international frameworks with a view to capturing relevant aspects to subsequently inform the national deliverables for each country. This approach is further justified by the fact that countries' legislative frameworks are shaped heavily by regional model policies and legislation as well as commitments under international conventions and frameworks. Equally, the countries' frameworks serve as the vehicle for the implementation of the international conventions and frameworks. The following tables summarise the major international and regional environmental frameworks that focal countries ascribe to:

¹ <http://ccoral.caribbeanclimate.bz/>

Table 2: Summary of major international environmental agreements and frameworks to which focal countries are signatories

International convention/ framework	Summary	Implications for project deliverables
UN Framework Convention on Climate Change (UNFCCC)	<p>Caribbean climate challenges include sea level rise, decreasing precipitation, increased intensity of hurricanes and overall higher temperatures. Signatories to UNFCCC have committed to working towards stabilising greenhouse gas concentrations towards minimising impacts to the climate system. More recently Caribbean nations have contributed significantly to drafting of the Paris Agreement at the UNFCCC Conference of Parties in 2015 (COP 21). The Paris agreement subsequently came into force in November 2016. Of critical importance to the region is the fact the Paris agreement specifically recognises the needs of SIDS and provides support for attempts to cap global temperature increase at 1.5°C. Key agreements under the UNFCCC include:</p> <ul style="list-style-type: none"> • The Kyoto Protocol which proposes binding targets for the reduction of greenhouse gas emissions • The Cancun Agreements which address the long-term challenge of climate change over time and encourages countries to take concrete action to speed up the global response. The related Cancun Adaptation Framework seeks to enhance action on adaptation and the development of national adaptation plans. Other aspects of the Cancun Agreements address mitigation, financial, technology and capacity building support. • The Paris Agreement promotes ambitious efforts to mitigate climate change and adapt to its impacts and addresses 	<p>The Green Climate Fund associated with the UNFCCC is an important funding source for all Caribbean countries including the four target countries in this initiative and the other OECS countries. This was emphasised during the recent Green Climate Fund Structured dialogue during the 4th Meeting of the Council of Ministers of Environmental Sustainability (COMES) of the OECS in Grenada from April 27 to 28, 2017. Caribbean countries are also keen to utilise the Warsaw International Mechanism for Loss and Damage² to realise its third function of enhancing action and support, including finance, to address the regional impacts on climate change being experienced and that are anticipated. This heavy emphasis on funding should be factored into any climate related deliverable under this initiative.</p>

² The Warsaw International Mechanism for Loss and Damage has three functions:

1. enhancing knowledge and understanding of comprehensive risk management approaches to address loss and damage associated with the adverse effects of climate change, including slow onset impacts;
2. strengthening dialogue, coordination, coherence and synergies among relevant stakeholders; and
3. enhancing action and support, including finance, technology and capacity-building, to address loss and damage associated with the adverse effects of climate change.

	<p>appropriate financial flows, a new technology framework and an enhanced capacity building framework to support action. The Agreement also provides for enhanced transparency of action and support through a more robust transparency framework.</p>	
<p>Convention on Biodiversity (CBD)</p>	<p>The CBD focuses on the conservation of global biodiversity including the sustainable use of its components and the equitable sharing of benefits arising from biodiversity resources. Country National Biodiversity Strategies and Action Plans (NBSAPs) under the convention address the mobilisation of financial resources, research, the regularisation and consolidation of legislation, public awareness, and use of traditional knowledge. Country reports to the Convention are framed against Aichi Targets. One of the 20 Aichi targets for example aims that by 2010 “the rate of loss of all natural habitats, including forests, is at least halved and where feasible brought close to zero, and that degradation and fragmentation is significantly reduced.”</p> <p>The CBD also has ‘Strategic Plan for Biodiversity 2011-2020’ to guide countries’ focus on mainstreaming biodiversity conservation into different economic sectors. Civil society rights and equity in using and sharing are addressed in the CBD’s Nagoya Protocol. In a similar vein the Mo’otz Kuxtal Voluntary Guidelines are geared towards Prior Informed Consent of indigenous peoples and local communities for using their traditional knowledge.</p>	<p>These aspects will be factored into the development of project deliverables, especially the forestry related documents and the wider environmental management deliverables.</p> <p>The attention to indigenous rights is noteworthy and where possible and appropriate will be referenced in the production of the deliverables.</p>
<p>Convention to Combat Desertification and Land Degradation (UNCCD)</p>	<p>Countries share similar issues related to land degradation including deforestation, overgrazing and soil erosion leading to high rates of surface runoff of sediment laden water. Under UNCCD, Caribbean countries have developed their National Action Plans to address these issues, reinforced by national policies and legislation (including forest policies).</p>	<p>Like the CBD, UNCCD commitments should be factored into project deliverables.</p>
<p>International Convention on Wetlands (Ramsar)</p>	<p>The Ramsar Convention on Wetlands designates wetlands of international importance across the region. Under this convention countries are mandated to</p>	<p>Mangroves are already key issues in the forestry related deliverables. Given the obligations under Ramsar- further</p>

	safeguard these ecosystems and this will be reflected in project deliverables.	strengthening of these areas may be needed.
Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES)	CITES attempts to control the international movement of plants and animals towards improved biodiversity protection. A key aspect is the development, enactment and enforcement of supporting legislation and regulations.	Implications for the project deliverables are similar to those under the CBD and UNCCD with greatest implications for forestry related deliverables. Grenada's forest policy and strategic plan, for instance, may need to ensure significant attention to mangrove management and wildlife management.
Sustainable Development Goals (SDGs)	This is the international framework replacing the Millennium Development Goals. Established in 2015, the SDGs consist of 17 goals articulated through 169 indicators, to serve as "a plan of action for people, planet and prosperity." Specific goals address natural ecosystems and climate change and environmental management and climate change also are mainstreamed into other goals. Consideration of goals and targets relevant to each country will be reflected in project deliverables.	The implementation of the SDGS can be facilitated by national level policies.
Small Island Developing States Accelerated Modalities of Action (SAMOA pathway)	The SAMOA pathway is the outcome and plan of action emanating from the 3 rd Conference of Small Island Developing States, including Caribbean States. It builds on previous SIDS outcomes such as the Barbados Programme of Action from 1994.	The SAMOA pathway recognises the special circumstances and vulnerabilities of SIDS and emphasises actions for climate change and marine resource management issues which will be addressed in the project deliverables.
United Nations Forest Instrument (UNFI)	The UNFI is a non-binding international agreement on sustainable forest management, which was adopted in 2007 at the United Nations Forum on Forests. The agreement was created to promote international cooperation and national actions to address deforestation through conservation and development of sustainable forest-based livelihoods. All signatories are tasked with developing National Action Plans for implementation of the UNFI.	National legislation, policies and action plans related to forests need to be aligned with the National Action Plan for the UNFI and can facilitate its implementation.

Table 3: Summary of major regional environmental frameworks to which focal countries are signatories

Grouping/ organisation	Organisation information	Relevant policies guidelines and frameworks	Implications for project deliverables
<p>Organisation of Eastern Caribbean States (OECS)</p>	<p>The OECS is <i>"an institutional forum to discuss and facilitate constitutional, political and economic changes which would be necessary for the successful participation of Member States in the regional and global economies."</i></p> <p>Focuses on cooperation, unity and solidarity amongst six independent countries, three overseas territories and one French department in the Eastern Caribbean.</p> <p>Promotes joint positions and harmonised approaches with regards to the environment and other sectors.</p>	<p>The OECS has developed model policies and regional strategies pertinent to environmental issues. A key framework is the St. George's Declaration of Principles of Environmental Sustainability in the OECS (2001) and the OECS Environmental Management Strategy. The <i>St. George's Declaration</i> is an agreement that was grounded on the belief by its members (of the Organisation of Eastern Caribbean States), that environmental resources must be effectively managed at all levels (locally, regionally and internationally), for sustainable social and economic development to be achieved. Principle 11 of the Declaration suggests that for sustainable productivity to be achieved, its the OECS Member States ought to manage "terrestrial, marine and atmospheric resources, organisms and ecosystems,"³ whilst not hampering the integrity of such natural and ecological processes. The agreement also makes provisions for environmental impact assessments to be conducted for making decisions on development activities. Principle 8 of the St. George's Declaration addresses the causes and impacts of climate change, and a number of other topics related to energy efficiency, renewable energy and disaster risk reduction are included in its outcomes and targets.</p> <p>These two documents constitute the overarching framework outlining the OECS environmental approaches. At the recent meeting of the Fourth Council of Environmental Ministers in April 2017 it was noted that there are plans to revise the existing Strategy.</p> <p>More sector specific environmental guidelines include the Model Water Policy and the OECS Land Policy Guidelines. There is also a Biodiversity Conservation and Sustainable Use Bill, which is a final draft stage. It is intended as a model bill to be adapted and adopted at the</p>	<p>Deliverables will be developed ensuring they are aligned with the regional frameworks.</p> <p>The model OECS documents have already used in the development of OECS country Environmental Management Acts and will be further utilised as needed.</p> <p>Some of the newer bills e.g. the OECS draft Biodiversity Conservation and Sustainable Use Bill will be important revising forestry related legislation.</p>

³ Government of Grenada. (2007). *Road Map toward Integrated Water Resources Management Planning for Grenada*. Prepared by Caribbean Environmental Health Institute and GEF-funded Integrating Watershed and Coastal Areas Management Project. Castries, Saint Lucia.

		national level. The OECS has also produced a Model Environmental Management Act which has been used by several Member States.	
Caribbean Community (CARICOM)	<p>Intergovernmental organisation focusing on economic integration and regional cooperation.</p> <p>Decision making is executed through the Ministerial body of the Council for Trade and Economic Development (COTED). Regional environmental projects are either managed through the Secretariat based in Guyana or through several CARICOM technical agencies.</p>	<p>Relevant environmental frameworks administered by the CARICOM Secretariat or technical agencies include:</p> <ul style="list-style-type: none"> • CARICOM Regional Framework for Achieving Development Resilient to Climate Change and its Implementation Plan (administered by the Caribbean Community Climate Change Centre (CCCCC)) • CARICOM Energy Policy • Caribbean Comprehensive Disaster Management Strategy • Common Fisheries Policy <p>The CARICOM Common Natural Resources Policy Framework and CARICOM Biodiversity Strategy are currently in development.</p>	Deliverables will be aligned with provisions under the various CARICOM Frameworks.
UN-Environment-Caribbean Environment Programme (CEP)	The Caribbean Environment Programme (CEP) was established in 1986. It is administered by a Regional Coordinating Unit. The CEP is geared towards regional cooperation within the Caribbean Sea towards sustainable development of the region.	The CEP Regional Coordinating Unit administers the Convention for the Protection and Development of the Marine Environment of the Wider Caribbean Region (Cartagena Convention). This is the umbrella agreement protecting the Caribbean marine environment. The Cartagena Convention protocols are also important for biodiversity protection namely: the Protocol Concerning Pollution from Land-Based Sources and Activities, the Protocol Concerning Specially Protected Areas and Wildlife (SPA) and the Oil Spill protocol. The Regional Coordinating Unit through SPAW also coordinates activities and develops synergies with work under international conventions like the CBD and CITES.	As with the CARICOM frameworks this wider framework is also under consideration in the development of project outputs.

