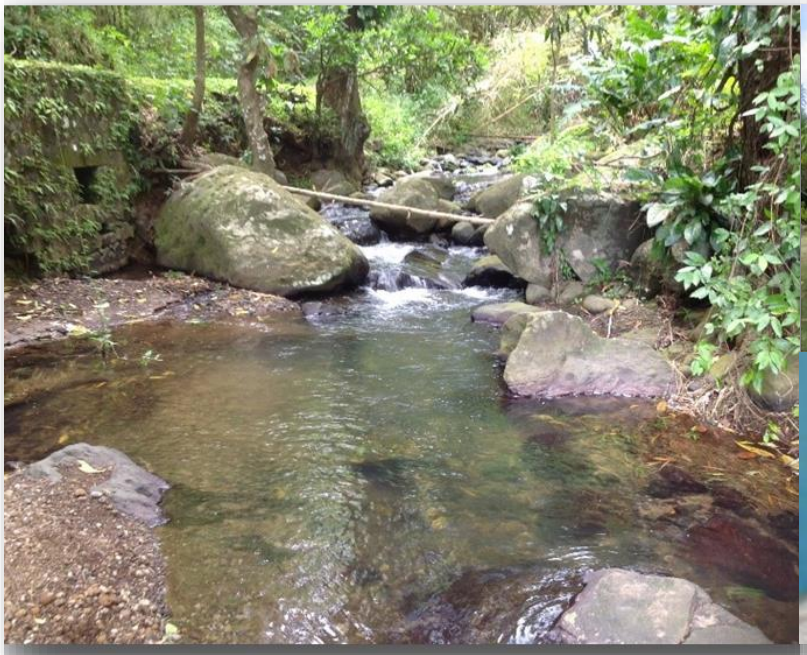
Grenada
National Water Policy



APPROVED BY THE CABINET OF THE GOVERNMENT OF GRENADA DECEMBER 2020

> "Water has an economic value in all its competing uses and should be recognized as an economic good….it is vital to recognize first the basic right of all human beings to have access to clean water and sanitation at an affordable price"

The Dublin Conference (International Conference on Water and the Environment)
Jan 31, 1992

This policy document should be cited as:
Government of Grenada (2020). *Grenada National Water Policy 2020.*

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Acknowledgements

The National Water Policy has been formulated through a participatory process of focus groups and consultations involving a large number of persons from government ministries and agencies, as well as non-government stakeholders.

The policy was developed under the umbrella of the Grenada Water Stakeholder Platform (G-WaSP) through the assistance of the global "International Water Stewardship Programme" (IWASP), financed by the German Federal Ministry for Economic Cooperation and Development (BMZ) and the British Department for International Development (DFID). IWASP is implemented by the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ).

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Acronyms and Abbreviations

CARICOM	Caribbean Community	NAP	National Climate Change Adaptation Plan
CARPHA	Caribbean Public Health Agency	NAWASA	National Water and Sewerage Authority
CSO	Civil Society Organisation	NDC	Nationally Determined Contributions
CCCCC	Caribbean Community Climate Change Centre	NGO	Non-Governmental Organisation
CCORAL	Caribbean Climate Online Risk and Adaptation Tool	NWP	National Water Policy
C&PM	Carriacou and Petite Martinique	OECS	Organisation of Eastern Caribbean States
GoG	Government of Grenada	PURC	Public Utilities Regulatory Commission
GEPAP	Gender Equality Policy & Action Plan 2014-2024	RWH	Rainwater harvesting
G-WaSP	Grenada Water Stakeholder Platform	SDG	Sustainable Development Goal
IWRM	Integrated Water Resources Management	SIDS	Small Island Developing State
M&E	Monitoring and Evaluation	TNA	Technology Needs Assessment
MoH	Ministry of Health		

Glossary

Adaptation	The process of adjustment to actual or expected climate and its effects. In human systems, adaptation seeks to moderate harm or exploit beneficial opportunities. In natural systems, human intervention may facilitate adjustment to expected climate and its effects.
Climate	The characteristics of weather (temperature, precipitation and wind patterns) which occur annually or seasonally, usually averaged over a 30-year time period for planning purposes.
Climate Change and Variability	A change of climate which is attributed directly or indirectly to human activity that alters the composition of the global atmosphere and which is in addition to natural climate variability observed over comparable time periods (typically decades or longer).
Climate Hazard	A potentially damaging physical manifestation of climatic variability or change such as droughts, floods, storms, episodes of heavy rainfall.
Climate Resilient Development	Development activities that will deliver benefits under all potential future climate scenarios and can cope with uncertainties over future conditions.
Demand Management	Measures that promote the efficient use of water, including load management and load reduction or conservation. It is the purposeful and beneficial manipulation of the level and timing of water usage. Demand management deploys various techniques for conserving water and improving the efficient use of water by end users.
Drought	A drought occurs when there is an extended period of deficiency in precipitation (relative to what is considered normal), which is then insufficient to meet economic, social and environmental demands.
Evaluation	A systematic assessment of the worth or utility of an intervention at a specific point in time, for example whether a policy has been effective in achieving set objectives.
Flood	An overflow of water from a river, lake or other body of water due to excessive precipitation or other input of water.
Groundwater	Water beneath the surface of the earth which saturates the pores and fractures of sand, gravel, and rock formations.
Integrated Water Resource Management	Management that seeks to promote the coordinated development of water, land and related resources in order to maximise equitable economic and social welfare, while maintaining environmental sustainability.
Mitigation	In the context of climate change, a human intervention to reduce the sources or enhance the sinks of greenhouse gases. Examples include using fossil fuels more efficiently for industrial processes or electricity generation, and switching to solar energy or wind power.
Monitoring	The systematic and continuous collection of data and information that enables stakeholders to check whether an intervention is on track to achieving set objectives.

Paris Agreement	The landmark agreement to combat climate change and to accelerate and intensify the actions and investments needed for a sustainable 'low-carbon' future, reached by the Parties to the United Nations Framework Convention on Climate Change (UNFCCC), at the 21st Conference of the Parties (COP 21) in Paris, on 12 December 2015.
Water Pollution Control	Activities designed to protect the country's rivers, streams, lakes, groundwater and nearshore coastal waters from the discharge of pollutants.
Rainwater Harvesting	The accumulation and deposition of rainwater for reuse on-site, rather than allowing it to run off. Its uses include water for garden, water for livestock, water for irrigation and water for domestic use with proper treatment.
Resilience	The ability of the (water supply) system to maintain service levels, and avoid significant damage and related costs.
Saltwater Intrusion	Aquifers in island and coastal areas are prone to seawater intrusion. As seawater is denser than freshwater, it will invade aquifers which are hydraulically connected to the ocean. Under natural conditions, fresh water recharge forms a lens that floats on top of a base of seawater. This equilibrium condition can be disturbed by changes in recharge and/or induced conditions of pumping and artificial recharge.
Surface Water	Water collecting on the ground, in a stream, river, lake, wetland, or ocean.
Vulnerability	The propensity or predisposition to be adversely affected. Vulnerability encompasses a variety of concepts including sensitivity or susceptibility to harm, and lack of ability to cope and adapt.
Water	In this policy, water includes rain; water as it flows above or below ground, and into the ocean; alternative sources including wastewater, brackish, and salt water; infrastructure used to produce, store and transmit water; and water to which all citizens have rights. In this definition the concept of ridge to reef is applicable.
Water Rights	Rights designed to protect the use and enjoyment of water that travels in streams, rivers, lakes, and ponds, gathers on the surface of the earth, or collects underground.
Watershed or basin or catchment	A geographical area drained by a particular surface water and/or groundwater system. The basin boundaries are demarcated so that there is generally no flow from one basin into another.

