MARCH 2021

Maritime Economy Plan

Grenada

Commonwealth Marine Economies Programme

Enabling safe and sustainable marine economies across Commonwealth Small Island Developing States (SIDS)

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Grenada has a marine space that is over seventy (70) times the size of its land space; therefore, the maritime economy represents a potentially significant contributor to the GDP of the country. The maritime economy also provides immense opportunities for economic growth for Grenada both within the historically important sectors (e.g., marine tourism, fisheries, mariculture, shipping) as well as for novel economic activities (e.g., offshore renewable energy, deep sea minerals, oil & gas, marine biotechnology).

This MEP provides an opportunity for Grenada to formally explore the opportunities as well as the cross-cutting issues that currently exist within this increasingly important subsector of the national economy.

Specifically, the plan provides an opportunity for Grenada to synthesize all the sector-specific plans and policies that are currently implemented within the maritime space into a single cohesive approach for the development of the marine economy that engenders the fundamental concepts of interconnectivity, sustainability, equity and good governance.

The Ministry of Sport, Culture and the Arts, Fisheries and Cooperatives would like to recognize the persons from within the public service, private sector and civil society that would have generously contributed their time to facilitate the production of this document geared towards expanding the economy of Grenada. The Ministry would also like to extend our gratitude to the UK Government for the support it is providing to Grenada via The Commonwealth Marine Economies (CME) Programme.

Hon. Yolande Bain-Horsford
Minister of Sports, Culture and the Arts, Fisheries and Cooperatives

Ministerial Statement on behalf of the UK government

The ocean is where life began and is essential for all life on Earth. It regulates climate and weather patterns, provides our food, medicine, energy and other valuable resources, facilitates marine transport and trade, and is full of wonders we have hardly begun to understand. Mangroves, seagrass beds and coral reefs also offer natural protection from the effects of climate change.

There is strong scientific evidence that effective ocean protection will be game-changing in turning things around for climate, for nature, and people. For many nations, especially Small Island Developing States (SIDS), or 'Large Ocean States' that is even more important, since the ocean is at the very heart of their sustainable economic development and the future of their people.

This Maritime Economy Plan presents a holistic view of the opportunities presented by the ocean for developing Grenada's 'blue economy' sustainably. It addresses issues such as the role of marine tourism in the prosperity of Grenada; the need for responsible and sustainable coastal development to protect lives and homes in the event of extreme weather events; the potential of aquaculture and mariculture development for a more diverse and resilient economy; the need to consider the protection of valuable ecosystems in national planning decisions; and the provision of diverse training and job opportunities within the blue economy to ensure that future generations continue to reap the ocean's benefits.

We are delighted that the UK has been working in partnership with the Government of Grenada to develop this bespoke national Maritime Economy Plan under the Commonwealth Marine Economies (CME) Programme. The CME Programme has also been supporting Grenada through the delivery of capacity building and scientific data collection, through the UK Hydrographic Office, the Centre for Environment, Fisheries & Aquaculture Science, and the National Oceanography Centre. This research has provided much needed information about the health and status of the marine environment and how to manage it sustainably.

Through the CME Programme, Grenada has access to the newly created Caribbean Fisheries Climate Change Report Card, which defines the risks and threats associated with climate change to the fisheries sector and options for adaptation. Grenada has also benefitted from ocean modelling and monitoring which provides accurate risk maps for its entire coastal zone. This work has helped to support key climate change resilience and coastal zone management. For example, seabed habitat maps will ensure that in the redevelopment of St George's Harbour, and the potential development of a new port at Grenville, the placement of new port infrastructure does not destroy biodiversity and essential fish habitats. This work on the ground builds a critical foundation for the recommendations contained in this Maritime Economy Plan.

As Presidents of the 26th United Nations Climate Change Conference, the UK will make the case for ocean protection at every opportunity. We are pleased to be partnering with a number of Large Ocean States on the frontline of climate change to inspire climate action. There is simply no path to net zero emissions, or the sustainable development goals, or the recovery of nature, without effective ocean protection and sustainable management of the marine environment.

Ambitious and co-ordinated actions, like those outlined in this Maritime Economy Plan, are critical for the future health of our ocean. We welcome this Maritime Economy Plan, as well as Grenada's work with the Organisation of Eastern Caribbean States to develop a National Ocean Policy to strengthen capacity for ocean governance, as well as coastal and marine spatial planning to facilitate the transition to a blue economy. By working in partnership through the CME Programme, and through projects supported by our new British High Commission in St George's, the UK and Grenada are supporting commitments made at CHOGM 2018. That includes the Commonwealth Blue Charter, which helps Commonwealth countries work together on a fair, inclusive and sustainable approach to ocean protection and economic development.

The UK Government remains committed to maintaining its track record as a reliable and committed development partner with Grenada in navigating this rapidly developing maritime sphere. We share one global ocean – so we need a whole earth effort to sustain it.

Lord (Zac) Goldsmith of Richmond Park
Minister for Pacific and the Environment

Lord (Tariq) Ahmad of Wimbledon
Minister for South Asia and the Commonwealth and Prime Minister's Special Representative on Preventing Sexual Violence in Conflict.

Abbreviations and Acronyms

BGMP – Blue Growth Master Plan
CANARI – Caribbean Natural Resources Institute
CARICOM – Caribbean Community
CBD – Convention on Biological Diversity
CCCCC – Caribbean Community Climate Change Centre
CCCCE – Caribbean Coastal Capital Centre of Excellence
CBI – Citizenship-by-investment
CCRIF-SPC – Caribbean Catastrophe Risk Insurance Facility Segregated Portfolio Company
CDB – Caribbean Development Bank
Cefas – Centre for Environment, Fisheries and Aquaculture Science (of the United Kingdom)
CIF – Climate Investment Fund
CIMH – Caribbean Institute for Meteorology and Hydrology
CME – Commonwealth Marine Economies
COAST – Caribbean Oceans and Aquaculture Sustainability Facility
CRFM – Caribbean Regional Fisheries Mechanism
C-SERMS – Caribbean Sustainable Energy Roadmap and Strategy
CTF – Clean Technology Fund
CTO – Caribbean Tourism Organisation
DfID – Department for International Development
DoE – Department of Environment
DoF – Department of Fisheries
EASME – European Agency for Small and Medium-size Enterprises
EBM – Ecosystem Based Management
ECROP – Eastern Caribbean Regional Ocean Policy
EEZ – Exclusive Economic Zone
EIA – Environmental Impact Assessment
EU – European Union
FAO – Food and Agriculture Organisation
FCDO – Foreign, Commonwealth & Development Office
GAF – Grenada Action Forum
GCEPC – Gravel, Concrete and Emulsion Production Corporation
GDP – Gross Domestic Product
GESTER – Governance, Environment, Social, Technology, Economy, Resilience & Risk (analysis)
GIZ – Deutsche Gesellschaft für Internationale Zusammenarbeit (German development agency)
GPA – Grenada Ports Authority
Grenlec – Grenada Electricity Services Ltd.
GSA – Grenada Sustainable Aquaculture
GTA – Grenada Tourism Authority
H&S – Health and Safety
ICZM – Integrated Coastal Zone Management

IDB – InterAmerican Development Bank
IMF – International Monetary Fund
IMO – International Maritime Organisation
IPCC – Intergovernmental Panel on Climate Change
ISM – Islands System Management
IRENA – International Renewable Energy Agency
JICA – Japan International Cooperation Agency
MEP – Maritime Economy Plan
MoU – Memorandum of Understanding
MPA – Marine Protected Area
MSC – Marine Stewardship Council
MSPs – Marine Spatial Plans
MW – Megawatt
NAP – National (Climate Change) Adaptation Plan
NC1 – Grenada's first National Communications (to the UNFCCC)
NDC – Nationally Determined Contribution
NEMO – Nucleus for European Modelling of the Ocean
NEMS – National Environmental Policy and management Strategy
NGO – Non-Governmental Organisation
NOC – National Oceanography Centre (of the United Kingdom)
NOGC – National Ocean Governance Committee
NOP – National Ocean Policy
NSDP – National Sustainable Development Plan
O&G – Oil and Gas
OECS – Organisation of Eastern Caribbean States
ORE – Offshore Renewable Energy
OTEC – Ocean Thermal Energy Conversion
PPU – Physical Planning Unit
PV – Photovoltaic
R2R – Reef to Reef Initiative
SCCF – Special Climate Change Fund
SDG – Sustainable Development Goal
SIDS – Small Island Developing State
SLR – Sea Level Rise
SWAC – Sea Water Air Conditioning
UKHO – United Kingdom Hydrographic Office
UNCTAD – United Nations Conference on Trade and Development
UNEP – United Nations Environment Programme
UNFCCC – United Nations Framework Convention on Climate Change
USAID – United States Agency for International Development
USD / US$ – United States Dollars
WCR – Wider Caribbean Region
WTTC – World Travel and Tourism Council

The Commonwealth Marine Economies Programme

The Commonwealth Marine Economies (CME) Programme was launched in 2016 and aims to support 17 Caribbean and Pacific Small Island Developing States (SIDS) in conserving their marine environments and making the most of their maritime resources to catalyse sustainable economic development. It is designed to promote growth, innovation, jobs and investment whilst safeguarding healthy seas and ecosystems and it helps to address climate change, the UN Sustainable Development Goals and the Paris Climate Change Accord.

The CME Programme broadly comprises three components:

- **Government Engagement and Dialogue:** The UK Government is committed to working in partnership with SIDS Governments of individual countries.
- **Scientific Research and Capacity Building:** To sustainably manage and use marine resources, it is vital to understand them. As a demand-led initiative, since 2016 the Programme has been collecting data, undertaking scientific research and delivering capacity building activities against a clear action plan developed from country requests.
- **Preparation of national Maritime Economy Plans:** Where requested by SIDS Governments, and in partnership with them, the Programme will assess the existing national economies and identify the opportunities and obstacles to development. Bespoke national Maritime Economy Plans (MEPs) will be developed to enable individual countries to address economic growth and alleviate poverty.