4. GRENADA

4.1 Introduction



Fig. 4: Map of Grenada (Source: World Atlas)

Declaration of Principles for Environmental Sustainability in the OECS, often working in conjunction with the OECS Commission as described in Section 2. Past relevant initiatives include the National Environmental Policy and National Environmental Management Strategy, 2005-2010; the Land and Marine Management Strategy of 2011; the Land Policy Issues Paper of 2013⁵; Draft Environmental Management Act of 2014; and Draft Sustainable Development Act of 2015.⁶

Based on the work of the OECS and 2010 National Environmental Summary report by the United Nations Environment Programme⁷, it was recommended that the government address several remaining institutional and legislative gaps. This includes preparing a Draft Environmental Management Act based on the OECS Environmental

Grenada is a tri-island state comprised of the islands of Grenada, Carriacou and Petite Martinique. The islands are of volcanic origin with steep mountainous terrain, covering an area of roughly 344 sq km. Rainfall on the island ranges from around 1500 mm per annum to 3800 mm per annum. The island's population stands at approximately 107,000.

Key environmental issues on the island include deforestation, soil erosion and the impacts of climate change and natural disasters. For example, in 2004, Hurricane Ivan killed 12 people and destroyed 90% of residences on the islands due to severe flooding, high winds and landslides. It caused an estimated US\$889 million⁴ in damage across the island.

The Government of Grenada has been working on creating the institutional framework that would address the environmental and sustainable

development issues facing the country. These attempts have been aligned with the St. George's

⁴ United Nations Economic Commission for Latin America and the Caribbean [ECLAC]. (2004). *Hurricane season in the Caribbean causes more than US\$2.2 billion in losses*. November 25 2004. Available at <http://reliefweb.int/report/bahamas/hurricane-season-caribbean-causes-more-us22-billion-losses>

⁵ Niles, E. (2013). *Grenada, Carriacou and Petite Martinique Land Policy Issues Paper*. Prepared for the OECS Social and Sustainable Development Division, Castries, Saint Lucia.

⁶ UNEP. (2010). *National Environmental Summary of Grenada*. UNEP Regional Office for Latin America and Caribbean, Panama City, Panama. Available at <http://www.pnuma.org/publicaciones/Final%20NES%20Grenada%20Nov-%202010-%20edited.pdf>

⁷ *ibid*

Framework Legislation and tailored to meet Grenada's specific requirements. This Bill was drafted in 2007 and has since been revised in 2014, but has yet to be adopted. Additionally, a Revised Protected Area, Forests and Wildlife Act, Climate Change Bill and a National Forestry Policy and Strategic Plan have been proposed. The CANARI Team will seek to engage a wide range of stakeholders, including government agencies, civil society and other environmental stakeholders in Grenada, in these revisions and new pieces of legislation to address all relevant concerns and take into account broader institutional issues that may have hindered adoption in the past. Grenada chapter

4.2 Deliverable: National Forest Policy and Strategic Plan

Approximately 50% of the main island of Grenada is covered in forest. The main forest types on the island are cloud forests, rainforests, lower mountain forest, evergreen and semi evergreen seasonal forest. There are also the drier forest types closer to the coastline namely deciduous, dry wood and littoral forest.⁸ The best examples of the various forest types are around the Grand Etang Forest Reserve, Mt. Hope/Claybony water catchment Levera, Morne Delice, the Annandale watershed, and Mt. St Catherine.

The threats to Grenada's forests include overgrazing and conversion of forest land to agriculture. Hunting is a major threat to forest wildlife. Forest fires are also a key issue. Natural disasters have also had a significant impact on Grenada's forests. For example, Hurricane Ivan lead to the loss of over 90% of trees in the Grand Etang Forest Reserve in 2014⁹. Much of the island's vegetation is still in the recovery stage as secondary vegetation with only a few remaining pockets of primary forest. Hurricane Ivan also lead to significant degradation of the country's wetlands, which are only now in recovery due in part to mangrove replanting exercises.

Grenada has a number of endemic and/or endangered species. This includes the endemic Grenada Whistling Frog (*Eleutherodactylus euphronides*), the endangered Grenada Dove (*Leptotilla wellsi*) and Grenada Hook-billed Kite (*Chondrohierax wheih*). Overall there are believed to be 150 bird species on the island. There are also 1,068 vascular plants listed for the island. Species such as the Grenada Dove are threatened by a loss of habitat and predation from invasive species like the mongoose.

The administration of Grenada's forest is the responsibility of the Department of Forestry and National Parks (hereafter the Forestry Department). The work of this department is guided by the Forest Policy, which is currently under revision. The Department's work is also guided by the Strategic Plan, which is also currently being updated. There is also the draft protected area, forestry and wildlife legislation (2003) to be revised.

The revision of all the above documents will factor in regional and international conventions and norms as discussed in Chapter 2 of this document. Critical amongst these are the CBD, RAMSAR and CITES conventions and the UNFI. At the national level, the Forest Policy, Strategic Plan and draft legislation should be aligned with the following:

- Crown Lands Ordinance 1896 and Crown Land Rules 1934

⁸ Government of Grenada. (2014). *Fifth National Report to the Convention on Biodiversity*. St. George's, Grenada. Available at: <https://www.cbd.int/doc/world/gd/gd-nr-05-en.pdf>

⁹ ibid

- Physical Planning and Development Control (Land Development) Act 2002 and Planning and Development Regulations 2002 (Draft)
- National Physical Development Plan 2003
- National Strategic Development Plan 2005
- Environmental Management Act 2005
- National Environment Policy and Management Strategy 2005-2010
- Bird and Other Wildlife Protection Act 1957 and Wildlife and Birds Sanctuary Act 1990;
- National Parks and Protected Areas Act 1990, Draft Protected Areas, Forestry and Wildlife Bill and Draft National Protected Area Trust Bill;
- Grenada Protected Area Systems Plan 2009
- National Biosafety Framework 2007
- National Agricultural Policy
- Growth and Poverty Eradication Strategy 2014-2018
- Tourism Policy Framework 2010 and Tourism Master Plan
- Land and Marine Management Strategy 2011

4.2.1 National Forest Policy

The existing Grenadian National Forest Policy starts off noting the importance of forests to Grenada and immediately focuses on the “wise use and sound management” of this resource. The goal of the policy is specifically to: “Maximise the contribution of forests to environmentally-sound social and economic development.”

In terms of the scope of the policy, of note is the broad definition of forests to include non-agricultural trees. Given this broad definition, **it may be worth the consideration of the stakeholders to include urban forestry aspects** in the revised policy to be produced under this project. This will be teased out further during consultations.

In terms of technical issues, the policy addresses species conservation, the protection and sustainable utilisation of forest goods and services and the importance of these areas in contributing to the Grenadian economy. The policy also discusses timber extraction to fill local furniture building needs, but does not focus heavily on this aspect. Initial consultations with Forestry Department staff and regional forestry experts (Eckelmann pers comm) have indicated that timber extraction is currently not a focus of the Grenadian forestry sector. However, if timber extraction is an aspect stakeholders may wish to re-emphasise into the future, this can be considered in the revised policy. The policy does however comprehensively address non-timber forest products (NTFPs) which still appears to be a strong focus, thus no alteration to this section is suggested.

Mangroves are stressed in the policy, which perhaps should be maintained as anecdotal evidence suggests that there is still a low public awareness of the importance of this ecosystem type. Further the policy emphasis on biodiversity, species conservation, watershed and wildlife management are other important aspects that the country may wish to retain in the policy. Overgrazing is mentioned as a specific issue to be managed in forest conservation especially in the context of Carriacou and Petit Martinique.

Two key technical aspects which are not heavily emphasised in the policy that stakeholders may wish to consider are the impacts of climate change on forest resources and the related aspect of invasive species management. Climate change impacts on forest resources can be summarised as follows¹⁰¹¹:

¹⁰ FAO. (2014). Forests and climate change in the Caribbean. *Forests and Climate Change Working Paper 13*. FAO, Rome.

¹¹ CANARI. (2017). *Implementing climate change action: A toolkit for Caribbean civil society organisations*. CANARI, Laventille, Trinidad.

- **Higher temperatures:** an average annual increase in surface temperature of 1.2 to 2.3°C by 2011
 - Invasive species are generally more tolerant of extreme conditions such as high temperatures and high or low rainfall levels. Higher temperatures are likely to favour invasive species. Discussions with the Forestry Department suggest that this may already be occurring; example the prevalence of invasive Bamboo (*Bambusa vulgaris*) in forested areas is a current concern.
 - Higher temperatures may also lead to a drying out of rivers and streams and subsequent death, habitat or food loss for aquatic animals.
 - Animal groups like reptiles which do not internally regulate their body temperatures may die off or otherwise experience negative health aspects associated with higher temperatures.
 - Animals and plants may also be prone to more microbial diseases which tend to prosper under higher temperature conditions.
- **Declining rainfall:** a decrease in rainfall of about 5-6% is projected by 2011
 - The lower rainfall predicted for the Caribbean under climate change scenarios, are expected to lead to more drought conditions. Fires, a function of both higher temperatures and dry vegetation, are also expected to be more frequent.
- **Declining rainfall and increasing temperatures**
 - Together, changing temperature and rainfall is expected to result in changing in plant flowering seasons, which will disrupt mating and feeding habits of animals
- **Intense rainfall periods and flooding:** While annually lower rainfall levels are anticipated when rain does fall it is expected to be in intense bursts, leading to flooding and related landslides.
 - As it pertains to forest resources this can lead to loss of trees, especially those trees with shallow rooting systems. In addition, nests of animals may be flooded out and seedlings may be inundated.
- **Higher intensity of hurricanes and storms:** More intense storms and hurricanes are projected.
 - Gusty winds can cause forest thinning from breaking branches and defoliation, uprooting of trees or loss of tree crowns. In 2014, Hurricane Ivan destroyed 90% of forest in Grand Etang forest reserve in Grenada. Foresters also observed massive growth of invasive vines after increased light with opening up of the canopy.
- **Sea level rise:** projections range from 0.5 to 0.6 metres by 2011
 - Mangrove forests are expected to recede where possible (i.e. not limited by physical barriers such as roads and construction) or they will become submerged and drown and the protective fringe of mangroves along the coastline will get smaller.