Part One – Situation Analysis

The Global and Regional Context

The global demand for water has been increasing at a rate of about 1% per year as a function of population growth, economic development and changing consumption patterns, among other factors, and it is predicted to grow significantly over the next two decades. At the same time, the global water cycle is intensifying due to climate change, with wetter regions generally becoming wetter and drier regions becoming even drier (WWAP/UN-Water, 2018).

Since 2012, several major international meetings and multilateral environmental agreements (MEAs) have highlighted the critical need for action to safeguard the supply of water. These include the UN Conference on Sustainable Development – Rio+20, the Third International Conference on Small Island Developing States (SIDS), the Sendai Framework on Disaster Risk Reduction, the Addis Ababa Action Agenda, and the 2030 Agenda for Sustainable Development (United Nations, 2015), all of which address the important role of water in sustainable development. Sustainable Development Goal 6 (SDG 6) is: '*Ensure access to water and sanitation for all*' (Box 1).

Box 1 SDG 6: ENSURE AVAILABILITY AND SUSTAINABLE MANAGEMENT OF WATER AND SANITATION FOR ALL – TARGETS

6.1 By 2030, achieve universal and equitable access to safe and affordable drinking water for all

6.2 By 2030, achieve access to adequate and equitable sanitation and hygiene for all and end open defecation, paying special attention to the needs of women and girls and those in vulnerable situations

6.3 By 2030, improve water quality by reducing pollution, eliminating dumping and minimizing release of hazardous chemicals and materials, halving the proportion of untreated wastewater and substantially increasing recycling and safe reuse

6.4 By 2030, substantially increase water-use efficiency across all sectors

6.5 By 2030, implement integrated water resources management at all levels

6.6 By 2020, protect and restore water-related ecosystems, including mountains, forests, wetlands, rivers, aquifers and lakes

6.a By 2030, expand international cooperation and capacity-building support to developing countries in water- and sanitation-related activities and programmes, including water harvesting, desalination, water efficiency, wastewater treatment, recycling and reuse technologies

6.b Support and strengthen the participation of local communities in improving water and sanitation management

Source: United Nations (2015)

SDG 6 has strong linkages to, and underpins several of the other SDGs, including: SDG 2 – to end hunger, achieve food security and improve nutrition and promote sustainable agriculture; SDG 3 – to ensure healthy lives and promote well-being; SDG 8 – to promote sustained, inclusive and sustainable economic

growth; SDG 9 – to build resilient infrastructure; SDG 13 – to take urgent action to combat climate change and its impacts; and SDG 15 – to protect, restore and promote sustainable use of terrestrial ecosystems.

At the regional level, Grenada[1] has committed to the St. George's Declaration of Principles for Environmental Sustainability in the Organization of Eastern Caribbean States (OECS); and the CARICOM Implementation Plan for the 'Regional Framework for Achieving Development Resilient to Climate Change', approved by CARICOM Heads in March 2012 (CCCCC, 2012). The St. George's Declaration identifies water resource management and use efficiency as an important issue, while the Implementation Plan identifies water as the most important cross-cutting issue for climate-compatible development in the region (Figure 1).

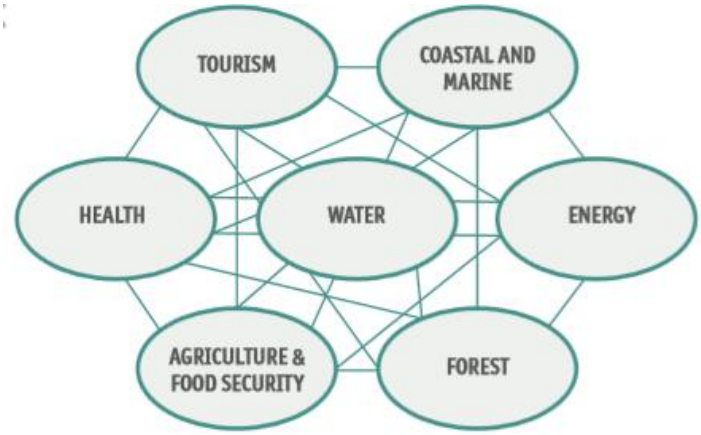

Figure 1 Sectors identified in the CARICOM Regional Framework

Grenada has also committed to the OECS' *Water Sector Model Policy and Model Water Act for Countries within the Organisation of Eastern Caribbean States*, and **this National Water Policy (NWP) is in close alignment with the OECS Model Water Policy.**

Water resources and availability in the Caribbean are largely controlled by climatic factors, but modified by island size, geology and topography. According to the Intergovernmental Panel on Climate Change (IPCC) 5th Assessment Report, small island states are especially vulnerable to the effects of climate change and the resulting increased water stress. Extreme rainfall events associated with tropical storms and hurricanes will affect national water infrastructure, whilst sea level rise is likely to lead to salinization of coastal aquifers. Climate change is also expected to result in hotter conditions and more frequent droughts in the Caribbean, which will also negatively impact Caribbean water systems. Thus, given increasing demand and the expected effects of climate change, even a slight reduction in rainfall could have serious consequences. Further, climate change, by causing an intensification of weather events, can increase the risk of pollution of water supplies from damage to wastewater treatment and/or collection systems, flooding of septic systems and the resultant contamination of groundwater sources.

[1] 'Grenada' refers to the tri-island State of Grenada which includes the islands of Carriacou and Petite Martinique.

The issues confronting the water sector in the region are not all due to the impacts of climate change or extreme weather events, however; there are several other challenges related to governance and the level of investment in the sector, both at the national policy level and at the level of the water utility.

For the purposes of this NWP, the water sector includes direct consumption and use of water (including harvested rainwater); land drainage; irrigation; industrial and other abstraction; in-stream use of water for recreation, amenity and ecology; environmental protection; treatment and disposal of sewage and industrial effluent; and associated infrastructure. As a critical natural resource, the issues connected with managing water resources are inherently diverse and complex. They involve questions of allocation and distribution, equity, sustainable use, pricing, regulation, education and participation.

The Local Context

Policy Rationale

In 2007, the first NWP was developed for Grenada, but by 2018 the Policy was never implemented. Since the first NWP was completed, many tenets remain constant, but much has also changed and evolved, foremost being changes in water demand since 2007 – whether resulting from new tourism projects or greater need for agriculture water. Climate change implications are much more important, and regional models point toward hotter and drier conditions in the region. Therefore, there is need for periodic review of the 2007 NWP, since changes over time can impact the relevance of the policy. The need for the current review is based on, but not limited to, the need to:

a. Provide for a clear vision and holistic policy direction for the water sector;
b. Assess the delay in implementation of the 2007 NWP and update it, taking into consideration key developments in the local water sector and international best practices for water resources management;
c. Re-align the updated Water Policy with Grenada's commitments under various MEAs including the OECS Model Water Policy;
d. Re-examine the role of the water sector and priorities of the national development planning process;
e. Integrate cross-cutting issues such as gender and climate change;
f. Incorporate current review of the institutional and legal framework; and
g. Incorporate the traditional and place-based knowledge about water by the people of Carriacou and Petite Martinique (C&PM).