The UK's Foreign, Commonwealth & Development Office (FCDO) is leading this Programme, which since 2016 has showcased UK world-leading expertise in marine science through delivery partners at the United Kingdom Hydrographic Office (UKHO), the Centre for Environment, Fisheries and Aquaculture Science (Cefas) and the National Oceanography Centre (NOC). The programme has also engaged a team of technical experts who are working in partnership with SIDS Governments to develop national Maritime Economy Plans. Examples of the work carried out in partnership with Grenada are provided in Section 1.5.

At the Commonwealth Heads of Government meeting in April 2018, 53 countries agreed the landmark **Commonwealth Blue Charter**, a bold commitment that sets out how member states will lead international efforts to sustainably develop and protect our ocean. The CME Programme supports the aims of the Commonwealth Blue Charter and is an integral part of the UK's effort to protect the health of the world's oceans and promote the growth of blue economies.

Executive Summary

This Maritime Economy Plan is a partnership initiative between the Governments of the UK and Grenada. It provides an overview of the existing maritime economy of Grenada and sets out priorities and actions that aim to help the country demonstrate a clear vision and direction that takes account of national issues, international commitments and the challenges of a Small Island Developing State. Actions support economic growth, livelihoods and jobs and reduce losses from natural hazards, weather events and climate change. The overall objective is to help grow the national economy in a way that reflects the aims of the Commonwealth Charter, including good governance, sustainable development, gender equality and recognising the needs of small and vulnerable States.

The principles of **low carbon, resource efficiency** and **social inclusion** have been used to shape the development of this Plan. This is compatible with the concept of the 'blue economy', which first emerged at the 2012 Rio+20 United Nations Conference on Sustainable Development and recognises the need to maximise the vast economic potential of the ocean while also preserving it for current and future generations. Progress towards a blue economy can help achieve a range of UN Sustainable Development Goals (SDGs), including SDG 14 (Life Below Water), SDG 5 (Gender Equality), SDG 8 (Decent Work and Economic Growth), SDG 7 (Affordable and Clean Energy) SDG 11 (Sustainable Cities and Communities), and others.

The maritime economy includes established sectors such as fisheries, tourism and shipping as well as emerging activities such as offshore renewable energy, aquaculture and marine biotechnology. It also includes the policies and management of these sectors and of the coastal and marine environment on which these sectors rely. This Plan describes the maritime economy in terms of Bedrock / Traditional sectors and Emerging sectors, although other reports may describe it using different categories (there is no internationally agreed way to describe maritime economy sectors).

Bedrock / traditional sectors	Emerging sectors
Energy – O&G[a], geothermal	Energy – renewables, storage, hydrogen, OTEC[b], SWAC[c]
Shipping, ports	Biopharmaceuticals
Fisheries and aquaculture	New fisheries and aquaculture incl. macroalgae
Tourism – cruise, yachting, beach / all inclusive	Tourism – eco tourism
Minerals / aggregates	Deep sea minerals / minerals

This Maritime Economy Plan has been produced as a result of several months of desk work, structured questionnaires, a consultative mission to Grenada and discussions with a range of Government, NGO, and other stakeholders. It is therefore very much a strategic overview of Grenada's maritime economic potential. Each maritime economy sector was subject to a bespoke multicriteria analysis using the information collected from all the sources to consider governance, environment, social factors, technology, economy and resilience and risk.

The Maritime Economy Plan was subject to review, feedback and update during 2020 / 2021, in consultation with the Government of Grenada. Due to the COVID-19 pandemic and associated travel restrictions, engagement with stakeholders was carried out remotely through a series of online meetings, phone calls and emails.

Key findings for Grenada's maritime economy are:

> The development of **marine tourism** is growing and playing an increasing role in the country's prosperity, but the sector needs to be managed in a way that ensures long term sustainability, particularly from coastal development, yachting and cruise tourism.

> The **National Ocean Policy (NOP)** offers a framework to develop new maritime activities and ensure they are carried out in a sustainable manner. The NOP can act as a planning policy guidance document to help implement actions and recommendations in this Maritime Economy Plan and other policies.

> There is currently no **National Maritime Transport Policy**. Such a policy could help meet International Maritime Organisation (IMO) requirements around safety at sea, pollution response and flag, coastal and port state measures. This will help to address some of the water quality / port waste issues in Grenada.

> Efforts to improve public awareness of marine and coastal safety (including boating, swimming etc.) are important to address a perceived cultural fear of the sea, which is limiting the realisation of the opportunities of a blue economy.

[a] Oil and Gas
[b] Ocean Thermal Energy Conversion
[c] Sea Water Air Conditioning

> The **COVID-19 pandemic** has had a significant impact on the economy of Grenada and the Caribbean as a whole. GDP for 2020 is expected to reduce by 12% compared to 2019. The number of tourism visitors was reduced by 59% in 2020 compared to 2019, with ripple effects felt across the country. Some businesses have found alternative income generating solutions, including online activities. The World Bank has approved a US$25 million COVID-19 Crisis Response and Fiscal Management Development Policy Credit to support the country's efforts to respond to the COVID-19 crisis.

Actions, primary actors (who should be responsible for the actions) and desired outcomes are presented for each maritime economy sector. These are **high level actions** that are of strategic importance for the sector and the country. Each sector is given a prioritisation category – Urgent, New / Needs Attention or Well Established.

19 actions are identified. The **Coastal Development** sector requires **urgent** attention. Coastal infrastructure linked to tourism is an important area of development. Management of climate change impacts to tourism facilities through climate resilient tourism policies, plans and management of the coastal zone is key. The development of Shoreline Management plans to prioritise coastal erosion and risk management plans will aid Grenada's ability to adapt to climate change. In addition, integrated island development plans that take account of all development needs that link to climate risk and resilience are required.

Shipping and ports is a well-established sector. In order to strengthen the sector, assessments into marine pollution contingency planning and the capacity of ports, harbours and landing sites to manage waste are required in addition to developing a strategy to enhance training of marine professionals and seafarers.

The **fisheries** sector would benefit from mainstreaming the sustainable use of marine resources in national policies and planning frameworks to ensure cross-Government understanding of the importance of fisheries to livelihoods and the economy. In addition, formalising the maritime boundaries, mapping and enforcing the boundaries would assist in protecting fishers' rights and jurisdiction in marine areas.

Investment in research and development of **marine renewable energy** technologies would strengthen the established energy sector by reducing reliability on fossil fuels in Grenada.

Aquaculture and mariculture and **ecosystem services** are emerging sectors which need attention in order to contribute sustainably to Grenada's maritime economy. Undertaking feasibility assessments to consider the future direction for the aquaculture and mariculture sector and updating the National Fisheries Policy would benefit the sector. An ecosystem valuation assessment will help to ensure that ecosystem services are protected and considered for future decision making.

The creation and implementation of a **National Ocean Policy (NOP)** coordinated and advised by a formally established **National Ocean Governance Committee (NOGC)** is an **overarching action** needed to improve linkages between current policies and plans of relevance to Grenada's marine space. Such a cross-government, integrated approach is needed to embed the concept of the blue economy across Ministries and Departments to effectively manage, protect and enhance the marine area and the economic opportunities it provides for improving livelihoods and equality.

The actions, issues and outcomes identified in this Maritime Economy Plan are **high level, strategic issues that require further discussion and development** before they can be implemented. Appropriate sources of funding need to be identified to support this process. The Maritime Economy Plan has been able to identify organisations potentially able to provide suitable funding, however, it was beyond the scope of this initial high level approach to develop the actions and identify specific funds at this stage.

The next step along the pathway towards a blue economy is for Grenada to work across government to identify those actions that are highest priority and which the country is most able to develop and implement in order to create **detailed implementation plans** and **funding applications** capable of achieving success with regional and national development agencies and funds. Such packages should create synergies with Grenada's NOP, Integrated Coastal Zone Management (ICZM) Policy and Blue Growth Strategic Masterplan, link to regional activities and goals in the Caribbean (e.g. Eastern Caribbean Regional Ocean Policy, SAMOA Pathway) and meet the aims and objectives of donor countries and organisations; and funding programme priorities. This is a significant task and should be addressed in a partnership approach across government and with regional organisations. The UK Government supports the aims of the Commonwealth Blue Charter through the Commonwealth Marine Economies (CME) Programme. The CME Programme is supporting Caribbean and Pacific Small Island Developing States (SIDS) to preserve their marine environments and make the most of their maritime resources to catalyse sustainable economic development, whilst safeguarding the health of the ocean.

Maritime Economy Plan
Grenada

1. Introduction

Commonwealth Marine Economies Programme
Enabling safe and sustainable marine economies across Commonwealth Small Island Developing States (SIDS)

1. Introduction

1.1. What is the Maritime Economy?

A maritime economy can include diverse components, from established ocean industries such as fisheries, tourism and maritime transport, to emerging activities such as offshore renewable energy, aquaculture, deep sea mining, and marine biotechnology. The mix will depend on national circumstances but will provide social and economic benefits for current and future generations, restoring and protecting the diversity, productivity, resilience and natural capital of marine ecosystems.

In the context of developing Maritime Economy Plans, the terms marine or maritime economy and **blue economy** are considered synonymous, such that the focus on the maritime economy, and plans to support its development and growth, encompass the sustainability and equity concepts of the blue economy.

Blue economy has been defined as, "economic activities that (i) take place in the marine environment or that (ii) use sea resources as an input, as well as economic activities that (iii) are involved in the production of goods or the provision of services that will directly contribute to activities that take place in the marine environment"[1].