Against the above backdrop, it may be prudent to include climate aspects in the revised policy. Specific forestry management mechanisms should be considered. While this level of detail is perhaps best included in the Forestry Strategic Plan, aspects will be discussed here. For example, management including tree planting schemes could focus on trees that are wind resistant and have deep and wide rooting structures. Invasive species and fire management will also require greater attention into the future. Fire management is already emphasised in the policy but may need to be reviewed and strengthened. While more the purview of the country's water policy, there may be a need within the forest policy to mention the need to limit water abstraction from rivers that are likely to be most affected by lower rainfall levels. Overall, appropriate silvicultural techniques should be utilised as far as possible to maintain forest ecosystem health and overall resilience to predicted climate change.

There is an alternative option, however, that stakeholders may wish to consider. For instance, some of the recent climate and ecosystem literature presents the argument that it may be more prudent to focus on the

maintenance of species which may be able to survive higher temperatures etc., instead of trying to maintain the pre-climate change ecosystem conditions^{12,13,14}. The debate continues and Grenadian stakeholders will have to decide what route is preferable for their country.

Apart from these technical aspects, the policy also speaks to governance, capacity and funding issues. For instance, the policy specifically highlights the need for the Government to be committed to the implementation of the policy and by extension the related strategies. The policy further emphasises the need for “adequate capacity” to manage Grenada’s forest resources. Discussions with the Forestry Department however, have suggested that currently **human resources capacity is a grave concern and major constraint in managing the country’s forest resources**. Issues cited include the retirement of senior officers, and the non-recruitment of junior staff, due in part to Government’s hiring policies. The Department’s capacity issues are well known outside of the Government structure and appears to be of concern to even civil society organisations. This capacity issue may need to be addressed in the general sense in the policy and options can be elaborated in the strategy.

Options can include wider discussions with senior Government officials about hiring and retaining staff. Short term options can include the use of volunteer programmes, consultants (including forestry sector retirees) wider engagement and utilisation of civil society human resource capacity in co-management arrangements. These, however, are limited shorter term options. Further, recruitment and training of junior staff using overseas development assistance funds (ODA) are also an option to possibly explore. This again is a short-term solution as Government financing will have to be utilised to retain staff post project closure. Few ODA projects allow for staff recruitment and financing anyway. The policy does mention Government financing for forest resource management as a key source of funding. Other options mentioned in the policy include grant funds and revenue generation vis a vis user fees. Departmental capacity issues are priorities which need to be addressed because as it stands, the current situation does not allow the Forestry Department to fulfil its facilitator role outlined in the policy document.

The existing policy was prepared using a highly participatory process. Stakeholder perspectives were sourced using questionnaires, radio programmes and several national workshops. The revised policy will also emphasise a participatory approach. It is recommended that a key component of this approach be a very strong engagement of high level senior Government officials to build support for the Forestry Department and the revised policy, strategy and legislation moving forward. This hopefully will critically also build an enabling environment to address the Forestry Department’s critical human capacity issues. The wide engagement of the public during the policy revision process will also hopefully assist in this aspect. Likewise, **mechanisms for effective stakeholder engagement in implementation will need to be provided for in the policy and the strategy**.

Grenada’s land use policy (to be billed as an overarching natural resource policy) is concurrently in development under the iLAND resilience programme while a draft land policy exists for Carricou and Petit Martinique. The latter was reviewed along with the land policy issues paper. The forest policy recommendations outlined above

¹² United Nations Environment Programme [UNEP] – Division of Environmental Law and Conventions. (2016). *The State of Biodiversity in Latin America and the Caribbean: A mid-term review of progress towards the Aichi Biodiversity Targets*. UNEP, Nairobi, Kenya. Available at <https://www.cbd.int/gbo/gbo4/outlook-grulac-en.pdf>

¹³ United Nations Development Programme - Capacity Development in Sustainable Water Management [Cap-Net]. (2015). *IWRM as a Tool for Adaption to Climate Change*. Cap-Net, Geneva, Switzerland. Available at <http://www.cap-net.org/training-material/iwrm-as-a-tool-for-adaptation-to-climate-change-english/>

¹⁴ Nurse, L., McLean, R., Agard, J., Briguglio, L., Duvat-Magnan, V., Pelesikoti, N., Tompkins, E. and Webb, A. (2014). Small Islands. In: *Climate Change 2014: Impacts, Adaptation and Vulnerability. Part A: Global and Sectoral Aspects. Contribution of Working Group II to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change*. [Field, C., Barros, V., Dokken, D., Mach, K., Mastrandrea, M., et al. (eds.).] Cambridge University Press, Cambridge, UK. Available at http://www.ipcc.ch/pdf/assessment-report/ar5/wg2/WGIIAR5-Chap29_FINAL.pdf

are generally in keeping with the issues and concerns outlined in the aforementioned documents. The forest policy focus on watershed management is also aligned with the country's Water Resources Management Policy.

Other aspects for consideration by stakeholders include **mainstreaming gender and youth aspects** into the policy. The policy already includes a strong public awareness component which should be maintained in the revised policy.

4.2.2 Strategic Plan

The 10-year Strategic Plan for the Forestry Department covers the period 2001-2010. It outlines the Departments' response to the National Forest policy, emphasising the Department's role as a facilitator, partner and advocate for forests. The Strategic Plan outlines the structure of the department, describing relevant units and staffing needed for each unit. **A new strategy developed under this project should revisit the proposed structures, roles and responsibilities to enhance efficiency and effectiveness as realistic within the context, including capacity limitations.**

The Key Units outlined include:

- Forest Conservation Unit
- Upland Watershed Management Unit
- Forest Recreation Unit
- Tree Establishment and Management Unit
- Heritage Conservation Unit
- Support Services Section

As discussed in policy section above, there appears to be a significant lack of capacity (low staffing levels) in the Forestry Department. While these units may have been functional during the early days of the strategic plan, it is doubtful that these units are functional now. Overall capacity is a major issue to be addressed during consultations and final policy and strategy development. Given the capacity issue, a possible consideration could be either the creation of a new unit to address climate change issues or the incorporation of these concerns into one of the existing units, perhaps the Forest Conservation Unit. The Forest Conservation Unit responsibilities could also be expanded to include invasive species management aspects. Additional research roles for the Forest Conservation Unit may also be needed vis a vis climate change and invasive species management.

The strategy goes on to outline the responsibilities of the Chief Forestry Officer and several officers including a:

- Mangrove and Coastal Woodland Conservation Officer (to be supported by the Forest Conservation Unit)
- Wildlife Conservation Officer (to be supported by the Forest Conservation Unit)
- Environmental Education Officer (housed within the Support Services Section)

Again, while acknowledging the current capacity challenges, one possible revision to the existing strategy is the amendment of the Environmental Education Officer Position to an Environmental Education and Stakeholder and/or Community Engagement Officer. While the policy was developed in a highly participatory manner, and while the Strategic Plan identifies a wide range of non-governmental partners and stakeholders, there is limited elaboration of the specific roles of these stakeholders. There perhaps should be a greater role for these groups beyond a basic receipt of information through an environmental education programme. Specifically, community groups or private sector for instance could be more involved in management of protected areas, or utilisation of forest resources in sustainable livelihood programmes. There may already be involvement of community groups and private sector in these areas but having an officer dedicated to managing these wider engagement aspects could be useful in moving towards a more systematic and structured approach.

Discussions with the Forestry Department staff revealed that currently that there are several ODA projects which the Department is involved in. Given this, it may also be useful to have a Project Management Officer dedicated to administering the various projects, including financial management aspects and proposal writing. This officer could be housed in the Support Services Section but may require some level of technical expertise and project management skills. The proposal writing aspect is included to perhaps assist the Department in securing additional resources to facilitate its work. This was raised as a particular capacity need in previous work with CANARI and FAO to develop climate change initiatives.

4.3 Deliverable: Revised Protected Area, Forest and Wildlife Act and Supporting Regulations

Like the Forest Policy and Strategic Plan, any discussion of potential revisions to the Draft Protected Area, Forestry and Wildlife Legislation 2003, is undertaken cognisant of staff and capacity issues within the Department which severely hampers its capacity to implement the legislation.

The latest draft of the Protected Area, Forestry and Wildlife Legislation provided is the 2003 version. The draft legislation has been revised several times and in its current form appears to be comprehensive. Key threats to forests previously outlined, are addressed in the draft legislation including:

- overgrazing
- hunting
- harvesting of timber and non-timber products
- forest fires
- natural disasters
- loss of mangroves
- loss of endemic and endangered species

The key concern with the draft legislation is feasibility of implementation. The current version attempts to address implementation issues by, for example, setting deadlines by which protected area management plans have to be adopted. A similar approach will be used in this revision to aid in implementation of the legislation. The 2003 legislation was also developed using a highly participatory approach, which will also be facilitated under this project.

An analysis by section is provided below, highlighting any potential areas for revision and updating.

4.3.1 Definitions of key concepts

The scope of watershed should be expanded in the definitions in this section. The identification of a “critical watershed” perhaps is meant to draw attention to those from water is abstracted by the utility. However, while there may be need to focus on these watersheds, all watersheds should be managed as far as possible to protect plants, animals and ecosystem services e.g. water supply. All watersheds require protection to minimise land based sources of marine pollution, drawing on a ‘ridge to reef’ approach. It is noted that this section defines “critical watershed” but not watershed. A watershed definition should be included as follows “An area of land surrounding a water body e.g. a lake or river that drains into the water body.”¹⁵

¹⁵ United States Geological Survey. (2016). The USGS Water Science School [webpage]. Available at <https://water.usgs.gov/edu/watershed.html>

4.3.2 Administration

This section outlines the formation and maintenance of the of the Forestry and National Parks Department by the responsible Minister. This is the department that would in turn have responsibility for the implementation of the Act, including aspects such as fire regulation, protection of watersheds and tree planting. The functions of the Director (head of department) are discussed as well as a proposed advisory body, the forestry and national parks advisory council. The council members will include tourism, water, commerce and NGO representatives. **The membership of this council should be reviewed and expanded as appropriate to ensure that all key stakeholders are represented.** For example, given that land clearance and overgrazing is regarded as a major threat to forests on the island, it may be also sensible to have a Ministry of Agriculture representative from the Land Use and Livestock Department. Further, as described in the policy and strategy section above, climate change issues are a concern for Grenada's forests. Thus, someone with climate expertise is recommended e.g. someone from the Environment Division.

The Act lays out the functions of the council, noting a 3-year rotation process and the provision of stipends to the members of the committee. Stipends are recommended to compensate council members for their time but they must be issued in a transparent and well documented manner.

4.3.3 Policy and Planning

This section notes the need to develop and continuously revise the national Forest Policy. To inform the policy, the legislation requires five-year tree inventories as well as wildlife surveys. The interval for the wildlife surveys is not indicated, however, and should perhaps be included. **In the process of revising and updating this legislation, the feasibility of doing this given the current context and capacity in Grenada should be considered.** For example, consideration could be given to using aerial photos and Geographic Information System (GIS) tools for assessment or extending the time period for surveys.