The Government of Grenada is committed to the creation of an enabling environment for the economic and social development of the country. This imperative has taken on particular importance after the experience of the 2008 global financial crises and as the economy recovers from the effects of natural disasters such as Hurricanes Ivan and Emily in 2004 and 2005, given the projected intensification of such natural disasters due to climate change. The sound management of water resources and the delivery of water services play a central role in underpinning the functioning of the economy. The Government has

recognised that the continued success of the economy and social development is being put at risk by the current water sector arrangements. A number of national constraints have been identified that if not addressed in a proper and timely manner will impose additional costs on the economy, impact on the country's international competitiveness and result in a failure to realize its full economic and social potential. The constraints identified include:

a. A fragmented and poorly coordinated approach to water resources management and its relationship to development activities and planning;
b. A severe lack of knowledge and understanding of the available water resources;
c. Increasing impacts on the natural and water resources environment from environmental degradation, pollution and inappropriate land use;
d. An absence of allocation and mediation mechanisms to resolve conflicts over the use of water resources;
e. Poor enforcement of regulations and the need to revise and update current legislation pertaining to water services and water resources;
f. Inadequate infrastructure to ensure water quality and quantity especially during dry seasons. This impacts domestic demand, as well as the potential and attractiveness of the hotel and tourist industry and on industry in general;
g. Absence of an adequate municipal sewage disposal system;
h. Relatively weak financial position of the water service provider and an inability to mobilize financial resources for major capital investments; and
i. Lack of planning for the impacts of natural disasters and climate change adaptation.

Grenada's Policy Environment

Over the past few years, Grenada has developed several national policy documents and plans, the following which have direct relevance for the water sector, and which have informed the development of the current NWP:

National Environmental Policy and Management Strategy (NEP/NEMS) for Grenada (GoG, 2004) – which envisions "a healthy and productive environment that guarantees the sustainability of development activities and processes and that contributes fully to social and cultural development, to economic prosperity, and to the quality of human life." The NEP/NEMS is Grenada's formal expression and commitment to arrest and reverse trends of environmental degradation and to ensure that sound environmental management is fully integrated into the national development policy framework.

Gender Equality Policy and Action Plan 2014-2024 (GEPAP) (GoG, 2014) – the overall goal of which is to promote gender equality, equity, social justice and sustainable development in Grenada. Under the key national development area 'Climate change, natural disasters and natural resource management', the GEPAP indicates that: '*Despite the fact that many aspects of the economy all have*

*gender dimensions, e.g., **water management**, waste management, land management, renewable energy, clean transportation, and 'green' buildings, discussions on gender equality are relatively absent from policy-making, planning and development programmes on these issues.'*

National Adaptation Strategy and Action Plan for the Water Sector in Grenada, Carriacou and Petit Martinique (GoG, 2015a) – aimed at determining the impact of climate change and climate variability on Grenada's water sector, determining the vulnerability of the water sector to climate related hazards and developing a National Adaptation Strategy and Action Plan to address the anticipated adverse effects of climate change on the water sector.

Grenada National Agricultural Plan 2015-2030 (GoG, 2015b) – which presents several strategic focus areas including: increasing agriculture's contribution to national economic growth, employment creation, poverty reduction and rural development; enhancing national food security; and strengthening the sector's resilience to climate change and natural disasters. The Plan identifies various Priority Actions to support Strategic Objectives including: irrigation; water storage; improved access to potable water and sanitation; rainwater harvesting (RWH) systems; and drainage.

Integrated Coastal Zone Management Policy for Grenada, Carriacou and Petite Martinique (GoG, 2015c) – which defines the coastal zone to include, among other criteria: a landward boundary guided by the 150 ft., 100 ft. and 75 ft. contour elevations for Grenada, Carriacou and Petite Martinique respectively; and which highlighted marine pollution from land-based sources and watershed runoff as key coastal zone management issues facing Grenada.

Final Draft Technology Needs Assessment (TNA) (GoG, 2016a) – carried out in support of Grenada's commitments at the 2015 UNFCCC 'Paris Agreement', and which TNA process identified the water sector as the priority sector to be assessed, with potable water, agriculture and tourism as the priority subsectors. Technology options which could be used to increase water availability for agriculture, tourism and domestic water supply during prolonged dry periods are identified and ranked.

Grenada's Nationally Determined Contribution (NDC) (GoG, 2016b) – which embodies Grenada's commitment made in 2016 under the Paris Agreement to reduce national emissions and adapt to the impacts of climate change. Grenada's mitigation measures comprise reducing its greenhouse gas emissions by 30% of 2010 levels by 2025, with an indicative reduction of 40% of 2010 levels by 2030. Further, the NDC identified *Improving Water Resource Management* (WRM) as an adaptation measure, among others, to support resilience-building at all levels.

National Biodiversity Strategy and Action Plan (NBSAP) 2016-2020 (GoG, 2016c) – a revised and updated version of Grenada's first NBSAP in 2000, pursuant to its obligations under the Convention on Biological Diversity. The Plan identifies the main threats to biodiversity in Grenada's fresh water ecosystems as pollution through waste disposal, unsustainable consumption, unsustainable agricultural practices, saline intrusion, invasive 'alien' species and over exploitation of the resources.

National Climate Change Policy for Grenada, Carriacou and Petite Martinique (2017-2021) (GoG, 2017a) **–** which identifies water supply and sewage management as a priority thematic area for building climate resilience, along with 'agriculture, agri-business and food security', biodiversity and ecosystems, human health and coastal zone management. The water-related outcomes of the Climate Change Policy are: reduced water outage times; increased application of water conservation/efficiency measures; and improved surface, sub-surface and coastal water quality.

National Climate Change Adaptation Plan (NAP) for Grenada, Carriacou and Petite Martinique (GoG, 2017b) **–** the function of which is to provide a strategic, coordinating framework for building climate resilience in Grenada. Under its Programme of Action 3 (PoA 3) *Water Availability*, the NAP identifies the Goal of: *Establishing a climate-responsive water governance structure*, and an Objective to: *Improve the policy, legal, regulatory and institutional framework for the water sector.* It is noteworthy that the first Priority Action identified under PoA 3 was to '*Update the National Water Policy (2007) to include climate change considerations.'*

(Draft) Grenada National Land Policy (GoG, 2018) **–** prepared in 2018 and awaiting Government approval and adoption. The key objectives of the Policy include to: establish the framework for the sustainable, productive and equitable development, management and use of Grenada's land and natural resources (including coastal resources) to compliment socioeconomic development initiatives of the country; and establish the information system required for sound management of land and natural resources and to map and manage risk from climate change.

The following two policy documents, currently under preparation, have also informed the development of the current NWP:

(Draft) Grenada Drought Management Plan – which has as its goal: *to achieve the greatest public benefit for domestic water use and sanitation in an efficient and equitable manner during severe dry periods such that there is sustainable economic, social and environmental development.* The Plan is based on participatory approaches in decision making, the important role of women in disaster management, and the need to urgently address the adverse impacts of climate change on water resources and assuring social and economic well-being through improved WRM.

National Sustainable Development Plan 2035 – being prepared to guide Grenada's development priorities over the 15-year period 2020-2035. The Plan envisions that by 2035, Grenada will be a prosperous and resilient nation, with a conscious and caring citizenry, promoting human dignity and realizing its full potential through sustainable economic and social progress for all, by mainstreaming adaptation strategies as part of continued stakeholder engagement and policy implementation.