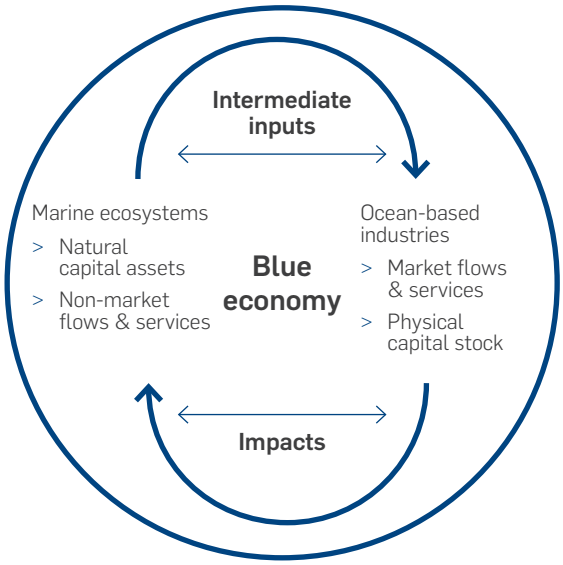
At its simplest, the blue economy includes all economic activities (existing and potential) that depend on the existence of the ocean, either directly or indirectly. For Small Island Developing States (SIDS), the blue economy often comprises the majority of the national economy, with so many economic activities dependent on the ocean. Interactions between economic, ecological and social interests on land and at sea, therefore, become symbiotic and difficult to disentangle, such that a development on one side of the land/sea interface affects the other.

1.1.1. Sectors in the Maritime Economy

The maritime economy can be divided and subdivided in many ways, with high-level generic divisions such as 'Harvesting of resources', 'Trade and commerce', and 'Ecosystem services' giving way to more detailed categories based on specific and established ocean industries such as 'fishing', 'shipping' or 'tourism'. These can be subdivided further – 'fishing' can be divided by vessel size, catch method or target species and can include onshore activities such as selling and processing or supporting activities such as netmaking and repair or chandlery and vessel maintenance.

A key step in the development of sustainable Maritime Economy Plans is to analyse existing maritime sectors, known as 'bedrock' or traditional sectors, to help their transition to more sustainable practices, where needed. Consideration is given to the potential for developing new sustainable maritime activities to replace those that are in decline or diversify the economy. Natural capital / ecosystem services are also taken into account as these underpin so many economic sectors and activities.

Figure 1 – A conceptual diagram of the sectors and interactions within the blue economy[2]



Marine ecosystem services

Natural resources and the economic benefit derived from them, whether specifically measured and included in economic valuations or not, are often termed **'ecosystem services'** and are also considered as part of the blue economy.

These traditionally non-monetised resources, such as the coastal defence benefit derived from reefs, are increasingly being explicitly considered in management decisions and are integral to the value and support of the blue economy as they underpin and support many of the traditional sectors such as fishing and tourism.

[1] Ecorys & European Agency for Small and Medium-sized Enterprises (EASME) Service contract: EASME/EMFF/1.3.1.13/SI2.718095. Study on the Establishment of a Framework for Processing and Analysing of Maritime Economic Data in Europe, Final Report, MARE/2014/45. https://www.msp-platform.eu/sites/default/files/ea0217517enn.en_.pdf. (Accessed October 2019.)

[2] Based on information in OECD, 2016, The Ocean Economy in 2030, OECD Publishing, Paris, http://dx.doi.org/10.1787/9789264251724-en

1.2. What is a Maritime Economy Plan?

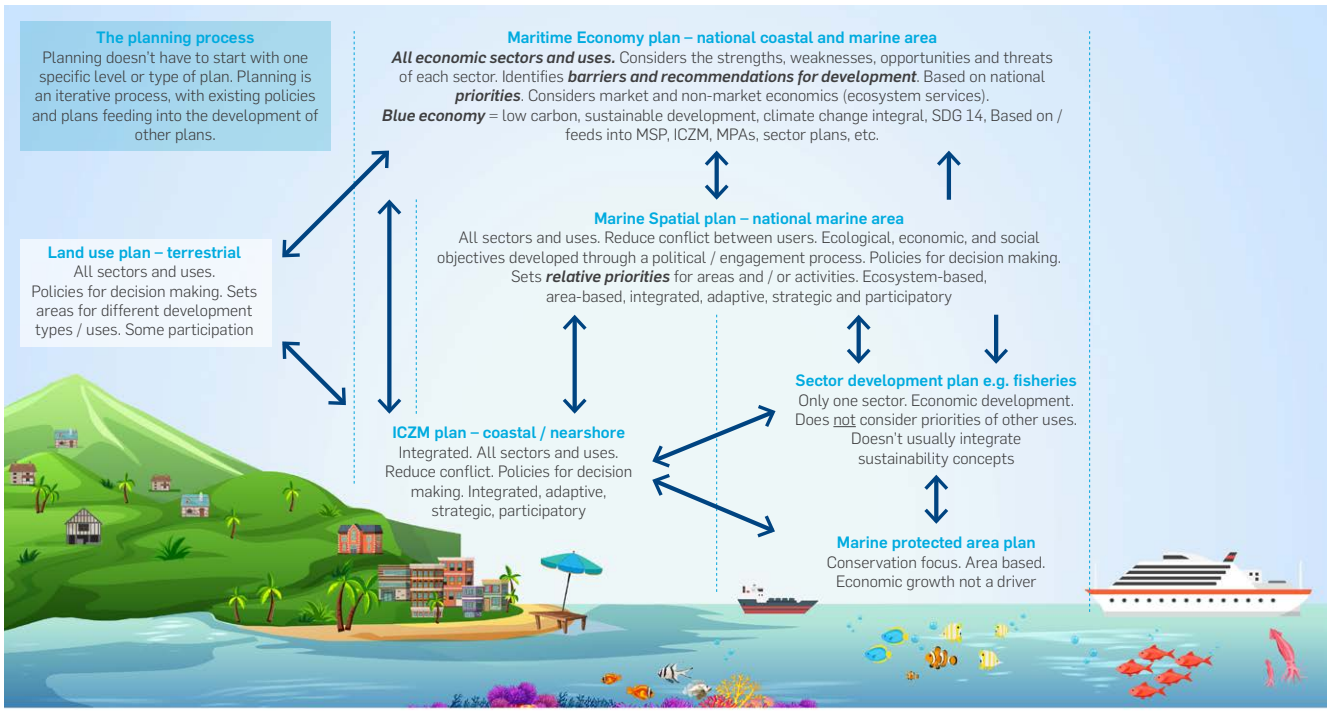
There are many types of plan used and applied in the management of the marine area. Most countries have some form of planning in their marine area already, even if they are not specifically called a 'Marine Plan' e.g. designation of shipping / navigation lanes or the identification of protected areas for conservation or fishing. Planning helps to communicate and achieve objectives. Planning, as a process, is important for a range of reasons:

- Increases efficiency by avoiding activities that do not work towards the stated objectives of the plan and by helping to organise resources;
- Facilitates coordination between organisations – everyone knows what the objectives are and helps to define roles and responsibilities;
- Helps to maintain management control over activities;
- Helps facilitate consistent decision making.

1.3. How to use this Plan

- This Plan only considers sustainable (blue) practices and is concerned with **finance** and **economics** of the Grenada Marine Area. It focuses on opportunities and risks to sustainable economic development and areas where there are greater opportunities / risks.
- It may be used to support decisions about **strategic Government / financial support** bodies or mechanisms for sectors to develop e.g. should there be financial support for a new fishery, for fleet renewal, for renewable energy supply chain development. Ideally, a Maritime (or Blue) Economy Plan should sit underneath and assist the implementation of a National Ocean Policy.
- It is **not** the intention that this Plan will be used to inform **individual management decisions** by regulators about which individual activities should / shouldn't be permitted in a particular place / time - this is the role of a Marine Spatial Plan.
- It does **not set priorities for all activities / uses** - there are activities that take place in the marine area which don't have a 'traditional' economic benefit that are not included (e.g. cultural use, landscape/ seascape, non-use values, recreation, health benefits). Such activities and uses will however be enshrined within a National Ocean Policy (which may sit above this plan) or be presented within a Marine Spatial Plan, which might sit **alongside** this document.
- It does not contain management measures, but may identify **how management can be financed** e.g. user access fees for recreational diving areas, blue bonds, etc.

Figure 2 – Types of marine plan and how they relate to each other



1.4. Benefits of a Maritime Economy Plan for Grenada

Maritime Economy Plans (MEPs) enable an analysis of existing maritime sectors to be undertaken in order to help the transition to more sustainable practices, where needed, and to consider the potential for developing new, sustainable marine activities. The work identifies the bedrock / traditional sectors of the maritime economy, the emerging sectors and the natural capital / ecosystem services utilised.

Having a Maritime Economy Plan helps to demonstrate that there is a clear vision and direction for the development of a sustainable maritime economy that takes account of national issues, international commitments, such as working towards the achievement of the **UN's Sustainable Development Goals (SDGs)**, with particular reference to SDG14 – Life Below Water, and the challenges associated with a number of themes shared by Grenada and other SIDS, such as:

- High dependency on imports for energy – the main source of energy is from hydrocarbons that have to be imported.
- High dependency on imports for food supply.
- Reliance on one or a few economic sectors (e.g. fishing, tourism, etc).
- Large ocean resource, with potential for new / emerging sector growth (e.g. biotechnology, renewable energy, minerals, etc).
- Capacity constraints to effectively manage / exploit sustainably a large ocean area / resource - relatively small population, government, resource (e.g. navy, research / exploration capability).
- Vulnerable to economic and environmental shocks (e.g. earthquakes, tsunami, hurricanes), including those driven by climate change (e.g. sea level rise, ocean acidification) with low resilience / ability to recover.
- Regional co-operation and organisations are well established (these may be sector specific e.g. fisheries, or more wide ranging).
- Remote locations – increases costs for both imports and exports of goods and services.
- High levels of poverty / social inequality – need to make growth inclusive to benefit all.
- High country debt and high relative proportion of government budget on servicing debt.

The overall objective is to grow the national economy, such that the country becomes economically resilient and less reliant on financial aid. It is also intended to reflect the aims of the Commonwealth Charter, including good governance, sustainable development, gender equality and recognising the needs of small and vulnerable States.