This section also speaks to the need to keep a record of watersheds. However, **the language of this section and other areas where watersheds are referenced may need to be adjusted somewhat to reflect the definition of a watershed** as suggested for Part 1. Watersheds are fixed geographic features thus a fixed number of these will exist for Grenada (depending on the scale used). So this register of watersheds should always be the same with only the status of the watersheds changing perhaps based on land use changes or soil erosion depending on parameters chosen for monitoring. Other possible monitoring criteria include number of point sources of chemical pollution, number of farms and amount of area under housing versus the amount under forest cover. Critical watersheds (e.g. those used for water abstraction) may require a stricter monitoring regime to guard against environmentally damaging activities or require restoration to protect ecosystem functioning.

National Plans and Management Plans are also described in this section focusing on the need to not just develop but also adopt the policy. **Review of this should consider the scope and process and ensure that this is feasible for implementation in Grenada's context and capacity, while ensuring management rigour and delivery of international and regional commitments.**

4.3.4 Protected areas and forest reserves

This section lays out the rationale and procedure for declaration of a national park and other protected areas. The Forestry Department's director is the one who would propose a specific site which then must be commented on

by the public before final declaration by the Minister. **Similarly, review of this should consider the scope and process and ensure that this is feasible for implementation in Grenada's context and capacity, while ensuring management rigour and delivery of international and regional commitments.**

4.3.5 Forests on private land

Part five of the existing legislation has a dual function. It allows the incorporation of private lands into a protected area if needed, but also indicates that the Forestry Department can be called upon to provide fee based services to maintain forests on private lands. **There should be review of implementation of this and analysis of lessons learnt and recommendations, alongside analysis of lessons learnt from similar processes in other Caribbean islands, to feed into any revisions and updating.**

4.3.6 Watershed management

Earlier comments regarding the definition of watersheds are applicable here. However, the emphasis is on protecting critical watersheds which may be prone to storms, landslides or erosion, etc. The Minister can declare an area a critical watershed, but it is not clear in the legislation what that means in terms of management and protection. This section of the legislation may **require further investigation and clarification**. Where the watershed is on private land, an agreement with the landowner is to be pursued.

The legislation goes on to describe the need for watershed management committees for the critical watersheds. This is to be applauded as the involvement of persons living in the watershed will allow for more effective understanding of the issues and hence better watershed management. A watershed management plan is also needed. The watershed management plan will require public consultation before final approval. **Clarity on terms of reference for watershed management committees and other mechanisms to ensure stakeholder engagement is effective and meaningful for them is needed** and can be informed by best practices from Grenada and other Caribbean islands.

4.3.7 Protection Rules

This is a comprehensive section outlining offences in forest reserves and protected areas. Unless in possession of a permit, persons will be committing offences if they for example remove trees, clear land, erect buildings etc. Hunting and fishing also require permits. There is also the alternative of not setting a maximum fine which may depreciate over time but providing some guidance for the range of the fine based on severity of the offence etc.

Similar protection rules are outlined in the crown land offences but there appear to be fewer restrictions on Crown lands. Fines are also included for persons who do not act in accordance with management plans for critical watersheds.

Fees are not stated in the draft legislation, however, and could be considered for insertion during this current revision of the legislation (or these may be reflected in regulations).

4.3.8 Permits

This section goes into more details on permits as it pertains to part 7 including the power of suspending or revoking permits as needed. This will need to be reviewed and updated to ensure efficiency and effectiveness within the context and capacity limitations in Grenada.

4.3.9 Wildlife

This sections outlines the species which may be hunted, and where and when hunting can occur. It is not permissible to keep or breed wildlife in Grenada, except where permits are provided for example for educational and scientific procedures. An initial review suggests that this section generally follows provisions in agreements such as the CITES convention but this will be reviewed to ensure all international and regional commitments are met.

4.3.10 Forest fires

Part 10 pays strict attention to fires and the need for permits to light a fire. This is an important section given that fires are a well-documented threat to forests in Grenada. This is of even greater importance given that higher temperatures and drought conditions are likely based on climate change projections and will likely cause more fires.

4.3.11 Enforcement

The enforcement section generally speaks to powers of inspection, arrest, seizure, forfeitures and compensation.

4.3.12 Miscellaneous

This section generally deals with regulations and appeals. It notes that this Act repeals the Forest, Soil and Water Conservation Act.

In general, the draft Act does cover aspects of global conventions and needs under the country's National Biodiversity Strategy and Action Plan (NBSAP). Provisions under the Act should, for example, assist in the retention of natural habitats and curb degradation. The Act's provisions should be able to assist with forest conservation in general but may benefit from greater reference to specific ecosystems, including wetland systems given their vulnerability to natural disasters for example. Invasive species may also warrant specific mention within the Act.

4.4 Deliverable: Revised Environmental Management Act 2014

4.4.1 Summary of Draft Environmental Management Act, 2014

Below is a summary of the key provisions of the draft Environmental Management Act 2014 (hereafter EMA).

4.4.1.1 Establishment and Organisation of the Department

The EMA outlines roles and responsibilities and provides for the creation of multi-stakeholder bodies. This includes outlining the responsibilities of the Minister responsible for the terrestrial and marine environment of Grenada, namely to promote integrated environmental management, a better understanding of the environment's role in economic and social development, and compliance in environmental matters. The EMA establishes a Sustainable Development Council, constituted by Cabinet, with responsibility to set objectives and priorities for environmental management. The EMA creates the position of Chief Environment Officer. This Officer, along with other officers and wardens, advises the Minister on all matters relating to environmental management and is responsible for implementing the EMA. The EMA establishes the Department of Environment to administer EMA and Regulations made pursuant to EMA and outlines the responsibilities of the Department. The Department has authority to implement and enforce the Act, which includes powers of entry, inspection and obtaining information and samples.

These institutional arrangements will need to be reviewed and updated to enhance efficiency and effectiveness as realistic within the context, including capacity limitations, and to ensure that international commitments are being fulfilled. For example, the SDGs provide a framework for integrating environmental management with economic and social development, and mechanisms for coordination across sectors and mainstreaming of environmental considerations will need to be addressed. In this light, the role of the Sustainable Development Council will need to be reviewed and perhaps expanded. Given the emphasis on participatory governance, accountability and transparency, mechanisms will need to be created to support stakeholder engagement, access to information and environmental justice.

4.4.1.2 Integrated Environmental Management

The EMA specifies that annual Environmental Management Plans must be prepared and includes and outline for what must be included in these.

Within one year of the commencement of the EMA and bi-annually thereafter, the Department must draft an Environmental Management Plan. The plan must contain the following:

- (a) a description of the general environment and environmental conditions in Grenada;
- (b) the general environmental quality objectives to be achieved and maintained under the Plan;
- (c) the ecological and other balances required to be maintained for the conservation of natural resources and protection of the environment;
- (d) the elements or areas of the environment which require special attention;
- (e) the policies, plans and programmes that may significantly affect the environment;

- (f) the functions exercised by the government entities exercising duties that may affect the environment;
- (g) the manner and means by which each government entity will ensure that such policies, plans and programmes have as their objective the achievement, promotion, protection and conservation of the environment;

It lays responsibility with the Department to ensure compliance with the plan.

The revised legislation under this project should consider if this has ever been implemented and, if so, what lessons have been learnt. Revised legislation should be updated to **ensure compliance with international and regional commitments, facilitate coordination with other national and sectoral initiatives, and reflect current best practice** while being realistic within the context and capacity limitations in Grenada. For example, Plans could include workplans towards delivery and reporting on targets and commitments under the CBD and the SDGs. Roles and responsibilities for implementation of the plan will also need to be outlined, including possibilities for co-management and private-public partnerships. Strategies for funding and capacity building will need to be included.

4.4.1.3 Environmental Impacts - Certificate of Environmental Clearance and Environmental Impact Assessment

The CEMA outlines a mechanism for control of development using Environmental Impact Assessments (EIAs). The Act states that any person carrying out an activity under the Second Schedule must first apply for and receive certification of environmental clearance (hereinafter called a "Certificate") from the Department. The purpose of requiring the Certificate is to determine the environmental impact that might arise out of any significant activity.

The Second Schedule lists twelve activities that require a Certificate. **This list is short in comparison to other Commonwealth Caribbean countries and could be reviewed to determine if additional activities should be added so that the list is more comprehensive and reflects potential activities that may develop on the island.** The Department may require an Environmental Impact Assessment for any activities that may have a significant adverse impact on biological diversity.

The CEMA also outlines the process for implementation of Certificates, including processes for engagement of government and other stakeholders in review and advisory capacities and mechanisms for transparency.

The Department must ensure that the possible direct and indirect impacts, including cumulative impacts on biological diversity, of any activity that requires an environmental impact assessment are evaluated by relevant Governmental entities.

The Department may require any application that requires the preparation of an environmental impact assessment to be submitted for public comment before a Certificate is issued by the Department.

The Department may request the assistance of any committee, working group or advisory council in making an environmental impact assessment of a proposed activity.

The Department cannot issue a certificate for activities that would produce a significant adverse impact on biodiversity or ecological value.

After considering all relevant matters, including the comments or representations made during the public comment period, the Department may issue a Certificate subject to such terms and conditions as it thinks fit, including the requirement to undertake appropriate mitigation measures.

Where the Department refuses to issue a Certificate, it must provide to the applicant its reasons for such decision in writing.

In regards to monitoring, the Department must monitor the performance of the activity to ensure compliance with any conditions in the Certificate, and to confirm that the performance of the activity is consistent with the description provided in the application for a Certificate; and the information provided in any environmental impact assessment.

Where an activity under the Second Schedule constitutes a development requiring the express grant of permission under the Physical Planning and Development Control Act 2002, the developer must deal directly with the Planning Authority with respect to any such activity that requires an environmental impact assessment.

There is an exception to these rules of obtaining a Certificate. Under the exceptions, these rules do not apply to any activity which, prior to the date on which review first became applicable, all final approvals necessary to proceed already had been obtained from all other governmental entities requiring such approvals; and any activity with respect to which, prior to the effective date on which review first became applicable, outline planning permission or full planning permission under the Physical Planning and Development Control Act 2002 had already been obtained.

Any final decision by the Department to refuse issuance of a Certificate or to issue a Certificate with conditions may be appealed to the High Court by the applicant.

Links with protected area and species management are made where CEMA provides for the Department to develop a list of areas within Grenada as “environmentally sensitive areas”, or of any species of plant or animal as an “environmentally sensitive species”, requiring special protection to achieve the objects of the Act. CEMA notes that the Department may permit “the wise use of such area or species” and provide for appropriate mitigation measures, but cannot otherwise authorise or permit any activity not previously authorised or permitted with respect to the area or species. The Department can only require compliance with the specific limitations on use or activities specified in the designation.

In development of revised legislation, **experiences with implementation will be reviewed so that lessons and recommendations can be reflected to enhance efficiency and effectiveness as far as feasible.** This should include ensuring that mechanisms are in place to build capacity for and enable effective stakeholder participation in the process to ensure that voices are heard, there is transparency and accountability, and environmental justice issues are addressed in line with international and regional commitments, for example under Goal 16 of the SDGs.