Water Resources Management Challenges

The Water Policy is based on the understanding that water is a socially-vital, economic good that requires a coordinated and participatory management approach, a commitment to good governance together with accountability and transparency that provides a sound platform for sustained economic growth and the reduction of poverty and inequality. Water's contribution to economic and social development must also take account of the importance of balancing competing water uses with the requirements of its many interrelationships within the ecosystem. In the implementation of the Water Policy, the following three key challenges to the sustainability of water resources management and water services have been identified:

Financial and Operational Sustainability – pricing water services to recover full costs and mobilising sufficient capital investment to ensure the adequate provision of infrastructure for economic and social development and to cover operation and maintenance and eventual replacement at rates (tariffs) that are equitable and affordable. Securing financing and investment is affected by the Government's high level of indebtedness and resultant difficulties in allocating resources in the national budget;

Institutional Sustainability – establishing and building the capacity of water resource management institutions, promoting good governance and maintaining effective relationships and coordination between the relevant public authorities, the private sector and civil society. Institutional structures need to be open and transparent in what the various actors do; and

Technical Sustainability – exploring a range of alternative and affordable options, and adapting solutions to be more appropriate to meet the needs of the water users and ecosystems and hence strengthen the economic base.

Grenada's Water Resources

Drinking Water

About 98% of the population has access to improved water supply and the majority of the island's domestic users are now metered. Drinking water comes mainly from water harvested in dams in the mountain ranges of the northern region and is distributed to households through gravity systems. Groundwater contribution to domestic water supply is small, accounting for about 7% of total annual withdrawal of about 14.1 million m^3. Groundwater is used mainly during the dry season, since surface water yields can then drop by 25 percent (UNDESA, 2012). Desalination is currently utilized by two major private sector entities in Grenada, and to supplement the harvested rainwater domestic supply in Carriacou and Petite Martinique. Very little data are available on the quality of the water resources in Grenada. All public drinking water supplies are treated to meet WHO standards and there is a protocol for monitoring water quality by NAWASA and the Ministry of Health (UNDESA, 2012).

Water for Agriculture

Grenada's agriculture is predominantly rain-fed (98% of arable land), however, estimates of the agricultural water demand were placed at 15% of the total demand. Water for agriculture is typically pumped from the downstream of rivers (about 92%) for larger operations, while for small backyard-type gardening, treated water from public mains is the main water source (about 6.5%). Water for livestock production comes from the public water supply, but there are little efforts to treat the generated wastewater before discharging into public waterways (Weaver, 1989).

Rainwater Harvesting

RWH has been used in the northern parts of the mainland, in remote communities where supply from NAWASA is not available, and in Carriacou and Petite Martinique where it is well developed as the main potable supply. RWH ponds have been used in livestock production and, in a few cases, for the provision of water for intensive vegetable production. It is now being promoted in 'climate smart agriculture' and for the augmentation of public water supply.

Water for Nature

Water for nature is in the form of lakes (Grand Etang, Lake Antione and Levera Pond); waterfalls (Concord, Seven Sisters, Annandale, Tufton Hall and Mt. Carmel) and their rivers and streams. These inland waters provide habitats for a variety of indigenous fauna, and provide for eco-tourism – inclusive of site seeing, swimming, fishing and river tubing. Some estuaries have developed into unique wetland systems providing additional opportunities for eco-tourism and education.

Nearshore Coastal Waters

Nearshore coastal waters result from flows from the mountains to the reefs, and create the coastal ecosystems of Grenada including mangroves, beaches, littoral forests, coral reefs, seagrass beds, rocky shores, and rivers, estuaries and wetlands. The health and integrity of the country's coastal waters have been severely compromised by human activities, including mangrove clearance, over-fishing and land-based pollution.

Wastewater Reuse

The reuse of wastewater is not a widespread practice in Grenada, but is receiving increasing attention as a response to periodic and longer term water scarcity. The increasing attention being paid to this potential resource needs to be accompanied by building positive public perception through education, and appropriate levels of treatment that reflect the different categories and accompanying quality standards required for hygiene and to protect public health.

Gender Equality and Water

The international community, as early as the International Conference on Water and the Environment in Dublin, Ireland, 1992, has acknowledged the importance of a gender-responsive approach to water management, as shown at Box 2. SDG 6 of the '2030 Agenda', Target 6.2, aims to achieve by 2030: *'access to adequate and equitable sanitation and hygiene for all and end open defecation, paying special attention to the needs of women and girls and those in vulnerable situations'* (United Nations, 2015).

Further, the Global Water Partnership's Gender Strategy (GWP, 2014) in addressing the role of women in participatory water governance, states: *'Gender roles do not only determine how women and men are affected by the way water resources are developed and managed; gender roles also determine how and what women can contribute to achieving universal access and to managing the resource sustainably, both in their individual capacity and as a Major Group in society.'*

Grenada's gender policy environment, in respect of the GEPAP 2014-2024, has been mentioned above.

Box 2 Dublin Principle 3: Women play a central part in the provision, management, and safeguarding of water

This pivotal role of women as providers and users of water and guardians of the living environment has seldom been reflected in institutional arrangements for the development and management of water resources. Acceptance and implementation of this principle requires positive policies to address women's specific needs and to equip and empower women to participate at all levels in water resources programmes, including decision-making and implementation, in ways defined by them

Part Two – Strategic Focus

Vision Statement

"A water secure Grenada in which present and future generations have sustainable access to adequate, safe and affordable water, and sanitation, to maintain and enhance the quality of their lives and livelihoods and the integrity of natural ecosystems"

Guiding Principles

Freshwater and coastal resources are linked through the hydrological cycle from ridge to reef and thus have to be managed in a holistic manner for the benefit of people, society, the environment and the economy. Therefore, the following principles will guide the application of the National Water Policy:

a. Water is public property and as such its ownership and stewardship is vested in the State. As steward and custodian of water it is the function, duty and role of the State to exercise control and regulation over the uses and the allocation of water resources; as such the state would ensure that water stewardship processes will involve civil society organisations, particularly disadvantaged groups, as well as the private sector. These groups have come together and formed the Grenada Water Stakeholder Platform (G-WASP) and would be considered in the implementation of the Policy;

b. The State may delegate some, part or all of the exercising of its responsibilities (control, regulation, allocation, duties, obligations) to a designated body, paying regard to the setting out of the powers, duties, roles and responsibilities of such;

c. Water and sanitation, in accordance with UN Resolution 64/292 are a human right and the State shall endeavor to ensure its fulfilment with respect to availability, accessibility, adequacy, safety and affordability;

d. Water is essential to sustain life, development and maintain ecological integrity. Its utilization shall be such as to ensure the sustainable provision of environmental goods and services that contribute to fresh and coastal water quality – and quantity in the case of freshwater;

e. The Precautionary and User Pays Principles shall be applied such as to ensure that water is used in an environmentally sound and sustainable manner; and those that utilize water for productive purposes should contribute towards the costs associated with that use;

f. Water will be managed in an integrated manner that takes into account the inter-relationships between land, ecosystems, and society, and water management shall be integrated into and informed by national development planning processes, and regional and international agreements and conventions;

g. To facilitate integration, water development and management shall be collaborative and incorporate participatory approaches, ensuring that all levels of stakeholders (users, planners,

policy-makers, managers, private sector, practitioners, civil society, etc.) have the opportunity for meaningful involvement in decision-making, through structured and institutionalized processes;

h. Particular attention shall be paid in the participatory processes to ensuring social equity and equality in the incorporation of women, vulnerable, and disadvantaged groups;

i. The private sector together with non-governmental and civil society organisations shall be recognised as partners, contributing to the sound functioning of the water sector and the State shall facilitate a greater role for their involvement in water resources management and water services provision;

j. Climate variability and change will manifest themselves most significantly through their impact on water, therefore the potential impacts shall be an integral and explicit part of water planning, development and management. These efforts shall be guided by the Regional Framework for Achieving Development Resilient to Climate Change, the Caribbean Regional Resilience Development Implementation Plan, and current National Policy documents;

k. The implementation of the Cartagena Convention, and in particular Annex III, the Protocol addressing the control and management of land-based sources of marine pollution (LBS Protocol) shall inform the development of pollution and wastewater management legislation, policies and regulations to protect the coastal water resources; and

l. The Policy shall apply to all geographic areas of the country; notwithstanding the small physical size of Grenada, there are geographic and climatic differences between the mainland and the dependencies of C&PM, which are semi-arid in nature.