1.5. The Commonwealth Marine Economies Programme in Grenada

A number of priority activities have been carried out in Grenada under the CME Programme, following an initial round of national engagement on country priorities in 2016. These include:

- Supply of new navigation charts and training in the use of new maps and bathymetric data.
- Production of a Maritime Safety Information development plan to assist port authorities with compliance of international shipping regulations.
- Provision of data on coastal sensitivity to oil spills and risk of introduction of non-native species for the national and regional disaster management teams.
- Coastal assets and community vulnerability risk assessment against climate change.
- Training on measuring sea level, surface winds and waves to help predict natural hazards.
- The development of habitat maps that will be key to ensuring that the placement of new port infrastructure will not destroy biodiversity and essential fish habitat.
- Blue Carbon report on seagrasses and mangroves that supports Natural Capital Accounting, previous economic assessments of blue carbon and the Grenada National Ecosystem Assessment.
- National coastal risk assessment work that required bathymetric surveys and national and regional ocean modelling. This produced a risk map of the entire coastal zone of Grenada to facilitate planning for preventative or mitigative measures to minimise risk to coastal infrastructure and local communities in the face of such natural hazards. This work has allowed assessments to be made for the redevelopment of St George's Harbour and a potential new port at Grenville on the east coast.
- Regional Caribbean initiatives:
  - Ocean modelling and monitoring using the Caribbean regional Nucleus for European Modelling of the Ocean (NEMO) model to validate water level, currents, temperature and salinity data to support climate change resilience and decision-making.
  - Development of the Caribbean Regional Climate Change Report Card to clearly define the risks and threats associated with climate change in vulnerable areas. This report card was used as a formal submission by the region into the UNFCCC process.
  - Hydrographic governance training and action planning to help identify and prioritise hydrographic data gaps and capacity requirements, based on economic risks, opportunities, safety at sea (e.g. ship-wrecks), environment and crisis management.
  - Development of a risk register, list of case studies and guidance to improve the planning, design, and installation of subsea cables to reduce risk from hazards. This will improve understanding of the impact of hazardous events to communications cables and their causes; and therefore, improve telecommunications resilience.
  - Production of a fisheries Report Card for the Caribbean on increasing the resilience of the sector to climate change.
  - Development of a report and workshop to raise awareness of renewable energy opportunities in the Caribbean.
  - Development of a spiny lobster larval dispersal model for the Caribbean to inform the assessment of the potential for spiny lobster aquaculture in the region (Antigua and Barbuda, Dominica, Grenada, St Lucia, St Vincent & the Grenadines).

Maritime Economy Plan
Grenada

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2. Grenada's Maritime Economy

Commonwealth Marine Economies Programme
Enabling safe and sustainable marine economies across Commonwealth Small Island Developing States (SIDS)

2. Grenada's Maritime Economy

2.1. Background

Grenada is a tri-island nation comprising the islands of Grenada, Carriacou and Petite Martinique, and is one of the most southerly of the Windward Islands in the Eastern Caribbean. The needs, challenges and development opportunities of the smaller islands are intimately connected with the ocean and distinct from those of the island of Grenada.

Figure 3 – Map of Grenada

Source: https://www.worldometers.info/maps/grenada-map/

Hurricanes Ivan and Emily in 2004 and 2005 significantly impacted Grenada's economy, such that some sectors are not fully recovered even now. The total damage from Hurricane Ivan alone was estimated at twice Grenada's GDP (Govt. of Grenada, 2017)[3]. Between 2000 and 2005 real GDP growth averaged about 5.5% per year but then decreased annually to 2012, as a result of weather events, global economic crises and a reduction in US tourist visitors. GDP has since returned to growth[4].

Grenada has a largely **tourism-based**, small, open economy that has shifted from one that was agriculture-dominant into one that is services-dominant, with tourism serving as the leading foreign currency earning sector.

Agriculture and fishing remain important sectors, dominating exports - nutmeg and mace, cocoa; fresh fruit and vegetables and fresh fish account for around 50% of Grenada's exports (OEC website)[6].

Grenada's economic growth is predicted to continue, while both unemployment and public debt are predicted to continue to fall. The Citizenship-By-Investment (CBI) programme is both financing the external deficit and supporting economic growth (IMF website)[7]. The Caribbean Development Bank (CDB) projects economic growth of 4.5%, with similar outcomes expected over the medium term (CDB, 2018).

The COVID-19 pandemic has had a significant impact on the economy of Grenada and the Caribbean as a whole. Grenada's GDP grew an estimated 3.1% in 2019 driven by strong activity in the construction and tourism sectors. However, due to the COVID-19 pandemic this is expected to reduce by 12% for 2020. It is forecast to rise to 6.1% in 2021 subject to the post-pandemic global economic recovery.

The number of tourism visitors was reduced by 59% in 2020 compared to 2019, resulting in a reduction in the hotel and tourism sector and leading to a significant fall in employment in the sector. Ripple effects of the COVID-19 pandemic have been felt across the country with closure of educational institutions, cessation of non-essential economic and social activities, alongside dwindling construction and investment activity.

Businesses have diversified their activities and have found alternative income generating solutions. A number of new industries have been developed, particularly online businesses. Grenada Industrial Development Corporation (GIDC) and Grenada Chamber of Industry and Commerce (GCIC) consider that Grenada could diversify its economy by providing a platform for companies looking to outsource their IT services.

In December 2020, the World Bank approved a US$25 million Grenada COVID-19 Crisis Response and Fiscal Management Development Policy Credit to support the country's efforts to respond to the COVID-19 crisis in the short term and enhance long-term sustainability.

Table 1 – Selected economic indicators

	2013	2014	2015	2016	2017	2018*
Real GDP Growth (%)	2.4	7.3	6.4	3.7	5.2	5.2
Average Inflation (%)	-1.2	-0.6	1.1	1.7	1.7	2.8
Unemployment (%)	32.2	28.9	30.4	28.2	23.6	20.9
Primary Balance	10.00	10.27	10.45	10.76	11.55	
(% of GDP)	-3.4	-1.2	2.1	5.4	4.7	6.2
Public Sector Debt	35.76	36.60	37.05	38.64	39.66	
(% of GDP)	101.7	86.2	82.4	76.3	68.9	62.7
GDP Current US$ bn [a]	**0.842**	**0.911**	**0.997**	**1.062**	**1.127**	**1.207**

*estimated

Source: Caribbean Development Bank, 2018 [5]

[a] World Bank website https://data.worldbank.org/country/grenada

[3] Government of Grenada, 2017, National Climate Change Adaptation Plan (NAP) for Grenada, Carriacou and Petite Martinique 2017-2021, Ministry of Climate Resilience, the Environment, Forestry, Fisheries, Disaster Management and Information

[4] IMF website, 2019, IMF Executive Board Concludes 2019 Article IV Consultation with Grenada https://www.imf.org/en/News/Articles/2019/07/03/pr19265-imf-executive-board-concludes-2019-article-iv-consultation-with-grenada

[5] CDB, 2018, Country Economic Review 2018 Grenada, Grenada Economic Brief 2018

[6] OEC website, Grenada country profile, https://oec.world/en/profile/country/grd/

[7] IMF website, 2019, IMF Executive Board Concludes 2019 Article IV Consultation with Grenada https://www.imf.org/en/News/Articles/2019/07/03/pr19265-imf-executive-board-concludes-2019-article-iv-consultation-with-grenada

2.2. Existing Economic Sectors

2.2.1. Context

Every aspect of a SIDS's economy can be considered as being linked to the maritime economy because of the dependence on maritime actors in importing necessary equipment and exporting produce to local and wider markets.

The tourism and transport sectors are to be the main drivers of growth, along with continued recovery in the agriculture sector. The **tourism** sector expanded in 2018. Stay-over arrivals rose 10.3%, with all major source markets increasing, including a 27% increase in cruise ship passenger arrivals. This growth in turn fuels growth in the hotel and restaurant sector, which is further supported by regional and international events, such as the Carriacou Boat Regatta, Grenada Invitational Athletics Meet, Dive Fest, Pure Grenada Music Festival and SpiceMas.

The **construction sector** continues to be a major source of economic activity and employment. Key public and private construction projects are fuelling this sector, including the Airport expansion, St. George's University, Silver Sands Resort and the Parliament Building, as well as projects under the UK-Caribbean Infrastructure Fund. This sector shows no signs of slowing down (Ministry of Finance, 2018)[8].

Private Education is the largest contributor to GDP, constituting approximately 19.3 percent in 2018, and has also been one of the main drivers of economic growth in recent years (Ministry of Finance, 2018).

2.2.2. Maritime economy

This section describes Grenada's maritime economy, using the general economic sectors set out in Table 2.

Table 2 – Maritime Economy sectors

Bedrock / traditional sectors	Emerging sectors
Energy – O&G, geothermal, etc	Energy – renewables, storage, hydrogen, OTEC
Shipping, ports	Biopharma
Fisheries and aquaculture	New fisheries and aquaculture incl. macroalgae
Tourism – cruise, yachting, beach / all inclusive	Tourism – eco tourism
Minerals / aggregates	Deep sea minerals / minerals

The following tables provide details of current economic activities via a sectoral overview and summary of economic contribution along with a short description of emerging opportunities.

View of Saint George's, the Capital of Grenada

[8] Ministry of Finance, Planning, Economic and Physical Development, 2018, Annual Economic review 2018 & Economic Outlook, https://www.gov.gd/egov/docs/budget_speech/grenada-econ-review-est-2018p-performance-daft.pdf

2.2.2.1. Bedrock sectors

ENERGY Sector overview	Grenada is highly dependent on the import of fossil fuels to generate electricity, which makes it vulnerable to global oil price fluctuations. The energy generation mix in 2015 was: diesel 98.84%, solar 1%, and wind 0.16%. Grenada aims to move away from petroleum but recognises that this cannot be achieved quickly. Primary energy consumption is dominated by transportation (~50%), followed by the power sector (40%). There is no oil and gas production in Grenada's waters although there are exploration activities. Biomass is widely used, with wood used for cooking in residential and rural areas. Bagasse is produced and used by the sugarcane industry and wastes from nutmeg processing also have potential to be used as fuel in steam turbine generation plants[9]. The Department of Energy & Sustainable Development in the Ministry of Finance, Planning, Economic Development & Physical Development is responsible for ensuring adequate provision of economical energy and promoting renewable energy technologies[10]. Grenada Electricity Services Ltd. (Grenlec) is the sole provider of electricity. Hurricane Ivan in 2004 destroyed 80% of the electricity network, meaning that everything had to be replaced so that Grenada now has very reliable electricity provision.
Economic contribution	Data on the contribution of the energy sector to the national economy are not publicly available. Grenlec plans to spend US$150m implementing renewable energy projects over the next few years, including the development of geothermal energy, which could meet almost half the country's electricity need[11]. There are no data available for people employed in the energy sector.
Emerging opportunities	Natural gas has been discovered in the seabed to the south of Grenada. Analysis indicates that it is not suitable for commercial exploitation (GOV, 2017)[12]. The government is keen to understand what resources exist and how they could be exploited sustainably. Grenada has committed to reducing greenhouse gas emissions to 30% of 2010 levels by 2025 and for 100% renewable energy by 2030 using geothermal, waste-to-energy, wind, and solar. A fuel levy on carbon has been imposed. There is significant potential for solar photo voltaic (PV), although most is currently small scale, used in houses, government buildings and schools. Geothermal energy potential is being assessed by the government and the Japanese International Cooperation Agency (JICA)[13]. In 2017 the Caribbean Development Bank (CDB) approved ~US$230,000 to help build capacity in the planning and use of geothermal energy[14]. Offshore Renewable Energy generation (ORE) is considered further under 'Emerging Sectors'.
Cross-cutting issues	Grenada sits at the southern end of the hurricane belt and is considered less at risk of extreme weather events than some other Caribbean states, but it is not without risk, which is likely to increase with climate change.