In addition, climate change considerations will need to be adequately reflected in the process,. Some SIDS (e.g. Dominica, Saint Lucia) already recognise the need to use EIAs as a tool to adapt to climate change in their National Communications to the United Nations Framework Convention on Climate Change (UNFCCC) and/or National Adaptation Programmes of Action (NAPA). Efforts to use EIAs as tool to adapt to climate change will need to be aligned with the National Climate Change Policy and Action Plan 2007, which is currently being updated, and the National Adaptation Plan, which is under development.

CARICOM has provided guidance for incorporating climate change adaptation and natural hazards in EIA process, including clearly describing the proposed project and identifying alternatives to project and approaches to implementation. Suggested steps are shown in the box below and can be considered in **incorporating climate change adaptation in EIAs** under Grenada's revised legislation under this project.

Box 1: CARICOM recommendations for incorporating climate change adaptation and natural hazards into the EIA process

Step 1 – Define Project and Alternatives - Preliminary identification of significant hazards and hazard impacts to inform EIA screening and scoping; Process: Using existing information and expert knowledge, estimate frequency or probability of hazard events; Estimate severity of impacts on project components and zone of influence;

Step 2 – Preliminary Vulnerability Assessment - Determine, based on information provided, whether a) the project is likely to have a significant effect on the environment and b) climate change impacts are likely to have significant effects on the project, and therefore require further study;

Step 3 – Initial Screening - Identify and agree upon the critical issues to be addressed in the EIA and the information and analyses required for inclusion in the environmental assessment report to determine acceptability and feasibility of the project; Information needs: Baseline data on project site, existing detailed hazard maps and assessment; Significant hazards and potential impacts on project and zone of influence/ project boundaries identified in screening; Relevant legislation and institutions; Climate change assessments;

Step 4 – Scoping - Fully assess and characterise significant natural hazards, their potential impact on the project and potential effects on those hazards introduced by the project; Information needs: Baseline data, hazard studies and maps indicating past incidence, factors influencing hazard occurrence and climate change scenarios;

Step 5 – Assessment and Evaluation - A Climate Change Adaptation Program should be developed as part of the EIA process to address significant impacts from climate change that will affect the project and define adaptation measures that will be established to address climate change impacts.

Grenada, like all CARICOM countries, can also use CCORAL in the EIA process. This tool describes how to assess the risk of any EIA activity and incorporate those risks into decision making. **The revised legislation should point to the use of available tools and sources of information as part of the EIA process.**

International and regional commitments will need to be reflected throughout in the revised legislation..4.1.4
Coastal Zone Management

Article 27 states that all rights in and over the foreshore are vested in the Crown and Article 28 states that there must be one public land access to every beach in Grenada. This article seeks to address an important issue in all Caribbean countries, particularly those undergoing substantial development, namely the ability of citizens and residents of the country to have free access to the beach. Implementation of this provision can be reviewed to

ensure that revised legislation provides a clear and relevant framework for implementation in the Grenada context, including consistency with current property law and property rights and how it is being implemented under the Physical Planning and Development Control Act, 2002.

CEMA also requires the Department to prepare a Coastal Zone Management Plan setting out a strategy for land and marine areas management within the coastal zone. **It is unclear how this section interfaces with the Draft Protected Area, Forestry and Wildlife Act and the newly developed Coastal Zone Policy and draft coastal zone legislation. This section will need to be reviewed and revised to ensure consistency and synergies within the new legislation being drafted under this and other projects as well as international and regional commitments.**

4.4.1.5 Environmental Management Activities

CEMA requires the Department to create a register of air and noise pollutants and a program for managing such pollutants. This includes requiring and granting permits to authorise any releasing of air pollutants and defining the terms and conditions of a permit. This can include the design, construction, operation, maintenance, and monitoring of the facility and processes releasing air pollutants.

The Department must also ascertain the extent of water pollution and the significant sources of water pollutants, maintain a register of such pollutants, and develop a process for managing such pollutants. The Department may require and grant permits to authorise any process releasing water pollutants subject to such terms and conditions as it thinks fit in accordance with applicable environmental standards.

Like air and water pollutants, the Department can do the same to regulate waste and hazardous substances. EMA also creates the criminal offense for violating provisions of the EMA, Regulations or permit conditions.

This will need to be **updated to reflect current knowledge and best practice in pollution and waste reduction and management, including international and regional commitments**, such as those under the Cartagena Convention Protocol Concerning Pollution from Land-Based Sources and Activities, the Protocol Concerning Specially Protected Areas and Wildlife (SPAW) and the Oil Spill Protocol. Currently, specific standards for waste water (gray water) are being developed for Grenada, and a technology needs assessment is being conducted.

The CEMA also obligates a person who causes significant pollution or degradation of the environment to take reasonable measures to prevent such pollution or degradation from occurring, continuing or recurring. The Act outlines a number of possible reasonable measures which may be taken and the process for ensuring compliance and enforcement. These will **need to be reviewed and updated to consider experiences with implementation and feasible mechanisms given Grenada's context and capacities**. Provisions for specifying the amount of fines and a process for determining appropriate fines should be reviewed and updated.

4.4.1.6 Public participation, access to information and environmental justice

There are various mechanisms in CEMA to relevant to public participation, access to information and environmental justice. For example, the Act provides that any person or group of persons may seek appropriate relief in respect of a breach of any provision of the Act, acting in their own interest, on behalf of others, as part of an affected group or in the public interest. The Act also identified eight specific areas under which the Department must maintain,

open to the public, registers with information relevant to implementation of the Act (e.g. on EIAs). The new **Regional Agreement on Access to Information, Public Participation and Access to Justice in Latin America and the Caribbean (Principle 10)** currently being negotiated will provide a useful policy framework to inform development of revised legislation to strengthen attention to these areas. Grenada signed the Declaration and officially joined the negotiation process in April 2016. This is in support for implementation of the Constitution of Grenada and various national laws and polices and international and regional commitments.

4.4.1.7 Regulations

The CEMA notes that the Minister may make Regulations prescribing matters required or permitted by this Act in 19 identified areas:

This is a long list of possible Regulations and should be reviewed and prioritised in the new legislation.

4.4.1.8 Environmental Offences

This section creates various criminal offenses for breaking the Requirements of EMA. This includes making criminal offenses for obstructing an officer, failure to submit an EIA or submitting a fraudulent EIA, failure to keep necessary records, and discharging hazardous waste or dangerous chemicals. This will need to be **reviewed and updated to ensure that current issues in Grenada are included and to ensure consistency with the new Abatement of Litter Act.**

4.4.1.9 Soil and Water Conservation

CEMA provides for the Minister, after consultation with a proposed Water Board, to declare any area from which the drainage of water flows to be a watershed to and make Regulations to conserve and develop the water resources of Grenada to meet the present and future need for water for domestic, agricultural, commercial, industrial and other beneficial uses.

The Minister may, after consultation with the Director of Agriculture, make Regulations for soil conservation, including the prohibition or control of the grazing of livestock and the encouragement of scientific farming techniques designed to reduce or prevent soil erosion.

This will need to be **reviewed and revised to ensure consistency and synergies with other relevant policies and legislation regarding management of forests, water and agriculture, including Grenada's Water Policy.**

4.4.1.10 Environment Trust Fund and Finances

This section allows for the establishment of a fund called the Environmental Trust Fund. The purpose of the Fund is to provide stable, adequate, secure and sustainable funding to finance the conservation and management of the environment in Grenada.

The Governor General appoints a seven-member Board of Trustees. The functions of the Board are to collect all revenue payable into the Fund or ensure that such revenue is collected promptly and efficiently and paid over into the Fund; allocate monies amongst beneficiaries of the Fund for purposes which are eligible for funding in accordance with the provisions of a Schedule yet to be written; and ensure that monies disbursed to beneficiaries of the Fund are utilised properly and efficiently for the purposes for which they have been allocated.

There are useful models and experiences and models from the region and other SIDS which could be considered in reviewing mechanisms for this Fund (e.g. Antigua and Barbuda's Sustainable Island Resource Framework Fund).

4.4.1.11 Ratification and Implementation of Multilateral Environmental Agreements

Under this section the Minister must appoint a Committee to be known as the Multilateral Environmental Agreements Committee. The Minister, on the recommendation of the Chief Environment Officer, may make Regulations for carrying out and giving effect to the provisions of any Multilateral Environmental Agreement. The Third Schedule lists these MEAs and revised legislation will **need to be updated to reflect current international and regional commitments**, giving priority to mechanisms for integrated and/or coordinated reporting. A regional initiative being led by the United Nations Economic Commission for Latin America and the Caribbean (ECLAC) towards regional priority targets under the SDGs may be relevant, and also includes building national capacity for monitoring and reporting.

A key area for attention in the revised legislation is to address climate change, which is not specifically addressed in CEMA. **Linkages to the Climate Change Bill, which is also being developed under this project, will need to be made.** However, as the framework environmental legislation, the EMA can provide a framework for integrating climate change into key areas, for example coastal zone management. The EMA could also provide a framework for incorporation of the UNFCCC into domestic law. The EMA, for instance, could provide for a National Climate Change Committee (NCCC) as a sub-committee of the National Environmental Commission (NEC). The EMA could also provide the NCCC, through the NEC, with the legislative mandate to facilitate and coordinate the implementation of adaptation and resilience measures across sectors and agencies. The EMA could also instruct the Minister for Environment (and relevant sector ministries) to take measures to address climate change, with a particular focus on the impacts of climate change and adaptation measures.

The revised legislation should make clear linkages between climate change adaptation and comprehensive disaster management, and include aspects of the Warsaw International Mechanism for Loss and Damage associated with Climate Change Impacts as a funding mechanism.

4.5 Deliverable: Climate Change Bill

The issue of climate change is of particular importance to the island of Grenada as a SIDS with a largely tourism-based and open economy. Climate change is likely to impact adversely on biodiversity, food, energy and water security, human health, physical infrastructure as well as economic development¹⁶. General key risks are provided in Section 2 of this paper.

The Government of Grenada recognises the critical challenge posed by climate change and is committed to ensuring an effective and coordinated response to climate change. Grenada is a ratified signatory to the United Nations Framework Convention on Climate Change, the Kyoto Protocol, and the Paris Agreement as well as endorsing the United Nations' post-2015 sustainable development goals. The government has also developed a number of key policies and plans on climate change. The National Climate Change Policy and Action Plan (draft plan 2007-2011) provides a coordinated, cross-sectoral approach to climate change adaptation and mitigation, and a National Adaptation Plan is currently being drafted to provide strategic guidance for adaptation planning and implementation.

To provide a comprehensive legal and institutional framework for action on climate change, a Climate Change Bill is now being prepared for Grenada. This Bill will support existing national and sectoral policies and plans and ensure that Grenada meets its international and regional obligations.