Goal of the Policy

The Goal of Grenada's National Water Policy is to provide sustainable management of the country's water resources, through stakeholder participation and contribution to economic, social and environmental development in an efficient and equitable manner.

The Policy is based on the need for a holistic and coordinated approach to water management; the adoption of the concept of Integrated Water Resources Management (IWRM) which recognizes the essential, finite and vulnerable nature of water, the conservation and protection of ecosystems, participatory approaches in decision making, the role of women, and the economic value of water; the need to urgently address the adverse impacts of climate change on water resources and enable social and economic well-being through improved water resources management.

Outcomes and Objectives of the Policy

To accelerate progress towards the achievement of the Policy Goal, the National Water Policy has defined 13 Policy Objectives, grouped under four main Outcomes, as follows:

Outcome 1. Enhanced enabling environment and improved, 'climate smart' water-related behavior

Policy Objectives

1.1 Improve the policy, legal, regulatory and institutional frameworks for the water sector.

1.2 Build national human capacity for the design and implementation of water-related climate adaptation projects.

1.3 Increase public awareness of integrated water resources management.

Outcome 2. Increased water access, availability and quality

Policy Objectives

2.1 Ensure that present and future generations have access to water of sufficient quality and quantity for their various uses and an acceptable standard of sanitation.

2.2 Promote the sustainable use of alternative water sources, such as RWH and water recycling and reuse, to ensure water availability under a changing climate.

2.3 Secure water for ecosystem services, recreation and aesthetics in order to ensure that vital ecosystems are maintained, restored and enhanced.

2.4 Promote sound stormwater management, as a measure which can contribute to the enhancement of limited available resources.

2.5 Promote the reduction of pollution of fresh and adjacent coastal waters through implementation of the obligations of the Cartagena Convention's LBS Protocol.

Outcome 3. Increased water use efficiency and conservation

Policy Objectives

3.1 Improve water infrastructure to build climate resilience.

3.2 Ensure water is used as efficiently as possible, including promotion of wise use and conservation, while recognizing the important role of women in household water management.

3.3 Promote 'climate smart' agriculture.

Outcome 4. Strengthened preparedness for climate variability and extremes

Policy Objectives

4.1 Improve hydrometeorological monitoring, emergency planning and decision making.

4.2 Minimize water-related climate change risks by adopting ecosystem-based adaptation solutions.

Basis for Action

Water resources in all its forms: surface, groundwater, harvested rainwater, rivers, lakes, coastal, wetlands and springs, developed or not, are all linked through hydrological, ecological and social cycles. Water is the thread that joins terrestrial and marine systems, the economy and society. This is particularly apparent in Grenada and other SIDS, where the effect of impacts on land and marine systems can be felt in the space of hours and days. Thus, water management must be integrated with and into the management of terrestrial and marine systems. Decisions affecting land use, economic and industrial development, water management, agriculture and the environment cannot be separated or treated in isolation from each other.

It is recognised that there is a need to address the institutional problems associated with a fragmented and uncoordinated approach and the necessity to facilitate an integrated approach to water management. Further, the lack of institutional capacity, the scarcity of human resources, the unsatisfactory nature and enforcement of regulatory controls, the need to improve the efficiency and effectiveness of water, sanitation and wastewater services are all hampering economic development and exacerbating the social and financial impacts of natural hazards. The situation calls for a comprehensive set of policy interventions that chart a way forward and address the acknowledged challenges.

Guidelines for Action

In implementing the Water Policy, the Principles, Goal and Objectives as set out above, shall apply equally to management of the water resource, provision of water and sewerage services and sanitation, irrigation, storm-water and drought emergency management, water recycling and reuse and maintaining health of ecosystems. Integrated management of the water sector must be based on sufficient and reliable information, the systematic evaluation of impacts, benefits and costs, and the application of the precautionary principle where appropriate.

The implementation of a Water Policy shall be guided by considerations with respect to two broad areas: (1) management of the water resources and (2) provision of water and wastewater services.

With respect to management of **water resources** (which encompass both fresh and nearshore coastal waters), guidelines for action shall include:

a. Integrated water resources management with equitable regard to quantity, quality required for human needs and ecological functions, and reducing negative impacts on the coastal and marine environment;
b. The coordination of water resources planning and development in consideration of national economic development goals and strategies;
c. The management of water resources is integrated within sustainable land management, agriculture, forestry, coastal zone and overall environmental management, and with due consideration to climate change adaptation;
d. The needs of stakeholders and water users are adequately addressed;

e. Water in the natural environmental must be maintained to meet environmental requirements and the maintenance of good ecological functionality;
f. Adequate data gathering, monitoring and the provision of information to the public on the state and sustainability of water resources; and
g. Special needs requirement for Carriacou and Petite Martinique due to the semi-arid conditions.

With respect to **water and wastewater services**, the guidelines for action shall include:

a. The provision of water and wastewater services is a separate and distinct function from the management of water resources which entails the adoption of sound business practices, and the fostering of good social and corporate governance;
b. The provision of water and wastewater services by non-state actors shall be facilitated where required and beneficial;
c. The provision of water and wastewater services shall be regulated with respect to quality of service, financial and economic efficiency, and environmental performance;
d. In accordance with the principle that access to water is a basic human right, the State shall ensure a service that makes available adequate and accessible quantities of water of a defined and acceptable quality that is affordable;
e. Water is to be used efficiently and there shall be incentives to encourage the wise use and conservation of water including *inter-alia* the re-use of treated wastewater, rainwater harvesting and investment in water conservation and waste reduction measures;
f. Subject to the principles of equity and affordability, the charges for water services shall reflect water's economic value, enabling all consumers to make appropriate choices regarding their level of water consumption and use;
g. There shall be a requirement to report on and publish information (technical, environmental, social and financial) pertaining to the provision of water services;
h. Investments in the water sector should balance economic development with poverty alleviation and improvements in public health; and
i. Special investments in the water sector for Carriacou and Petite Martinique should balance the scarcity of the resource.

In pursuit of good governance and transparency, regulatory and operational (service provision) functions need to be separated. Regulation should be such as to provide effective oversight that encourages ethical business practice without exercising undue and intrusive interference in business activities. At the same time Government must be held accountable for its actions.

Strategic Response

Strategic responses include the following:

a. Enact institutional arrangements that separate the management of water resources from the provision of water services, allocates water rights among competing users, implements effective and transparent regulatory oversight, and dispute resolution mechanisms;
b. Implement effective and transparent coordination with regard to water, planning and development matters;
c. Ensure the inclusion of stakeholder participation in decision-making, e.g. through the Grenada Water Stakeholder Platform;
d. Establish and maintain the information base for sustainable water resources management;
e. Implement a regulatory regime that prevents and controls pollution of fresh and coastal waters;
f. Establish institutional mechanisms that facilitate the sustainable financing of the water sector, the regulating of water services and the setting of prices for water and wastewater services;
g. Adopt measures that would maintain and enhance the rainwater assets in C&PM, with a localized monitoring and evaluation plan;
h. Build the human resources capacity and expertise within the agencies responsible for water management including measures to ensure and support compliance;
i. Adopt measures to reduce the negative impacts of water-related (flood and drought) disasters on the society, the economy and the environment and to reduce the impact of natural disasters on the water sector including the explicit consideration of the impact of and adaptations to climate change;
j. Mainstream gender considerations into the development of water sector plans, programmes and actions; and
k. Adopt initiatives that bring about a cultural and attitudinal change to the way in which water is regarded by citizens.