[9] Renewable Energy and Energy Efficiency partnership (REEEP), 2013. Grenada 2012. Accessed at https://www.reeep.org/grenada-2012 [29/01/2019]

[10] The Official Website of the Government of Grenada. Ministry of Finance, Planning, Economic Development & Physical Development. Accessed at https://www.gov.gd/ministries/finance.html [25/01/2019]

[11] US Department of Energy - National Renewable Energy Laboratory, 2015. Energy Transition Initiative – Islands: Energy Snapshot Grenada. Accessed at https://www.nrel.gov/docs/fy15osti/62699.pdf [29/01/2019]

[12] Embassy of Grenada in the Russian Federation. Grenada awaiting results on natural gas discovery. Accessed at https://grenadaembassy.ru/2017/10/19/grenada-awaiting-result-gas-discovery/ [18/03/2019]

[13] The Official Website of the Government of Grenada, 22 January 2018. Grenada Geothermal Resource Development. Accessed at https://www.gov.gd/geothermal-info.html [25/01/2019]

[14] Caribbean Development Bank, 22 March 2017. Grenada receives grant for geothermal energy development. Accessed at https://www.caribank.org/newsroom/news-and-events/grenada-receives-grant-geothermal-energy-development [25/01/2019]

SHIPPING & PORTS Sector overview	The main port for Grenada is in St. George's. It has the capacity to handle cargo and cruise passengers in two distinct areas and with cargo handling and container storage areas. Other ports of entry are: Prickly Bay; Port of Grenville; Tyrell Bay; Port of Hillsborough; Port of St. Davids; and Le Phare Bleu. Grenville is located on the east of Grenada and has two jetties which cater predominantly for small boats and ferry passengers. Prickly Bay and St. David's are on the south coast of Grenada; both cater for leisure craft, including large yachts. The Osprey Ferry docks in Tyrell Bay are the site of a departure / arrival building alongside a large boatyard and marina. A future upgrade of Hillsborough port in Carriacou is planned to allow berthing and handling of passengers of international and regional ferries. The construction of a sister ferry terminal in Sauteurs (in the north of the main island of Grenada), is being considered to link the two islands together. There are no ports on Petite Martinique, although there are several jetties. There are no large-ship building shipyard, drydock or assembly facilities in Grenada, although there are companies offering construction of sailing vessels and a small shipyard in Carriacou. Boat building is a key historic industry in Carriacou and a key economic contributor in the outer islands. Capability exists to make traditional boats, fishing boats, yachts and 20ft long speed boats. The yachting and leisure craft sector is booming. Grenada is considered to be below the hurricane belt and only charges mooring fees in Marine Protected Areas (MPAs), creating an influx of yachts that moor up in locations such as Carriacou and Petite Martinique, during the Caribbean hurricane season. Many moor up in mangrove areas and seabed habitats causing a lot of damage. Mooring fees could be levied for this to pay for re-creation of these habitats, and / or the installation of less damaging fixed moorings. The cruise ship sector continues to grow and receives strong support from the Government. Grenada attracts yachts, tourism and fishing vessels due to the skills and capacity of the boatyards, the relative safety of mooring in Grenada and the abundance of well stocked chandlers. Grenada Port Authority (GPA) is the National Maritime Authority, responsible for dealing with all IMO regulations, management and operations of Government owned ports and regulating privately owned ports. The GPA is part of the Ministry of Finance. Industry members are represented by the National Shipping Association of Grenada
Economic contribution	The GDP of Grenada in 2017 was approximately US$ 1,065m, with US$ 445m in merchandise trade. As an island State, around 90% of the goods are transported by sea. Of the merchandise trade, US$ 420m were imports and US$ 25m were exports. (UNCTAD)[15]. Data for employment figures in the maritime transport and port sector are absent and statistical data on employment are structured in a manner that makes analysis difficult. The country has a strong labour union. Responsibility for contracting and managing stevedoring and longshoring rests with the GPA. The port at St. George's, employed around 200 people in 2015[16].
Emerging opportunities	The cruise and leisure craft / yachting sectors are key areas of opportunity for development. The challenge for the cruise market is to encourage longer stays, increase spend in-country (both by visitors and for vessel supplies) and diversify trips to areas other than beaches (rainforest, culture, etc.) Boat building is important for maritime trade and there is a wish to maintain and grow boat building projects.
Cross-cutting issues	Port waste / water quality issues – there are limited waste / waste water facilities. Vessels often pump sewage direct into the sea. Limited water quality monitoring – for public / environmental health.

[15] United Nations Conference on Trade and Development. Maritime profile: Grenada. Accessed at https://unctadstat.unctad.org/CountryProfile/MaritimeProfile/en-GB/308/index.html [15/03/2019]

[16] Briceno-Garmendia, C., Cubas, D. & Bofinger H.C. (2015). OECS Ports: An Efficiency and Performance Assessment.

FISHERIES Sector overview	The fisheries sector is a major source of employment, income, food security and foreign exchange. The majority of landings are tuna (yellowfin, black fin) and other pelagic species, e.g. Atlantic sailfish, billfish, dolphin fish. Approximately 70% of landings are tuna / tuna-like species that are mainly exported. Demersal fin fish making up a further 22%. Part of the production is exported intra-regionally to islands such as Martinique and Guadeloupe, especially from Carriacou. The crustacean fishery is very small but high value; mainly of Caribbean spiny lobster, queen conch and sea turtles. There is a co-management arrangement with St. Vincent and the Grenadines for lobsters / conch and a reciprocal arrangement needs to be set between the two nations (fishers from Union Island have family on Petite Martinique and Carriacou etc.). There are 45 landing sites around the islands, seven of which are primary landing sites with fish market and port facilities, storage, ice making and vessel berths. Six of these sites are on Grenada, with the seventh on Carriacou. There are four processing plants which cater mainly for fresh fish exports. The main landing sites are Grenville (25%), Gouyave (22%), Carriacou & Petite Martinique (18%), Grand Mal (12%), Melville Street (11%), other secondary sites (8%), Victoria (2%), Duquesne and Sauteurs (1% each) (FAO, 2007)[17]. Gouyave has historically been the fishing capital of Grenada. The majority of fish caught is exported from the mainland. However, Carriacou and Petite Martinique would like to develop facilities to export from their own islands. There is a draft National Fisheries Policy in place and fisheries are included in the National Biodiversity Strategic Action Plan (2016), Blue Growth Masterplan (2016) and Marine Protected Area management plans, but there is no formal fisheries management plan. The National Fisheries Policy requires updating and finalising. Grenada is a member of the Caribbean Regional Fisheries Mechanism (CRFM). The Department of Fisheries (DoF), a unit of the Ministry of Sports, Culture and the Arts, Fisheries and Co-operatives, oversees the sector. Approximately 80% of the fleet is registered and licensed. Only Grenadian registered vessels are allowed to fish in Grenada's waters.
Economic contribution	FAO data estimates exports of fish and fish products to be US$7.6m, with a fleet of around 800 vessels operated by around 3,500 fishers, most of them full time, although this data is from 2014. The secondary sector involves 70 vendors, 13 boat builders, 5 exporters (FAO Country Profile website).
Emerging opportunities	The government has implemented a policy to develop the fisheries sector and increase its contribution to income, employment and foreign exchange earnings. Grenada is actively promoting the FAO Code of Conduct for Responsible Fisheries. Foreign exchange income is mainly from tuna exports and a diversification of exports and market areas offers opportunities for growth.
Cross cutting issues	**Sargassum:** affects vessels, landing sites and inshore fisheries. The seaweed can clog engines and gear, cause an obstruction to passage, smother fishing areas and affect water quality. **Climate change:** Possible negative impacts on ecosystems that are important to commercial fish e.g. coral reefs, sea grass beds, mangroves. Changing water temperature may affect pelagic species' distributions / migrations. Increase in extreme weather events damaging vessels, landing sites, affecting trade and impacting coastal ecosystems.