4.5.1 Policy context

As detailed in previous sections, Grenada is signatory to a number of multi-lateral environmental agreements that focus on climate change and climate-resilient development (Section 2 and 3). It is also party to a number of regional agreements that provide strategic guidance and priorities for climate change mitigation and adaptation. The Climate Change Bill will, thus, support Grenada's efforts under these various agreements.

At the national level, Grenada has developed policies and plans such as the National Climate Change Policy and Action Plan 2007 and National Energy Policy 2011. A National Adaptation Plan and National Sustainable Development Plan 2030 are also currently under development.

The National Climate Change Policy and Action Plan was developed in 2007, and is currently being updated. It seeks 'to lay the foundation for an organised long term response to climate change'.¹⁷ The plan proposes strategies such as climate proofing, strengthening the use of climate change data, building adaptive capacity and reducing GHG emissions through energy efficiency and the use of renewable energy. Furthermore, the plan sets out strategic goals for mainstreaming climate change adaptation and mitigation into at-risk sectors such as agriculture, housing, water and coastal development.¹⁸ Under the policy, the government has also proposed that the National Climate Change Committee be re-constituted to coordinate the process of gathering and compiling information and ensuring national stakeholder engagement.

¹⁶ Simpson, M., Clarke, J.F., Scott, D.J., New, M., Karmalkar, A., Day, O.J., Taylor, M., Gossling, S. Wilson, M., Chadee, D., Stager, H., Waithe, R., Stewart, A., Georges, J., Hutchinson, N., Fields, N., Sim, R., Ritty, M., Matthews, L., Charles, S. (2012). *CARIBSAVE Climate Change Risk Atlas (CCRA) - Profile for Grenada*. Summary Document, March 2012. Bridgetown, Barbados: The CARIBSAVE Partnership, Department for International Development and Australian AID.

¹⁷ Nachmany, M., Fankhauser, S., Davidova, J., Kingsmill, N., Landesman, T., Roppongi, H., et al. (2015). *Climate Change Legislation in Grenada. An excerpt from the 2015 Global Climate Legislation Study: A Review of Climate Change Legislation in 99 Countries*. Grantham Research Institute on Climate Change and the Environment, London School of Economics. Available at <http://www.lse.ac.uk/GranthamInstitute/wp-content/uploads/2015/05/GRENADA.pdf>

¹⁸ Ibid

In 2011, the National Energy Policy was developed with the ultimate goal to provide affordable, equitable, reliable, clean and sustainable energy sources and services to drive and secure national development, and improve the quality of life for all of its citizens.¹⁹ The policy seeks to promote low-carbon development through transitioning to renewable energy sources, improving energy efficiency and lowering energy consumption in various sectors, including the transport, agriculture, tourism and manufacturing sectors.²⁰ The National Energy Policy is more oriented towards mitigation rather than adaptation, with its focus on reducing GHG emissions.

4.5.2 Outline of Proposed Climate Change Bill

In shaping a Climate Change Bill for Grenada, the following sections are proposed to address Grenada's existing policy and legal context and environmental priorities:

- **Administration:** to address roles and responsibilities of various stakeholders, including:
 - establishing and delineating the duties and powers of the Minister responsible for the environment (currently within the Ministry of Education, Human Resource Development and the Environment)
 - establishing a multi-stakeholder Advisory Body to promote an integrated and coordinated approach to climate change as outlined in the National Climate Change Policy and Action Plan, with representatives from all relevant ministries and agencies, CSOs and private sector associations that deal directly with climate change and environmental management. Consideration will need to be given to whether the National Climate Change Committee, which has been re-constituted as per the proposal in the National Climate Change Policy and Action Plan, can undertake the functions of this Advisory Body. The National Climate Change Committee currently acts as an advisory body to the government and coordinates research and stakeholder engagement for climate change responses. Additionally, the role of the Sustainable Development Commission will need to be considered. This commission, which comprises of representatives of various agencies, was established in 2005 as a quasi-body to advise the sitting government on environmental issues of importance.²¹ It is not clear whether this commission is still active and operational.
- **Climate Change Adaptation Programme:** to establish a national adaptation framework specifying the need to identify and implement adaptation measures in different sectors in order to reduce the vulnerability to the negative effects of climate change.²² This framework would support the implementation of the new National Adaptation Plan that is being drafted. Additionally, the bill should stipulate that Ministers of the government conduct impact and vulnerability assessment for key sectors, such as agriculture, public health, tourism and water, and develop sectoral adaptation plans for identified vulnerable sectors.²³ A sectoral adaptation plan shall specify the adaptation policy measures the Minister of the Government concerned, having regard to the approved national adaptation framework, proposes to adopt for the purposes of enabling adaptation to the impacts of climate change.²⁴ All plans must take

¹⁹ Government of Grenada. (2011). *National Energy Policy Of Grenada - A Low Carbon Development Strategy for Grenada, Carriacou and Petite Martinique*. St. George's, Grenada. p.6

²⁰ Ibid p1

²¹ Ibid p50

²² Government of the Republic of Ireland. (2015). *Climate Action and Low Carbon Development Act 2015*. Dublin, Ireland.

²³ Ibid S 6(2)

²⁴ Ibid S 6(2)

into account sustainable development and the cost to the national economy as well as scientific and technical advice in relation to effectiveness of mitigation and adaptation measures.²⁵

- **Mitigation and Emission Targets:** to create statutory GHG emissions budgets and emission reduction targets and provide for the establishment of an advisory body on climate change as mandated by Grenada's Nationally Determined Contribution (NDC) under the UNFCCC. The emission reduction provisions will impose duties on the relevant Ministers, which require them to establish interim emissions reduction targets through secondary legislation.²⁶ The Ministers will be required to seek expert, independent advice from an established expert advisory committee in advance of setting or modifying emission budgets, interim emission reduction targets or creation of other provisions.
- **Energy:** to provide for energy audits, for example measures for auditing and assessing the energy performance of existing buildings, particularly non-residential buildings, to enhance understanding of the contribution of buildings to GHG emissions and inform strategies for mitigation such as improved energy efficiency and use of renewable energy. This would support greater compliance with the draft building code and guidelines, which has been passed in parliament and are now in the testing and evaluation stage to bring buildings up to standard to handle natural disasters as well as to climate proof.²⁷
- **Conservation and Natural Resource Management:** to give legal effect to emphasise the import of the vulnerability of Grenada's natural ecosystems to climate change as well as the value of ecosystems as carbon sinks (e.g. forests and wetlands). This incorporates an ecosystem based approach as adopted by the UN Convention on Biological Diversity at the Fifth Conference of the Parties.²⁸ It also seeks to enable the National Climate Change Policy and Action Plan's objective of 'avoidance, minimisation or adaptation to the negative impacts of climate change on Grenada's natural environment including ecosystems²⁹, species and genetic resources'.
- **Coastal Zone Management:** to address the projected severe impacts of climate change on coastal areas.³⁰ Mechanisms may include the identification of coastal vulnerability areas (e.g. those with beach erosion, coastal inundation or coastal instability) and development of a coastal zone emergency action subplan for those areas, adjusting coastal planning regimes, strengthening building codes, and establishing protected areas and wildlife corridors, . This will be aligned with the *Physical Planning Act*, which requires that environmental assessments be done for any coastal zone development, the *Revised Protected Area, Forest and Wildlife Act* and supporting regulations including the *Fisheries (Marine Protected Areas) Regulations*³¹ that makes provisions for the protection of coastal zones. Grenada has also developed a Land and Marine Management Strategy and is drafting a new Coastal Zone Management

²⁵ Ibid S 7

²⁶ Consistent with its obligations under article 2 of the UNFCCC, Grenada created one mandatory emission target of 30% reduction in GHG emissions of 2010 by 2025 and an indicative reduction of 40% of 2010 by 2030. However, consideration should be given to having more than one interim target so that Grenada will be able to work in increments to ensure the final emission target in 2030.

²⁷ Government of Grenada. (2004). *Grenada National Report on Sustainable Development*. Ministry of Finance, St. George's, Grenada.

²⁸ 'Decisions adopted by the Conference Of The Parties to the Convention on Biological Diversity at its Fifth Meeting', *Fifth Meeting of the Conference of the Parties to the Convention on Biological Diversity* (UNEP 2000). <<https://www.cbd.int/decision/cop/default.shtml?id=7148>> accessed 3 March 2017.

²⁹ Convention on Biological Diversity (adopted 5 June 1992, entered into force 29 December 1993) [1993] ATS 32 art. 2: ecosystem means a dynamic complex of plant, animal and micro-organism communities and their non-living environment interacting as a functional unit"

³⁰ Grenada's annual and capital cost for sea level rise, at the current rate, is currently estimated to be US \$489 million by 2050.

³¹ Government of Grenada. (2001). *Fisheries (Marine Protected Areas) Regulations 2001*. St. George's, Grenada.

Policy. This policy provides a vision for future use, development and protection of the nation's coastal zone.³² It calls for heightened environmental awareness and community stewardship as well as public access to coastal areas tackling various areas including mangrove deforestation.

- **Physical Development:** to provide mechanisms for integration of climate mitigation and adaptation considerations, for example via the use of EIAs and issuing certificates of clearance before proceeding with any physical development.
- Waste Management
- Integration with Disaster Risk Reduction
- **Research, Monitoring and Access to Information:** to clarify responsibility to provide analytical support on climate change to the various sectors and relevant ministries and to set out a structure for public awareness and engagement and public engagement in decision making. Research in Grenada is currently facilitated by the National Climate Change Committee that acts as an advisory body to the government and coordinates research and stakeholder engagement in climate change responses.
- **Awareness and Capacity building:** to support implementation of the Government of Grenada's a priority to educate the public on climate change and the Government's plan to adapt to the adverse effects. The Climate Change Policy and Action Plan includes objectives to build local capacity to access and respond to climate change; also to sustain public awareness and create education programming.³³
- **Climate Information, Research and Monitoring:** to provide a framework to guide collection and use of information for decision making, reporting and monitoring, including consideration of:
 - Multi-level Vulnerability and Risk Assessments to assist in understanding who and what is at stake and what needs to be prioritized and planned for
 - Loss and Damage Assessments – to help understand current and projected loss and damages and the related financial impacts and implications
 - Establishment of a national Climate Change database and information system – i.e. central repository or other mechanisms to ensure that the information generated through research and monitoring is incorporated into the decision-making process and support required reporting. This item should also be considered in context of potential linkages and contribution to other existing databases and information systems.
 - Climate scenario modelling as basis for adaptation planning
- **Integration with Disaster Risk Reduction:** to guide integration of climate change with comprehensive disaster management (as recommended in the Regional Comprehensive Disaster Management (CDM) strategy 2014-2024, which promotes an integrated risk management approach to building resilience and safeguarding lives and livelihoods against multiple risk scenarios in the Caribbean region for the period 2014-2024). . The Climate Bill should therefore consider:
 - Assessments to understand disaster risk linked to climate change and variability
 - Strategies or measures for addressing climate related hazards and extreme events
 - The need for early warning, preparedness, response and business continuity measures to be developed

³² Government of Grenada. (2016). *Protecting Our Coastline: Coastal Zone Management in Grenada*. German Agency for International Cooperation (GIZ), Berlin, Germany.