Four key areas have been identified that require a policy response, and that need to be addressed within an institutional framework. Broadly these relate to:

1. Management of the country's water resources:

a. A resource management function that includes the monitoring and assessment of the state of resources, the development of resources and their protection, and conditions governing water re-use including replenishment of water sources for water supply. This function would be carried out by the Water Resources Management Unit (WRMU) (to be established), based on the principles of IWRM;
b. An allocation function that determines water use rights, the obligations and conditions of water use and the arbitration between competing uses;
c. Inter-sectoral planning, coordinating and information functions;

d. Improving the provision of water for agriculture. The increasing demand for agriculture water in meeting the strategic goal of the sector's resilience to climate change and natural disasters requires special attention in improving the availability of water for 'climate smart agriculture'; and

e. Improving the provision of water for Carriacou and Petite Martinique – support and promotion of RWH, ensuring its sustainability, augmented by efficient desalination technology.

2. The provision of water and wastewater services:

a. Provision of infrastructure that meets current and future needs of consumers;

b. Management and maintenance of the infrastructure;

c. Contributing to sustainable development, capacity building and social capital; and

d. Investments in the water infrastructure.

3. Water quality regulation as it relates to public and environmental health, including:

a. Setting and regulation of drinking water quality standards and monitoring;

b. Setting and regulation of water quality standards for water bodies including recreational water quality standards and monitoring;

c. Setting and regulation of water quality standards, categories of use, monitoring and reporting criteria in relation to the treatment and re-use of water; and

d. Water pollution control – setting and regulation of wastewater quality standards and control of pollution of water bodies.

4. Economic and service regulation:

a. Public and customer interests;

b. Standards of service; and

c. Financial and economic measures.

Part Three – Institutional Framework

Institutional Framework

The institutional framework provides clarification of the roles of government, civil society and the private sector and their respective responsibilities regarding ownership, management and administration of water resources and services. It is the duty of the State to ensure that an appropriate, functional and cost-effective framework is in place. In line with the commitments and obligations under the Revised Treaty of Basseterre of the OECS, the institutional framework encompasses the regionalization and harmonization of governance arrangements, policy setting and regulation around resource management, service provision and building across Member States of the OECS. This arrangement facilitates more efficient and cost-effective use of scarce resources.

The Role of Government

As the most important actor in the water sector, Government would provide the enabling institutional and regulatory environment, and comply with its commitments to the MEAs to ensure success of the Policy. As such it shall: (1) Promote the goals, objectives and strategies of the Water Policy; and (2) Retain the capacity to monitor progress and intervene as appropriate in consultation with stakeholders. Specifically, Government is committed to:

a. Providing leadership and coordination generally, and promoting the goals, objectives and strategies of the Water Policy;
b. Ensuring a thoroughgoing review of the existing water sector and related legislation, and drafting and adopting of the appropriate new legislation;
c. Establishing effective public sector institutions with full accountability, representation and transparent decision-making;
d. Establishing the institutional and other mechanisms for integrated water resources management – including mechanisms for citizen and civil society engagement – and incorporating IWRM in national strategies for sustainable development;
e. Implementing the Forestry Policy to ensure watershed/wetlands protection;
f. Using appropriate legal and financial instruments to balance economic development priorities with impacts on social structures, livelihoods, recreation and the environment, while protecting the rights of the public (especially the poor);
g. Providing for the regulation of the activities of water service providers;
h. Providing an appropriate environment for involvement of the private sector (including small and medium enterprises (SMEs) and community enterprises) in the water sector;
i. Monitoring the implementation of the Water Policy; and
j. Overseeing the planning for climate change adaptation, prevention and mitigation of disasters related to floods, droughts and emergency responses.

The Role of the Private Sector

The private sector is expected to play a greater role in water services provision and water resources management. As such, the private sector is encouraged to contribute to the Policy's realization by direct involvement in the management and/or expansion of existing services provided by Government. This involvement would be in collaboration with government and the community through various approaches including contracting-out, management concessions and direct investment in water services provision and emerging technologies for the water sector. More specifically, the private sector, including SMEs, trade associations and community enterprises, will be expected to: (a) Develop and implement corporate environmental policies that emphasize water conservation and guidelines for sustainable industrial processes; (b) Observe the Polluter Pays Principle, the User Pays Principle and the Precautionary Principle as applicable; and (c) Collaborate with government departments and agencies in reducing land- and marine-based sources of pollution.

The Role of the Citizen

Through established participatory mechanisms and public awareness and outreach activities, citizens would better understand the importance of their role in decision-making in the management of water resources and water service provision and the successful realization of the Water Policy. Citizens' active participation, including the participation of the youth and women, will help to inform decisions regarding the allocation of water, as well as assist in improving water security and reducing risks and uncertainties.

The Role of Civil Society

Non-governmental organisations (NGOs) and other civil society organisations (CSOs) play an important role in enabling households and communities to acquire skills, assets and resources necessary to adapt to climate change and associated hazards such as drought. Moreover, Grenadian NGOs have been facilitating women's participation in natural resource management and building leadership skills for disaster mitigation, as well as promoting community water awareness and water resources management processes in rural Grenada. Therefore, it is envisaged that NGOs and CSOs will play a key role in helping consumers especially the poor, to express their demands, as well as in advocacy. Specific mechanisms, including those based on the Grenada Water Stakeholder Platform, will be developed to ensure the participation of NGOs and other CSOs in all levels of decision-making in water resources management.

The Role of the International Development Community

The international development community (IDC) has demonstrated a growing commitment to help Grenada address the problems of the water sector and developing this policy. The implementation of the Water Policy will provide opportunities for continued assistance and involvement by the IDC, particularly in building capacity through programmes of technical assistance, training and development, support for CSOs and citizens' action, technology and information exchange and assisting in the mobilization of funds for the proposed developments.

The policy implementation framework for Grenada is presented in Part 4.

Part Four – Policy Implementation

Implementing the Policy

The Water Policy is based on the results of a review of the Draft Water Policy of 2007, a situational analysis of Grenada's water sector, alignment with the OECS Model Water Policy, and consultation with over 170 stakeholders from the public and private sectors and civil society – about 40% of whom were women. The Policy should be treated as a dynamic instrument in a dynamic environment requiring periodic review. This means that Government would monitor the impact of the Policy against the vision and objectives that have been set, and adjust the Policy in the light of changes in the situation.

Institutional Arrangements

Grenada's policy position is that the responsibility for management of water resources is to be separated from responsibility for the provision of water and wastewater services. In order to give effect to this restructuring, such changes of institutional arrangements will be implemented through supporting legislative measures. In view of the limited resources available, and the need to minimize the expected financial impact, any restructuring should as far as possible build on existing structures and current best practice. However, this should not limit the scope of needed reform of the water sector.

The institutional framework can be characterized as triangular, consisting of three sets of inter-related functions: (A) Policy Direction and Coordination; (B) Regulation; and (C) Services Provision; illustrated in Figures 2 and 3.