[17] FAO, 2007, Fishery Country Profile, FAO website, http://www.fao.org/fishery/docs/DOCUMENT/fcp/en/FI_CP_GD.pdf

MARINE MINERAL EXPLOITATION Sector overview	Mining in Grenada is limited to quarrying for construction materials. A quarry in Telescope Point provides high-quality basalt rock for concrete, asphalt road surfaces, rock armour and boulders. Gravel mining operations also take place in Mon Rush. Both operations are run by the state-owned Gravel, Concrete and Emulsion Production Corporation (GCEPC website)[18]. Prior to 2008, beach sand mining took place across the islands, to provide basic material for construction. Over-extraction resulted in severe beach erosion and negative effects to coastal infrastructure and marine habitats and the practice was banned. Telescope Point remained the only designated beach site for sand mining but this was also closed in 2009 due to detrimental effects to the eastern coastline. More recently (2013) the government considered allowing beach sand extraction to start again. Sand extraction remains illegal, except by the GCEPC from three permitted locations - Galby and Bacolet Bay in St David and The Canals of Mt Rodney in St Patrick (NOW Grenada, 2018). Illegal sand extraction is reported to take place. Navigational dredging takes place but does not supply useable aggregates.
Economic contribution	There is no deep-sea mining or export of aggregates in Grenada. Materials for construction such as sand continue to be imported or mined from some of the licenced sites, but it seems that besides providing some employment (sea-) mining does not contribute significantly to the national economy. The GCEPC has been heavily in debt and its overall contribution to the country's revenue is limited (NOW Grenada, 2017)[19]. Data for employment figures regarding mining, quarrying or dredging are not publicly available.
Emerging opportunities	There is little opportunity to develop marine mineral exploitation, due to the limited availability of the resource and the detrimental effects that removing beach sand has on the shoreline.
Cross-cutting issues	Removing sand from beaches increases the rate of coastal erosion and can impact assets and land onshore as well as affect coastal habitats and species that use the beaches (e.g. turtles). Reducing beach widths and heights increases the impact and extent of wave impact on the coast, which can also increase erosion. Such effects would be likely to increase with climate change, more extreme weather events and sea level rise. Historic beach erosion has affected important assets (the cemetery on Carriacou). Steeper beach profiles with unknown depths can also pose a danger to swimming (GAF, 2013)[20].

[18] Gravel, Concrete & Emulsion Production Corporation. Accessed at http://www.gravel.gd/index.htm [18/03/2019].

[19] Now Grenada, July 2017. Keeping an eye on the people's business: Gravel, Concrete and Emulsion Production Corporation. Accessed at http://www.nowgrenada.com/2017/07/keeping-eye-peoples-business-gravel-concrete-emulsion-production-corporation/ [18/03/2019]

[20] Grenada Action Forum, May 2013. Pushing Grenada backwards with beach sand mining. Accessed at https://grenadaactionforum.wordpress.com/2013/05/24/pushing-grenada-backwards-with-beach-sand-mining/ [18/03/2019]

TOURISM Sector overview	Tourism is a significant driver for the Caribbean economy. This poses a challenge for Grenada to distinguish itself as a destination. It markets itself as 'Pure Grenada'; somewhere that hasn't become over-commercialised. Marine tourism has become the largest single maritime economic activity, including yachting, boating, recreational fishing and cruising. While many tourists do not venture far from the coast, open water activities are on the increase. The yachting sector is booming and expected to grow, both nationally and regionally in the Eastern Caribbean. Most tourist visitors are from the US. Visitors from the UK / Europe are encouraged as they tend to stay longer. There is currently no National Tourism Policy. The Grenada Tourism Authority (GTA) is responsible for developing the tourism industry. GTA actively engages with the major cruise lines, including Royal Caribbean, Carnival Corporation, Norwegian Cruise Line Holding and MSC. There are around 300,000 cruise visitors per year, mostly during October to May, although cruise visitors spend less than non-cruise visitors. This sector is expected to grow (Ministry of Tourism, pers. comm. 2019). As a result of a public / private sector consultancy project, GTA have agreed a number of actions to enhance and market Grenada, Carriacou and Petite Martinique as a premier cruise destination, including adding value to tour packages and training frontline personnel.
Economic contribution	The total contribution of travel and tourism to GDP in 2017 was US$256.1m (23.3% of total GDP), set to rise by 5.7% per year during 2018 – 2028. The industry directly supported 3,000 jobs (6.4% of total employment). This is expected to rise by 4.1% a year to 5,000 (9.4% of total employment) by 2028. When indirect employment is included, the industry supported 21.4% of total employment (10,500 jobs). This is expected to rise to 15,000 jobs by 2028 (29.8% of total). Travel & tourism investment in 2017 was US$29.2m (14% of total investment). This is expected to rise by 4.5% in 2018 and by 5.2% a year to US$50.5m by 2028 (18.2% of total) (WTTC, 2018)[21]
Emerging opportunities	GTA forecasted 6% growth in visitor arrivals for 2019, supported by construction of new hotels / accommodation. The key short-term priority is to improve yachting visitors' experience and grow business in Grenada and link with St. Vincent & the Grenadines. The leisure boat sector has growth potential. The key medium-term priority is to facilitate strategic engagement with the National Sustainable Development Plan (NSDP) 2035 for business development actions under the National Ocean Policy (NOP). Opportunities should be developed taking account of the Blue Growth Master Plan (BGMP) vision and the developing NOP. There is growing interest in eco-tourism and wildlife experiences, which are supported by a well-managed, healthy and safe marine environment, as well as opportunities to grow visitor numbers from different countries e.g. China and Japan and increase opportunities away from beaches / traditional beach-based holidays. The number of tourism visitors was reduced by 59% in 2020 compared to 2019, as a result of the COVID-19 pandemic, resulting in a fall in employment and income in the hotel and tourism sector and knock-on effects across the country. The impact of COVID-19 on the tourism sector means that a better link with agricultural production and climate smart practices are required to increase the resilience of Grenada's economy.
Cross-cutting issues	**Sargassum:** Affects vessels, marinas, beaches; clogging / affecting engines and creating unsightly and unpleasant smelling beaches as it decomposes. **Climate change:** Negative impacts to ecosystems that support tourism; increase in extreme weather events damaging infrastructure, increasing erosion and impacting coastal ecosystems. Sea level rise (SLR) is predicted to increase beach / land loss, including to important tourist areas such as Grand Anse. **Port waste / water quality:** There are limited waste / waste water facilities. Vessels often pump sewage direct into the sea. Limited water quality monitoring – for public / environmental health. There is no sewage treatment provision in Grenada. **Skills and capacity:** Is a major issue in terms of the management of projects, start up and development of businesses by nationals and supporting services for the boating / yachting sector – repairs, etc. currently would need to be done on another island.[22]

[21] https://www.wttc.org/-/media/files/reports/economic-impact-research/countries-2018/grenada2018.pdf

[22] Grenada Industrial Development Corporation (GIDC) & Grenada Chamber of Industry and Commerce (GCIC) personal communication, 2019

2.2.2.2. Emerging sectors

OFFSHORE RENEWABLE ENERGY (ORE) Sector overview	Caribbean trade winds associated with the equatorial latitude are characteristic climate features. Together with daily temperature related sea breezes, offshore wind energy generation has attracted project development activities in some Caribbean countries, although not yet Grenada. In 2015 the Israeli company WERPO announced that it was in negotiation with the government to install a wave energy system in partnership with a Caribbean corporation. The first wave energy system would generate 10 MW with the potential to expand this to a second system of 100 MW[23]. The current status of the project as well as the overall wave energy potential remains unknown. Ocean Thermal Energy Conversion (OTEC) and Sea Water Air Conditioning (SWAC) systems have potential use in Grenada. SWAC systems are well-recognised for their ability to provide air conditioning in hotels etc. and OTEC systems are now at demonstration stage for electricity generation. High average temperatures for surface sea warming and deep water for cooling systems provide the resource capacity required for the technology. Currently Grenada's Prime Minister is Chair of the SIDS DOCK initiative, which is designed to connect the energy sector in SIDS with the global market for finance, sustainable energy technologies, and with the EU and US carbon markets and is able to trade the avoided carbon emissions in those markets. SIDS DOCK recently (November 2019) signed an MoU to foster the development of deep-sea Ocean Thermal Energy Conversion and floating wind projects in small island countries[24].
Economic contribution	There are no data on the economic contribution or employment in ORE. The sector is at the development stage only. The transition towards a greater use of renewable energy requires multilateral funding support.
Cross-cutting issues	Access to lower cost, sustainable energy is a key driver to decrease reliance on hydrocarbon imports and to meet both energy efficiency and renewable energy targets: > 10% electricity production from renewables by 2025 with 10MW from solar; 15MW from geothermal; and 2MW from wind. > 20% energy efficiency gains in electricity production by 2025. > 2025 target year – 30% absolute emission reduction compared to base year of 2010. > 2030 Target – 40% absolute emission reduction compared to base year of 2010. > Energy – 30% emissions reduction in electricity production.

[23] MarineEnergy.biz, 24 March 2015. WERPO eyes Grenada for wave system deployment. Accessed at https://marineenergy.biz/2015/03/24/werpo-eyes-grenada-for-wave-system-deployment/ [25/01/2019]

[24] Naval Group website, https://www.naval-group.com/en/news/sids-dock-and-naval-energies-to-develop-otec-deep-sea-conversion-and-floating-wind-projects-for-small-island-developing-states/

MARICULTURE Sector overview	The aquaculture sector in Grenada was originally introduced in the 1990s to produce tilapia and fresh water prawns, however it was discontinued due to limited land space, a lack of an economy of scale and inability to compete with traditional capture fisheries[25]. Mariculture is a stated economic growth area, partly to help diversify the fisheries sector and to offset access restrictions to some areas as a result of marine protected area designations[26]. The Grenada Sustainable Aquaculture (GSA) initiative is investigating establishing a recirculating system to produce the Pacific White Shrimp (*Litopenaeus vannamei*) as this would not be in direct competition with fishermen. The project is supported by the Government[27] and is currently looking for investment. There is also a developing project to establish Bluefin tuna rearing in conjunction with Japan[28] There are a range of constraints to developing the sector: > Terrestrial sites – access to suitable coastal sites (coastal land is a valuable development resource for housing and tourism) and / or inland sites close to water; > Marine sites – suitable sheltered coastal bays are desirable for other coastal development interests, particularly tourism; > Markets – plentiful supply of relatively cheap fish (jacks/scads) and higher value fish (tuna) limit demand for farmed species, which tend to be more expensive until the sector is well established. Opportunities for sustainable aquaculture development, particularly tilapia, freshwater prawns and seamoss should be explored in further detail.
Economic contribution	Aquaculture has not yet developed as a significant activity in Grenada and can be classed as experimental / developmental. It does not currently contribute significantly to the economy or jobs.
Cross-cutting issues	**Climate change** impacts to coastal land and suitable bays may affect the development of the sector. **Water quality** may become an issue for both the species cultured and human health. **Gender equality -** There are several gender aspects in the aquaculture sector that need consideration to improve opportunities for women to engage in the economy.