³³ Nachmany, M., Fankhauser, S., Davidova, J., Kingsmill, N., Landesman, T., Roppongi, H., et al. (2015). *Climate Change Legislation in Grenada. An excerpt from the 2015 Global Climate Legislation Study: A Review of Climate Change Legislation in 99 Countries*. Grantham Research Institute on Climate Change and the Environment, London School of Economics. Available at <http://www.lse.ac.uk/GranthamInstitute/wp-content/uploads/2015/05/GRENADA.pdf>

- **Mainstreaming in Key Sectors:** to provide guidelines for mainstreaming consideration of climate change mitigation into key sectors (e.g. tourism, transport, energy, waste management) and likewise to mainstream climate change adaptation into key vulnerable sectors (e.g. environment, tourism, agriculture, water, coastal zone management)
- **Climate Financing:** to specify a range of financial instruments to support climate change responses, including:
 - direct budget support to the Department of Environment and other key partner agencies;
 - project support for implementation of initiatives to deliver specific results;
 - extra-budgetary support through a separate Climate Change or Green Fund. This Fund could be created from the following sources: monies appropriated annually or for special purposes by Parliament; monies collected pursuant to this Act; monies provided to the Fund by foreign states, regional or international organisations, or lending agencies, to further the objects and purposes of this Act; monies earned or accrued from investments; and any other monies to which the Fund may make a lawful claim.;
 - public-private partnerships and fiscal measures, such as subsidies and tax incentives, offer potential opportunities. Tax incentives and subsidies will be particularly useful in promoting climate-friendly and climate-proofing behaviours within communities and small businesses that will be facing increasing risks from climate change and need to be financially prepared. Additional instruments to finance climate change measures may include grants, concessional and non-concessional loans, and equity investments.

The aforementioned sections are indicative only. These will be further refined based on stakeholder input at the in-country consultations and through the review process.

8. REFERENCES

- Anderson, W. (2012). *Principles of Caribbean Environmental Law*. Environmental Law Institute, Washington, DC.
- Bulkeley, H., Newell, P. (2009). *Governing climate change*. Routledge, New York.
- Caribbean Community Climate Change Centre [CCCCC]. (2014). *Impact Assessment Report and National Adaptation Strategy and Plan for the Water Sector*. Prepared by Environmental Solutions Limited for CCCCC and Department of Physical Planning and Environment, Ministry of Sustainable Development, Basseterre, St. Kitts.
- CCCCC. (2013). *Caribbean Climate Online Risk and Adaptation Tool (CCORAL)*. Available at <http://ccoral.caribbeanclimate.bz/stage1>
- CCCCC. (2011). *Delivering Transformational Change 2011-2021. Implementation Plan for Caribbean Community Regional Framework on Achieving Development Resilient to Climate Change*. Belmopan, Belize: CCCCC. <http://dms.caribbeanclimate.bz/M-Files/openfile.aspx?objtype=0&docid=4714>
- CCCCC. (2009). *Caribbean Community Regional Framework on Achieving Development Resilient to Climate Change*. Belmopan, Belize: CCCCC. Available at <http://dms.caribbeanclimate.bz/M-Files/openfile.aspx?objtype=0&docid=948>
- Camacho, A. (2005). Mustering the Missing Voices: A Collaborative Model for Fostering Equality, Community Involvement and Adaptive Planning In Land Use Decisions, Installment Two'. *Stanford Environmental Law Journal* 24: 269.
- Caribbean Disaster Emergency Management Agency [CDEMA]. (2014). *Caribbean Comprehensive Disaster Management Strategy 2014-2024*. St. Michael, Barbados: CDEMA.
- Caribbean Natural Resources Institute [CANARI]. (2017). *Implementing Climate Change Action: A Toolkit for Caribbean Civil Society Organisations*. CANARI, Laventille, Trinidad.
- Central Intelligence Agency [CIA].(2016). *The World Factbook - Maps*. Available at <https://www.cia.gov/library/publications/the-world-factbook/geos/sc.html>
- Department of Agriculture. (2013). *St. Kitts 2013-2016 Agriculture Development Strategy*. Basseterre, St Kitts: Department of Agriculture, Ministry of Agriculture, Cooperatives, Fisheries, Lands and Housing.
- Department of Physical Planning, Natural Resources and the Environment. (2008). *Nevis Physical Development Plan, Draft, December 2008*. Charlestown, Nevis: Department of Physical Planning, Natural Resources and the Environment, Ministry of Sustainable Development.
- Development Control and Planning Board. (2006). *National Physical Development Plan*. Basseterre, St. Kitts: Development Control and Planning Board, Ministry of Sustainable Development.
- Environmental Law Institute. (2015). *Sustainable Fisheries & Coastal Zoning in Montserrat. Legal and Institutional Assessment of Authorities and Approaches*. Washington, DC. Available at <http://waittinstitute.org/wp-content/uploads/2016/08/Sustainable-Fisheries-Coastal-Zoning-Montserrat-Legal-Framework.pdf>

Food and Agriculture Organisation of the United Nations [FAO]. (2014). Forests and Climate Change in the Caribbean. *Forests and Climate Change Working paper 13*. FAO, Rome. Available at <http://www.fao.org/3/a-i4220e.pdf>

Gardner, L. (2007). *Review of the Policy, Legal and Institutional Frameworks for Protected Areas Management in Saint Lucia*. OECS Environment and Sustainable Development Unit, Castries, Saint Lucia.

Global Water Partnership. (2000). *Integrated Water Resources Management (IWRM)*. Background Papers 4. Stockholm, Sweden: Global Water Partnership Technical Committee.

Government of Antigua and Barbuda. *The Barbuda (Coastal Zoning and Management) Regulations, 2014*. St. John's, Antigua.

Government of Grenada. (2017). Grenada's Nationally Determined Contribution, Under the UNFCCC. Available at <http://www4.unfccc.int/submissions/INDC/Published%20Documents/Grenada/1/Grenada%20INDC.pdf>

Government of Grenada. (2016). *Abatement of Litter Act*. St. George's, Grenada.

Government of Grenada. (2016). *Protecting Our Coastline: Coastal Zone Management in Grenada*. German Agency for International Cooperation (GIZ), Berlin, Germany.

Government of Grenada. (2014). Fifth National Report to the Convention on Biodiversity. St. George's, Grenada. Available at: <https://www.cbd.int/doc/world/gd/gd-nr-05-en.pdf>

Government of Grenada. (2011). *National Energy Policy of Grenada - A Low Carbon Development Strategy for Grenada, Carriacou And Petite Martinique*. St. George's, Grenada.

Government of Grenada. (2010). *Using LEED as the Basis for the Green Building Code in Grenada*. Grenada Bureau of Standards, St. George's, Grenada.

Government of Grenada. (2008). *A National Water Policy for Grenada*. St. George's Grenada.

Government of Grenada. (2007). *National Climate Change Policy and Action Plan 2007-2011*. St. George's, Grenada.

Government of Grenada. (2007). *Road Map toward Integrated Water Resources Management Planning for Grenada*. Prepared by Caribbean Environmental Health Institute and GEF-funded Integrating Watershed and Coastal Areas Management Project. Castries, Saint Lucia.

Government of Grenada. (2004). *Grenada National Report on Sustainable Development*. Ministry of Finance, St. George's, Grenada.

Government of Grenada. (2003). *National Hazard Mitigation Policy 2003 for Grenada*. National Hazard Mitigation Policy Development Committee, St. George's, Grenada.

Government of Grenada. (2001). *Fisheries (Marine Protected Areas) Regulations 2001*. St. George's, Grenada.

Government of Grenada. (1993). *National Water and Sewerage Authority Act*. St. George's, Grenada.

Government of Montserrat. (2014). *Conservation and Environmental Management Act, 2014*. Ministry of Agriculture, Trade, Housing, Lands and Environment, Brades, Montserrat.

Government of Republic of Ireland. (2015). *Climate Action and Low Carbon Development Act 2014*. Dublin, Ireland.

Government of Republic of Trinidad and Tobago. (2000). *Environmentally Sensitive Area Rules*, Under the Environmental Management Act, 2000. Environmental Management Authority, Ministry of Planning and Development, Port of Spain, Trinidad.

Government of St. Kitts and Nevis. (2014). *Food and Nutrition Security Policy, Draft*. Basseterre, St. Kitts.

Government of St. Kitts and Nevis. (2013). *National Social Protection Strategy 2013-2017*. Prepared for the Government of St. Kitts and Nevis in partnership with the United Nations Children's Fund and United Nations Entity for Gender Equality and the Empowerment of Women. Basseterre, St. Kitts.

Government of St. Kitts and Nevis. (2012). *National Poverty Reduction Strategy and Action Plan 2012-2016*. Prepared for the Government of St. Kitts and Nevis in partnership with the Caribbean Development Bank.

Government of St. Kitts and Nevis. (2010). *Medium Term Economic Strategy, 2010-2012; Volume I: Synthesis, Volume II*; EuropeAid/126688/D/SER/KN. Basseterre, St. Kitts.

Government of St. Kitts and Nevis. (2001a). *Initial National Communications on Climate Change*. Basseterre, St. Kitts.

Government of St. Kitts and Nevis. (2001b). *Natural Hazard Mitigation Policy and Plan for the Federation of St. Kitts and Nevis*. Basseterre, St. Kitts: Post-Georges Disaster Mitigation Programme Guidance Committee.

Government of Saint Lucia [GOSL]. (2014). *Draft Environmental Management Act of 2014*. Ministry of Physical Development, Environment and Housing, Castries, Saint Lucia.

GOSL. (2013). *Climate Change Adaptation Policy 2013 of Saint Lucia*. Ministry of Sustainable Development, Energy, Science and Technology, Castries, Saint Lucia.

GOSL. 2010. *National Energy Policy of Saint Lucia 2010*. GOSL, German Technical Cooperation and CARICOM Secretariat.

GOSL. (2010). *Using LEED as the Basis for The Green Building Code in Saint Lucia*. Saint Lucia Bureau of Standards, Castries, Saint Lucia. Available at http://www.copant.org/phocadownload/construccion_sostenible/St%20Lucia_Julien_SLBS.pdf

GOSL. (2008). *Revised Second National Biodiversity Strategy and Action Plan for Saint Lucia*. Ministry of Sustainable Development, Energy, Science and Technology, Castries, Saint Lucia.

GOSL. (2007). *Draft Environmental Management Act of 2007*. Ministry of Physical Development, Environment and Housing, Castries, Saint Lucia.