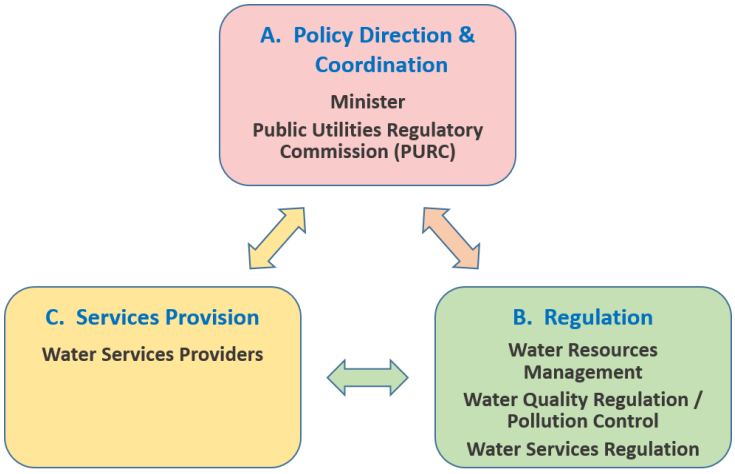

Figure 2 Water Sector Institutional Relationships

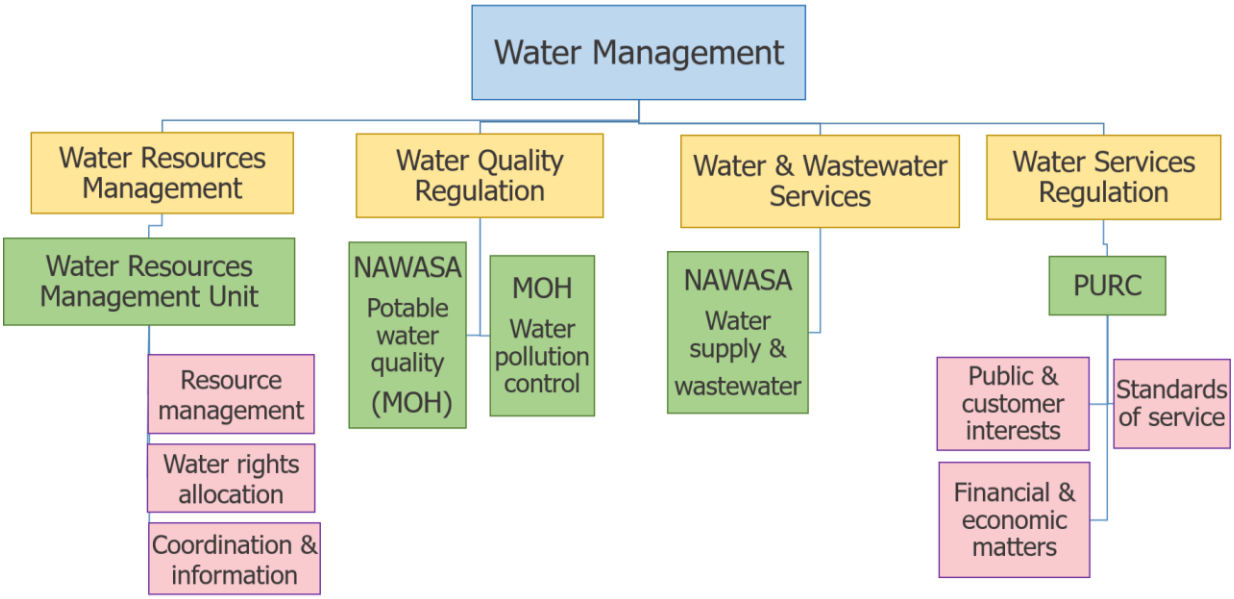

Figure 3 Water Sector Functional Chart

A. Policy Direction and Coordination

Minister with responsibility for Water – the primary role of the Minister with responsibility for water matters is to provide high-level national and regional policy support and direction. The Minister and Ministry will provide the political and policy agenda for the water sector and have a steering role in four broad areas:

i Ensuring the sufficient allocation of resources;

ii Ensuring that the necessary framework of policy, law and regulation are in place to guide the sector;

iii Taking a balanced view of competing needs and requirements; and

iv Providing oversight and responsibility for the functioning of the sector.

Responsibility for policy related matters and international agreements will continue to rest with the Ministry responsible for water matters. In the event that a regional regulatory commission or authority is established under the OECS Secretariat to provide for regional harmonization and capacity building, the Minister would be the national point of contact.

Public Utilities Regulatory Commission (PURC) – a statutory body established under the provisions of the Public Utilities Regulatory Commission Act, 2016, as amended by the Public Utilities Regulatory Commission (Amendment) Act, 2017. **The PURC will:**

i Provide coordinated, multi-sectoral, policy-level planning and decision-making for the water sector;

ii Ensure that the sector is integrated with other sectors of government, economy and society;

iii Provide policy advisory support on policy-related matters, such as:

- sector regulations and performance;
- response to water-related emergencies, natural hazards and disasters;
- financing, planning and development;
- water security;
- compliance with national, regional and international agreements and conventions; and

iv Provide policy-level and administrative oversight of the proposed Water Resources Management Unit.

It is inevitable that there will be disputes over such a strategic and important resource as water. Therefore, an important function of the PURC would be to establish dispute resolution and appeal mechanisms that provide a means of resolution outside of the legal system. In this respect, mediation is the preferred means of dispute resolution.

In emergency situations, the Government in consultation with the PURC may waive charges and fees for water users, for a limited and determined period of time. In emergency situations, the PURC shall, in consultation with other agencies, assume responsibility for declaring a water-related emergency, and for the necessary coordination, direction and management of responses for the duration of the emergency.

The PURC may delegate functions and duties to other regulatory agencies or refer matters to them where detailed or specialist evaluations and inputs for decision-making are required.

B. Regulation

Water Resources Management

The day-to-day management of Grenada's water resources in their entirety: surface waters (streams, rivers, lakes, other natural reservoirs), ground waters (natural aquifers, wells), water stored as part of municipal/community supplies from rainwater harvesting or other sources, estuarine waters and waters along the coast that are subject to use (recreation, supply for desalination and receiving environment for effluent discharge) shall be the responsibility of a **Water Resources Management Unit (WRMU)**.

The role of the WRMU is to ensure that waters are managed and maintained for present and future generations and for the continued provision of environmental services. The WRMU's powers, duties and responsibilities will reflect the Objectives and Principles of this Policy. Decision-making shall be evidence-based and informed by the principles of IWRM and the Precautionary Principle.

In order to fulfill these functions, the WRMU will, in its resource management function:

1. Establish, analyse, assess and monitor the status of national water resources (quantity, quality, utilization, vulnerability) on a routine basis, and identify the available resources and their potential sustainable yields.

2. Develop water resources master and action plans, including disaster contingency and resource use efficiency plans setting out the strategy for the sustainable utilization of water resources, and undertake or commission such studies or research required for the development of such plans.
3. Collect, store, process and maintain a national water information database and regularly report on the state of water resources.
4. Provide input into national development planning and policy development.
5. Work with water service providers and other water users, including communities, to ensure the protection of water resources, and the efficient and sustainable use of water resources. The G-WASP will act as the major 'sounding board' for these actors in the discourse with the WRMU (and PURC) on WRM issues.
6. Identify and invest in measures to protect, enhance or remediate the natural environment.
7. Publish an annual report on its work and activities.

The WRMU will put in place mechanisms for the inclusion, engagement of and partnerships with stakeholders, the business community and civil society in water resources management, awareness raising and public outreach.