BIOPHARMA Overview	The economic value of the search for biopharmaceuticals can benefit the pharmaceutical industries, the host country and the community who gain benefit from ownership of the biological resource and can expect adequate compensation for resource use. There is currently no systematic search for biopharmaceuticals in Grenada. Although Grenada is a signatory of the Convention on Biological Diversity (CBD)[29] it is not a party of the Nagoya Protocol on Access and Benefit-sharing such that any successful biopharmaceutical discoveries in Grenada would not be required to comply with the Protocol or benefit the country as much as possible. Biopharmaceuticals is not a priority for the government and does not form part of the consideration in the development of the National Ocean Policy. As such, it is not considered further and there is no Action Plan in section 5.3 for this sector.
Economic contribution	There are no data on the economic contribution or employment of biopharma.

[25] SOFRECO. (2012). http://acpfish2-eu.org/uploads/projects/id140/I1544%20-%20ACPFISH%20II%20-%20CAR%20-%201.2%20-%20B2b%20-%20Policy%20Grenada%20%20-01.pdf

[26] Pers Communication Hon. Alvin Martin Da Breo – Minister of Forestry and Fisheries at meeting on the 18th October 2018

[27] http://gsacbi.com/sustainable-aquaculture-project

[28] http://www.nowgrenada.com/2018/07/bluefin-tuna-farming-to-be-explored-in-grenada/

[29] Convention on Biological Diversity. List of Parties. Available Online: https://www.cbd.int/information/parties.shtml [Accessed March 2019]

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Maritime Economy Plan
Grenada

Funded by
UK Government

3. Cross Cutting Issues

Commonwealth Marine Economies Programme
Enabling safe and sustainable marine economies across Commonwealth Small Island Developing States (SIDS)

3. Cross Cutting Issues

A number of issues cut across the different economic sectors previously highlighted and deserve consideration in their own right. Individually, they are significant enough for SIDS with a small and static population, a geographically-expansive but constrained resource area and highly volatile and changing geomorphology. However, their inter-connections increase their individual effects: as a result, these interactions need to be actively considered as part of the recommendations contained within an MEP.

3.1. Regional Organisations in the Caribbean

Countries in the Wider Caribbean Region (WCR) have a strong tradition of working together to achieve shared goals and this is a particular feature in relation to ocean governance and management. The **Caribbean Community (CARICOM)**, is an economic bloc of 14 member countries that allows for the implementation of common approaches and collaboration including the use of marine resources. CARICOM has several associated agencies that deal with issues of relevance to maritime economy sectors or concerns, including the Caribbean Regional Fisheries Mechanism (CRFM), Caribbean Community Climate Change Centre (CCCCC), Caribbean Tourism Organization (CTO) and the Caribbean Institute for Meteorology and Hydrology (CIMH).

The **Organisation of Eastern Caribbean States (OECS)** was established by several CARICOM states. These countries share a common approach to policy areas such as trade, health, education and the environment, including matters relating to the sea and its resources. The OECS also provides the basis for the delivery of the Principles of Environmental Sustainability under the St. George's Declaration, making it a significant driver to achieve SDGs in the Eastern Caribbean.

3.2. Current State of Marine Planning and Management in Grenada

The Government of Grenada is very aware of the need for marine planning and management and has undertaken several national initiatives, including:

- Integrated Coastal Zone Management (ICZM) Policy
- Ridge to Reef (R2R) Initiative
- National Adaptation Plan (NAP)
- Marine Protected Areas Programme
- Blue Growth Strategic Masterplan

Grenada is working towards designating 25% of coastal areas as MPAs; there are currently four MPAs.

In 2013, the OECS approved and adopted the **Eastern Caribbean Regional Ocean Policy (ECROP)** to promote a common approach to ocean governance in all member states and mandated that each member develop a National Ocean Policy (NOP) to support the overarching regional policy. The ECROP has a number of priorities and goals, many of which are synergistic with the SDGs and therefore of relevance to the maritime / blue economy. As part of the OECS, Grenada is fully integrated into the ECROP programme and is actively developing a National Ocean Policy (NOP) within the ECROP framework and policies:

- Secure access to resources – clearly defined maritime boundaries, monitoring, compliance, surveillance & enforcement
- Adopt multiple-use ocean planning and integrated management
- Maintain and improve ecosystem integrity
- Promote public awareness, participation, and accountability
- Promote social and economic development
- Support research and capacity building
- Build resilience and manage uncertainty

The NOP will create a framework for integrated planning and management of the marine space and activities from 2020 to 2035 to deliver Grenada's NOP vision:

'Our marine and coastal resources are sustainably managed to maximise the potential of the blue economy, ensure resilience to climate impacts, protect and restore marine ecosystems and nurture our natural and cultural heritage for the benefit of current and future generations'

Grenada's NOP is based on 12 overarching principles:

- Island Systems Management (ISM)
- Access and benefit sharing
- Ecosystem Based Management (EBM)
- Precautionary approach
- Environmental stewardship
- Environmental liability
- Sustainable Development
- Transboundary cooperation
- Public and Private Participation
- Good governance
- Use of sound science and best practice
- Gender Equity and Inclusivity

The Island Systems Management (ISM) concept was developed by the OECS and recognises the particular characteristics of islands; the need to take a systemic view across land and sea. It is a multidisciplinary, integrated approach using adaptive management to address conflict in resource use and provide policies to control the impacts of human intervention. It is closely related to, and builds on, approaches in ICZM and R2R.

A National Ocean Governance Committee (NOGC) comprising representatives from relevant public bodies will be established to deliver, monitor progress, and be accountable for ensuring that actions in the NOP are carried out.

Table 3 – Ministries, Departments and Bodies with a role in marine planning and management

Ministry / Department / Organisation	Role in marine planning / management
National Ocean Governance Committee	Inter-ministerial public body delivering and monitoring progress on the implementation of the National Ocean Policy
Ministry of Sports, Culture and the Arts, Fisheries and Co-operatives	Administers and manages offshore and coastal fisheries, and fishing vessel licensing; promotes and manages MPAs and mitigates for coastal risks
Ministry of Tourism, Civil Aviation, Climate Resilience and the Environment	Promotes and regulates tourism activities in the marine area. Disaster management and climate resilience functions have recently transferred to the Ministry of Tourism
Ministry of Finance, Economic Development, Physical Development, Public Utilities and Energy	Economic planning and policy
Physical Planning and Development Authority	Regulates coastal development including marine structures
Ministry of Infrastructure Development, Transport and Implementation	Regulates electricity generation and transmission including offshore energy generation
Department of Energy and Sustainable Development	Promotes petroleum exploration and use of renewable energy sources including marine energy
Ministry of Trade, Industry and Consumer Affairs	Promotes growth of trade, marine industries and shipping
Ministry of Carriacou and Petite Martinique Affairs and Local Government	Represents interests of Carriacou and Petite Martinique including services and infrastructure in the coastal and marine areas
Grenada Coast Guard	International borders maritime surveillance and search and rescue
Grenada Ports Authority	Administers and regulates port operations
Ministry of Foreign Affairs, International Business and CARICOM Affairs	Technical cooperation, loans and grants, and human capacity building. The Ministry also has oversight of international Treaties and Conventions, including all multi-lateral environmental Agreements.

3.3. Weather events and Climate Change

Grenada is characterised by mountainous terrain with extensive corals and mangroves. It has a humid, tropical climate with approximately 3% of its land area at sea level, including the main towns and key socio-economic facilities. Grenada is generally considered to be below the Caribbean hurricane belt, but it is vulnerable to tropical storms, occasional hurricanes and storm surges. The hurricane season is from June to November.

Coral reefs are an important source of income for Grenada providing tourism, recreation and fishing opportunities. They are also vital for protecting the island against adverse weather events such as storms and hurricanes. The Intergovernmental Panel on Climate Change (IPCC) has concluded that coral ecosystems are among the most vulnerable to climate change as they are subject to rising ocean surface temperatures, leading to coral bleaching and acidification of marine waters.

There are two distinct rainfall patterns - the dry season typically runs from January to May and the rainy season from June to December. Carriacou and Petite Martinique generally experience lower levels of rainfall and can suffer severe drought conditions. Floods are mostly associated with storm surges in low coastal areas, which also cause erosion. Landslides are a risk during the rainy season in the mountain regions. The Coastal Vulnerability and Risk Assessment Project for Grenada shows that the country is highly vulnerable to sea level rise, and that there is potential for inundation of land and flooding[30], which would significantly affect commercial activities, human settlements and infrastructure (airport, ports, tourism), as well as causing significant erosion, and potential disappearance of beaches. The direct effects of sea level rise on agriculture are less severe, although some areas are already experiencing saline intrusion to coastal aquifers.

Changes in precipitation and temperature caused by climate change raise concerns for water availability, which would impact farmers, especially those growing fruits and vegetables, while more erratic rainfall patterns could lead to periods of drought and / or heavy rains eroding soil, damaging crops and increasing agricultural runoff.

Grenada submitted its first National Communications (NC1) including its greenhouse gas inventory to the United Nations Framework Convention on Climate Change (UNFCCC) in 2000. The country signed and ratified the Paris Agreement and submitted its first Nationally Determined Contribution (NDC) in 2016. In 2020, Grenada submitted its second NDC to the UNFCCC as confirmation of the ambitious 2030 NDC target of a 40% reduction in GHG emissions below 2010 levels (achieving this target is conditional on external funding). Grenada's NDC highlights the country's commitment towards a low carbon and climate resilient development pathway.

3.3.1. Opportunities and plans for climate action

Grenada has a National Adaptation Plan (NAP) which is the central delivery mechanism for climate resilience and adaptation. It is a means of identifying medium and long-term adaptation needs and developing and implementing strategies and programmes to address those needs.