GOSL. (2004). *National Environmental Policy and National Environmental Management Strategy*. Ministry of Physical Development, Environment and Housing, Castries, Saint Lucia.

GOSL. (2002). *National Climate Change Policy and Adaptation Plan 2002 of Saint Lucia*. Ministry of Physical Development, Environment and Housing, Castries, Saint Lucia.

GOSL. (2001). *The Physical Planning and Development (Land Development) Act, 2001*. Castries, Saint Lucia.

Greenaway, F. (2013). *Montserrat Land Policy Issues Paper*. Prepared for the OECS Social and Sustainable Development Division, Castries, Saint Lucia.

International Association for Impact Assessment [IAIA]. (2012). *Climate Change in Impact Assessment: International Best Practice Principles*. IAIA statement on climate change and impact assessment. *Special Publication Series No. 8*. IAIA, Fargo, ND. Available at <http://www.iaia.org/uploads/pdf/SP8.pdf>

King-Joseph, A., Lendor-Gabriel, G. (2013). *Saint Lucia Land Policy Issues Paper*. Prepared for the OECS Social and Sustainable Development Division, Castries, Saint Lucia.

- Ministry of Public Works, Utilities, Energy and Housing. (2011). *National Energy Policy for St. Kitts and Nevis*. Basseterre, St. Kitts.
- Ministry of Sustainable Development. (2014). *St. Kitts and Nevis National Biodiversity Strategy and Action Plan 2014-2020*. Basseterre, St. Kitts.
- Ministry of Sustainable Development. (2010). *Stocktaking Report for St. Kitts and Nevis National Preparatory Process for the United Nations Conference on Sustainable Development (Rio+10)*. Prepared by Island Planning Services for the Ministry of Sustainable Development. Basseterre, St. Kitts.
- Ministry of Sustainable Development. (2006a). *National Adaptation Strategy in Response to the New European Union Sugar Regime 2006-2013*. Basseterre, St. Kitts.
- Ministry of Sustainable Development. (2006b). *National Capacity Self Assessment for St. Kitts and Nevis*. Final Report, February 2006. Basseterre, St. Kitts.
- Ministry of Sustainable Development. (2005). *National Environmental Management Strategy and Action Plan 2005-2009*. Basseterre, St. Kitts.
- Ministry of Tourism and International Transport. (2014). *St. Kitts Tourism Sector Strategy and Action Plan 2014-2019*. Basseterre, St. Kitts.
- Murray, L. (2015). *Climate and Development Resources in Grenada*. CCCCC, Belmopan, Belize. Available at http://www.academia.edu/14819304/Climate_and_Development_Resources_Grenada
- Nachmany, M., Fankhauser, S., Davidova, J., Kingsmill, N., Landesman, T., Roppongi, H., et al. (2015). *Climate Change Legislation in Grenada. An excerpt from the 2015 Global Climate Legislation Study: A Review of Climate Change Legislation in 99 Countries*. Grantham Research Institute on Climate Change and the Environment, London School of Economics. Available at <http://www.lse.ac.uk/GranthamInstitute/wp-content/uploads/2015/05/GRENADA.pdf>
- National Emergency Management Agency. (2013). *St. Kitts and Nevis National Disaster Plan. Part I: Basic Plan and Part II: Terms of Reference*. Basseterre, St. Kitts.
- Niles, E. (2013). *Grenada, Carriacou and Petite Martinique Land Policy Issues Paper*. Prepared for the OECS Social and Sustainable Development Division, Castries, Saint Lucia.
- Norville, P. (2017). *Environmental Management Issues related to Low Income Housing in Saint Lucia*. Caribbean Disaster Mitigation Project, OECS, Castries, Saint Lucia. Available at <http://www.oas.org/cdmp/HRHIP/documents/Norville/EnvironmentalSitingCriteria.doc>
- Nurse, L., McLean, R., Agard, J., Briguglio, L., Duvat-Magnan, V., Pelesikoti, N., Tompkins, E. and Webb, A. (2014). Small Islands. In: *Climate Change 2014: Impacts, Adaptation and Vulnerability. Part A: Global and Sectoral Aspects. Contribution of Working Group II to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change*. [Field, C., Barros, V., Dokken, D., Mach, K., Mastrandrea, M., et al. (eds.).] Cambridge, UK: Cambridge University Press. Available at http://www.ipcc.ch/pdf/assessment-report/ar5/wg2/WGIIAR5-Chap29_FINAL.pdf
- OECS. (2005). *Institutional Strengthening: A Framework for Integrated Environmental Management in Saint Lucia*. OECS Environment and Sustainable Development Unit, Castries, Saint Lucia.
- OECS and GOSL. (2002). *Legal and Institutional Review of Environmental Management in Saint Lucia*. Castries, Saint Lucia.
- Rawlins, S.C, Hinds, A., Rawlins, J.M. (2008). Malaria and vectors in the Caribbean: the continuing challenge of the disease forty-five years after eradication from the islands. *West Indian Medical Journal* 57(5): 462-469.

Simpson, M., Clarke, J.F., Scott, D.J., New, M., Karmalkar, A., Day, O.J., Taylor, M., Gossling, S. Wilson, M., Chadee, D., Stager, H., Waithe, R., Stewart, A., Georges, J., Hutchinson, N., Fields, N., Sim, R., Rutty, M., Matthews, L., Charles, S. (2012). *CARIBSAVE Climate Change Risk Atlas (CCRA) - Profile for Grenada*. Summary Document, March 2012. Bridgetown, Barbados: The CARIBSAVE Partnership, Department for International Development and Australian AID.

<http://dms.caribbeanclimate.bz/M-Files/openfile.aspx?objtype=0&docid=5032>

Simpson, M., Clarke, J.F., Scott, D.J., New, M., Karmalkar, A., Day, O.J., Taylor, M., Gossling, S. Wilson, M., Chadee, D., Stager, H., Waithe, R., Stewart, A., Georges, J., Hutchinson, N., Fields, N., Sim, R., Rutty, M., Matthews, L., Charles, S. (2012). *CARIBSAVE Climate Change Risk Atlas (CCRA) - Profile for St. Kitts*. Summary Document, March 2012. Bridgetown, Barbados: The CARIBSAVE Partnership, Department for International Development and Australian AID.

<http://dms.caribbeanclimate.bz/M-Files/openfile.aspx?objtype=0&docid=5049>

Simpson, M., Clarke, J.F., Scott, D.J., New, M., Karmalkar, A., Day, O.J., Taylor, M., Gossling, S. Wilson, M., Chadee, D., Stager, H., Waithe, R., Stewart, A., Georges, J., Hutchinson, N., Fields, N., Sim, R., Rutty, M., Matthews, L., Charles, S. (2012). *CARIBSAVE Climate Change Risk Atlas (CCRA) - Profile for Saint Lucia*. Summary Document, March 2012. Bridgetown, Barbados: The CARIBSAVE Partnership, Department for International Development and Australian AID.

<http://dms.caribbeanclimate.bz/M-Files/openfile.aspx?objtype=0&docid=5040>

United Nations Department of Economic and Social Affairs [UNDESA]. (2012). *Climate Change Adaptation in Grenada: Water Resources, Coastal Ecosystems and Renewable Energy*. UNDESA, New York. Available at https://sustainabledevelopment.un.org/content/documents/UNDESA%20Grenada_web%20version.pdf

United Nations Development Programme [UNDP]. (2016). *2030 Agenda for Sustainable Development and 17 Sustainable Development Goals*. Geneva, Switzerland: UNDP.

<http://www.un.org/sustainabledevelopment/development-agenda/>

UNDP - Capacity Development in Sustainable Water Management [Cap-Net]. (2015). *IWRM as a Tool for Adaption to Climate Change*. Cap-Net, Geneva, Switzerland. Available at <http://www.cap-net.org/training-material/iwrm-as-a-tool-for-adaptation-to-climate-change-english/>

United Nations Economic Commission for Latin America and the Caribbean [ECLAC]. (2012). *Draft Regional Agreement on Access to Information, Public Participation and Access to Justice in Environmental Matters*. Latin America and Caribbean Declaration on Principle 10 under the Rio Declaration on Environment and Development. Available at <http://www.cepal.org/en/principio-10>

ECLAC. (2004). *Hurricane season in the Caribbean causes more than US\$2.2 billion in losses*. November 25 2004. Available at <http://reliefweb.int/report/bahamas/hurricane-season-caribbean-causes-more-us22-billion-losses>

United Nations Environment Programme [UNEP] – Division of Environmental Law and Conventions. (2016). *The State of Biodiversity in Latin America and the Caribbean: A mid-term review of progress towards the Aichi Biodiversity Targets*. UNEP, Nairobi, Kenya. Available at <https://www.cbd.int/gbo/gbo4/outlook-grulac-en.pdf>

UNEP. (2016). *Green Economy Scoping Study for Saint Lucia*. UNEP, GOSL and the University of the West Indies. Available at http://www.pnuma.org/publicaciones/FINAL_Green_Economy_Scoping_Study_for_Saint_Lucia.pdf

UNEP. (2010a). *National Environmental Summary of Grenada*. UNEP Regional Office for Latin America and Caribbean, Panama City, Panama. Available at <http://www.pnuma.org/publicaciones/Final%20NES%20Grenada%20Nov-%202010-%20edited.pdf>

UNEP. (2010b). *National Environmental Summary of the Federation of St. Kitts and Nevis*. UNEP Regional Office for Latin America and Caribbean, Panama City, Panama. Available at <http://www.pnuma.org/publicaciones/Final%20NES%20St%20Kitts%20Nevis%20Nov%202010-%20edited.pdf>

UNEP. (2010). *National Environmental Summary of Saint Lucia*. UNEP Regional Office for Latin America and Caribbean, Panama City, Panama. Available at <http://www.pnuma.org/.../Final%20NES%20-%20St%20Lucia-2010-%20edited.pdf>

UNEP – World Conservation and Monitoring Centre. (2017). *Protected Area Profile for Montserrat from the World Database of Protected Areas*. Cambridge, UK. Available at: <http://www.wdpa.org/country/MSR>

UNEP Global Programme of Action on Protection of the Marine Environment, Hague, Netherlands. Available at <http://www.pnuma.org/gobernanza/cd/Biblioteca/Zonas%20Costeras/15%20REVIEW%20OF%20NATIONAL%20LEGISLATIONS%20RELATED%20TO%20COASTAL%20ZONE%20MANAGEMENT.pdf>

United Nations Framework Convention on Climate Change [UNFCCC]. (1992). Available at http://unfccc.int/files/essential_background/background_publications_htmlpdf/application/pdf/conveng.pdf

United Nations International Strategy for Disaster Reduction [UNISDR]. (2015). *Sendai Framework for Disaster Risk Reduction 2015-2030*. Geneva, Switzerland: UNISDR.

Williams, P.I. (2013). *St. Kitts and Nevis Land Policy Issues Paper*. Prepared for the OECS Social and Sustainable Development Division, Castries, Saint Lucia.