In its allocation, coordination and information functions, WRMU will:

1. Develop a permit system for the allocation of access rights to the use of water resources, which set out the terms, conditions and limitations on use, which address aspects such as the length of term, quantity, quality, timing, conditions of revocation or temporary suspension, prior use, types of uses, quality standards, system of payments, appeals and dispute mechanisms. These shall be applied to the abstraction or diversion of waters, allocation of quotas, and effluent discharges and pollution control.
2. Develop water resources management plans, as outlined above, in consultation and collaboration with significant water users, water sector stakeholders, other stakeholders, G-WASP and PURC so as to ensure that plans take account of national and local needs. Such plans should incorporate:
    a. The estimation of water availability uses and losses;
    b. Options and conditions pertaining to water reuse;
    c. The assessment of the impact of climate change and variability on water availability and usage; and
    d. Analyses of the socio-economic aspects and trends in water use and consumption patterns, including behavioral aspects, demand management, urban growth and changing land use.
3. Require significant users of water resources with access and use rights to prepare their own resource use plans.
4. Develop standards, regulations and guidelines governing the management of water resources.

5. Identify areas or resources that are water stressed, and institute measures to address or mitigate the causes, to be developed in consultation with government agencies.
6. In order to preserve and/or protect water resources, subject water sensitive areas to special conservation measures governing land and water use, to be developed in consultation with government agencies.
7. Design and deliver public education and awareness programmes on water resources management.

Water Quality Regulation / Pollution Control

Water quality regulation and the control of pollution to the freshwater, and by extension, the marine environment covers: standard setting, monitoring functions and measures to ensure compliance in respect of drinking water standards, water bodies (fresh and coastal), effluent and pollution control and protection of the environment. These play a critical role in maintaining human well-being and the health of ecosystems in Grenada. Within the OECS, the Caribbean Public Health Agency (CARPHA) has a role in coordinating and advising national governments with respect to water quality and pollution control issues. Since Grenada will continue to exercise shared mandates for water quality regulation, arrangements will be put in place to ensure that there is a coordinated approach amongst the respective organisations.

No change in the overall institutional arrangements in respect of *drinking water quality standards and monitoring* are proposed. At present NAWASA is responsible for the testing of drinking water quality for compliance purposes and reporting to the Ministry of Health (MoH). In exercising its oversight and audit functions to ensure compliance with drinking water quality standards, MoH may, on the recommendation of the Chief Environmental Health Officer, utilize the services of other recognised and/or competent agencies.

The duties, responsibilities and powers of MoH will include:

1. The development and implementation of water quality standards and regulations covering drinking water quality and effluent standards.
2. Rules and standards governing water reuse and augmentation, including RWH and desalination.
3. The setting of water quality objectives for significant freshwater bodies and all coastal waters.
4. Powers to scrutinize developments that would have a material impact on the water environment and to require measures to ensure compliance with standards and regulations and/or the maintenance and improvement of healthy ecosystems.
5. Enforcement of quality and effluent standards, the requirement for the submission of remedial action and implementation plans, and the imposition of penalties in the event of on-going breaches.

6. Publishing of an annual report on actions taken and the state of national water quality and ecosystems.

Water Services Regulation

The achievement of the objectives of efficient and effective water and wastewater services and use of water resources requires the application of an appropriate regulatory regime. Regulation should be such as to encourage the financial sustainability of the sector, taking into consideration governments preferred mix of tariffs, taxes and transfers to finance the sector.

Regulatory oversight will be provided by the PURC, the duties, responsibilities and powers of which will include:

1. Setting of 'License to Operate' conditions, duties and requirements pertaining to service providers.
2. Setting, monitoring and reporting annually on standards of service provided to customers.
3. Setting out the objectives, requirements and priorities to be met by service providers.
4. Requiring service providers to prepare management plans that set out how water resources management, quality regulation, and services provision requirements are to be met and their impact on the investment needs and tariffs.
5. Ensuring that water tariffs (including wastewater tariffs) and associated charges are set at a level that can be justified in terms of covering operation and maintenance costs and capital investment requirements.
6. Monitoring compliance and setting penalties pertaining to non-compliance with such standards in respect of customer and consumer interests.
7. Setting mechanisms for the consultation and inclusion of stakeholders in contributing to decision-making in relationship to customer care and economic regulation.

In setting of tariffs, the Government of Grenada will ensure that the poor and other vulnerable groups are not placed at risk and in this respect the PURC will provide advice and direction.

A further option to the establishment of a national regulatory body would be the establishment of a regional regulatory body. Such a body could be constituted as an Agency either under the auspices of the OECS or CARICOM. The duties and functions that a regional regulatory body would perform could be some or all of those identified above.

C. Provision of Water and Wastewater Services

There will be no change in the current organisational arrangement for the provision of water and wastewater services in the short term (until the first review of this National Water Policy).

The proposed Water Resources, Supply and Sewerage Bill of 2019 will separate water resources management from water services provision. Water and sewerage services may be provided by a

public utility (NAWASA), private corporations, community organisations, a Government Department or joint public-private partnerships. Service providers of water and wastewater services would be governed by Part X - Water Supply and Sewerage Services of the proposed Water Resources, Supply and Sewerage Bill of 2019. NAWASA, which is now the primary service provider, will act like a corporate body operating under commercial principles owned in whole or part by the Government, but at arms-length from it. NAWASA would be required to undertake transparent monitoring and reporting of performance, and the inclusion of measures and incentives to ensure good performance.

In carrying out their functions, water services providers must ensure that there are effective and meaningful mechanisms for stakeholder participation and consultation.

It should be noted that corporate entities engaged in the production and sale of bottled water are regarded as commercial enterprises producing products for human consumption. The standards, regulation, monitoring, reporting and compliance of their products would be covered by the requirements of the food standards regulatory regime undertaken by the Grenada Bureau of Standards

Implementation, Monitoring and Evaluation of the National Water Policy

The Policy will be implemented through an accompanying IWRM Plan involving a number of complex issues and interactions between disparate entities and individuals, and requiring new and additional financial resources. It is recognised that, given the current national fiscal conditions, all the desirable actions may not be possible in the short-term, hence the actions in the plan are categorized as high-medium- or low-priority, and that a step-wise approach should be used to ensure success.

The cross cutting issues in the Policy and IWRM Plan make monitoring and evaluation (M&E) a central tool to manage interventions, improve practice and ensure accountability. Every two years, the responsible institutions and entities will provide data and information through the existing NAP M&E framework for compilation and eventual Cabinet consideration, and public communication.

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Online Resources

Caribbean Climate Online Risk and Adaptation Tool, CCORAL http://ccoral.caribbeanclimate.bz/

Caribbean Community Climate Change Centre – clearinghouse search tool http://www.caribbeanclimate.bz/caribbean-climate-chage-tools/clearinghouse-search-tool/

Climate Technology Centre & Network (CTCN) https://www.ctc-n.org/resources/climate-change-adaptation-technologies-water-practitioner-s-guide-adaptation-technologies

Global Climate Change Alliance http://www.gcca.eu/

GWP IWRM ToolBox https://www.gwp.org/en/learn/iwrm-toolbox/about_iwrm_toolbox/

UN Environment (UNEP) Water https://www.unenvironment.org/explore-topics/water

UN-Water Publications http://www.unwater.org/unwater-publications/

UN-Women Training Centre https://trainingcentre.unwomen.org/

World Resources Institute – Climate https://www.wri.org/our-work/topics/climate