Mitigation:

- 2030 Target – 40% absolute emission reduction compared to base year of 2010; 2025 target year – 30% absolute emission reduction compared to base year of 2010.
- Demand-side Efficiency – Emissions reductions in the building sector through retrofitting (20%) and energy efficiency building codes (30%); and 20% emissions reduction in the hotel sector.
- Transport (land and marine) – 20% emissions reduction in the transport sector by 2025. Gasoline and diesel taxes; introduction of biofuel blends; and fuel-efficient standards for vehicles.
- Waste – Construction of a controlled (or capped) landfill to compact and cover waste and collect methane gas generated for electricity production; employment of waste reduction, sorting and recycling activities.
- Forestry – national obligation to protect 17% of its terrestrial area as part of the Aichi Target and 20% under the Caribbean Challenge initiative.

Adaptation:

Coastal Zone Management:

- Undertake a detailed mapping of the coastal features to provide a definition of the coast.
- Re-established its beach monitoring program under new terms of reference and stronger institutional backing.
- Undertake several community ecosystem based adaptation actions including coral restoration, mangrove rehabilitation, all with alternative livelihood implications.
- Water Resource Management – Complete a vulnerability assessment and develop a national adaptation plan and action plan for the water sector, mapping and water quality testing of informal water sources.
- Water Conservation and Re-use – Rainwater harvesting in some remote communities to improve water collection and storage.

Cross-cutting aspects:

- Enhancing the institutional framework on climate change – establish an integrated and coordinated approach to addressing climate change to help minimise capacity gaps in the system while ensuring coherence and cohesion at the local and national level.
- Building the resilience of communities – engage community groups and Non-Governmental Organisations (NGOs) in the participation of activities geared at building climate resilience.

[30] http://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=2&cad=rja&uact=8&ved=2ahUKEwid9ZnhrtrjAhUUa8AKHVcDBPgQFjABegQIAhAC&url=http%3A%2F%2Fdms.caribbeanclimate.bz%2FM-Files%2Fopenfile.aspx%3Fobjtype%3D0%26docid%3D5722&usg=AOvVaw24gZvA-Wt6YYzH2f_Ypuev

3.4. Ecosystem Services

Marine and coastal environments, and their supporting ecosystems, support a diverse range of sea life that is important for global biodiversity and play a significant role in Grenada's economy and way of life. Maintaining the health and biodiversity of marine ecosystems in Grenada is fundamental for the services that they currently provide, for supporting cultural and social well-being and for future sustainable development opportunities.

Current ecosystem services include subsistence food provision from fisheries and aquaculture, shore stabilisation and coastal protection provided by mangroves and carbon sequestration from seagrass and tidal marshes. The protection and preservation of coral reefs is of critical importance, both from an ecological perspective and for their role in supporting a tourist industry that depends largely on healthy marine and coastal ecosystems.

Degradation of marine ecosystems presents a major threat to livelihoods, health and well-being. In the marine area, these come from the effects of climate change, including ocean acidification and coral bleaching, physical damage from increasingly intense hurricanes and the growth of maritime activities and land-based pollution.

3.4.1. Economic contribution

Coastal and marine ecosystems provide a variety of ecological functions that directly and indirectly translate to economic services and value to humans. However, the value of ecosystem services is often difficult to quantify as it is not easily captured in 'traditional' economic balance sheets. It may not be immediately visible in markets, business transactions or national economic accounts and it may only be perceived when services are diminished or lost (MACBIO, 2015)[31]. The importance of natural assets can be disregarded if they are under-valued and, therefore, they may become overused or depleted. In turn, this may have real and significant, if unintended, knock-on effects to economic sectors.

Grenada has conducted a number of protected area ecosystem valuation exercises. There is currently an initiative between the Environment Division and the Caribbean Natural Resources Institute (CANARI) to carry out a country-wide National Ecosystem Assessment of Grenada for 2019 - 2023 (CANARI, 2020)[32]. The National Sustainable Development Plan (NSDP) also considers ecosystem services for the blue economy, with stakeholders expressing concerns about skills gaps which pose challenges in accessing new technologies.

3.5. Coastal and Disaster Risk Management

The National Disaster Management Agency (NDMA) is the body responsible for the overall management of disasters and emergency situations in Grenada.

3.5.1. Natural Hazards

Historical records indicate that Grenada has been adversely affected by a range of natural hazards such as droughts, floods, wind, storm surges, tropical cyclones, landslides and seismic hazards (earthquakes and tsunamis).

There is the potential for serious adverse impacts to coastal communities and infrastructure from flooding, sea-level rise and inundation, especially during storm surges. Serious disruption of social and economic life could be expected to occur as a result of natural hazards. Coastal erosion from SLR

Creole Wrasse swimming around coral reef in Grenada, where natural resources support an important tourism industry

[31] MACBIO. (2015). Fiji National Marine Ecosystem Service Valuation. Available Online: http://macbio-pacific.info/Resources/fiji-national-marine-ecosystem-service-valuation/ [Accessed February 2019]

[32] CANARI. (2020). Grenada Ecosystem Assessment: Linking Science and Policy. Available Online https://canari.org/climate-change-and-disaster-risk-reduction/grenada-ecosystem-assessment-linking-science-and-policy/ [Accessed February 2021]

and extreme events could disrupt coastal villages such as Gouyave, Grand Mal, Duquesne, Soubise and Marquis. Roads through these communities and other areas such as Carriacou are at or below sea level in some cases. These roads could experience flooding and become impassable during high tides and experience severe damage during storm surges. Maurice Bishop Airport is considered the most at risk CARICOM airport with regard to SLR[33].

There is a desire to increase development in the coastal zone to support government policy targets associated with sustainable tourism. An area of critical importance is the threat of beach erosion to the majority of the existing tourism facilities in areas located near the coastline (e.g. Grand Anse and Carenage), where significant land and beach losses are predicted due to sea level rise (SLR)[34]:

- Grand Anse: land loss ~ 206,000m^2 and beach loss of over 54,509m^2. Resorts impacted in this region include the Allamanda Beach Resort, Coyaba Beach Hotel, Spice Island Resort and Flamboyant Hotel (currently being renovated under a new name).
- Carenage (harbour in the capital): land loss of almost 19,000m^2. There are no beaches in this area.
- Marquis: land loss of over 9,000m^2 and beach loss of over 4,000m^2
- Soubise: land loss of over 13,700m^2 and beach loss of over 3,000m^2

The Physical Planning Unit (PPU) is the authority responsible for planning and development control and the protection of the natural and cultural heritage. Although its mandate includes forward planning, almost all of its operations are focused on development control. As there is no up to date National Physical Development Plan, the PPU is operating without any planning guidance or land zoning development orders in place. The PPU manages this process by consulting extensively within government to ensure the national policy direction is taken forward.

Grenada and St. Lucia have implemented an insurance scheme specifically designed to assist the fishing industry in the event of extreme weather events; Caribbean Oceans and Aquaculture Sustainability Facility (COAST) insurance, with support from the CME Programme, World Bank and Caribbean Regional Fisheries Mechanism (CRFM). The insurance has been developed by the Caribbean Catastrophe Risk Insurance Facility Segregated Portfolio Company (CCRIF SPC). The insurance encourages and incentivises the sustainable management of fisheries, policy reforms and climate-smart fisheries and offers cover for fishers and related businesses (e.g. vendors) in the event of extreme weather events such as tropical storms and hurricanes. The government is encouraging all vessels to be insured and will only provide licences if the fisher has insurance. Furthermore, the Grenada Development Bank will only provide vessel loans if the fisher is licensed and insured.

3.5.2. Man-made Hazards

In addition to natural hazards there are a number of man-made hazards such as fires, pollution, toxic spills and accidents, including forest fires and oil spill events. The impact of an oil spill could be potentially devastating to Grenada's natural resources in terms of destruction of beaches, coral reefs and marine life.

3.6. Gender Equality

The UN SDG 5 aims to achieve gender equality and empower all women and girls. There are nine targets, with at least one indicator each, that aim to achieve the overarching goal. Maritime industries are traditionally male-dominated areas, particularly in bedrock sectors of fishing, ports / shipping, marine aggregates. Commercial and offshore fisheries remain a male-dominated sector worldwide. Women's roles and activities in these bedrock sectors tend to be in supporting onshore roles, such as fish processing, food preparation and service sector roles.

The UN has highlighted the gender equality issues around the COVID-19 pandemic, noting that the majority of caregivers, at home, in communities and in health care, are women. Although those most affected by COVID-19 are reportedly men, the elderly, and people with chronic diseases and weak immune systems, women and girls are disproportionately impacted by both the disease and the public health measures to contain it. Women are at increased risk of infection due to their caregiving role; and loss of livelihood, due to their jobs tending to be in service sectors that have been closed; or in part time or informal work.

Women's role in subsistence nearshore / coastal fishing is often unpaid and, therefore, undervalued in economic data. A move towards valuing ecosystem services and the economic contribution that ecosystems make in supporting the economy will help to highlight the value of the roles of women to the economy. The stewardship and management of ecosystem services and the creation of new small scale business opportunities can also provide additional opportunities for women and more rural or remote island communities, such as through small scale aquaculture.

Tourism is one maritime economy sector that offers a wider range of opportunities for women to take an active part in the economy. The opportunity to diversify and expand the tourism offering creates the opportunity for women and rural / remote communities to engage in the economy. The development of this Maritime Economy Plan has included consideration of how gender equality currently affects the maritime economy sectors as part of the multicriteria analysis carried out (see section 4.1).

[33] ICCAS. The Economic Effects of Climate Change in Grenada. Available Online: http://www.iccas.gd/sites/default/files/resources/ICCAS%20Brief_EconomicImpact_Key%20sectors_NF.pdf [Accessed February 2021]

[34] Government of Grenada, 2017, National Climate Change Adaptation Plan (NAP) for Grenada, Carriacou and Petite Martinique 2017 – 2021, Ministry of Climate Resilience, the Environment, Forestry, Fisheries, Disaster Management and Information

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4. Analysis and Plan Development

Commonwealth Marine Economies Programme
Enabling safe and sustainable marine economies across Commonwealth Small Island Developing States (SIDS)

4. Analysis and Plan Development

This Plan has been produced as a result of several months of desk work combined with a consultative mission to Grenada, during which intensive discussions were scheduled with a wide range of government, NGO, and private sector stakeholders. It is therefore very much a strategic overview of Grenada's maritime economic potential. Often such swift approaches and taking a 'helicopter view' can be a highly beneficial mechanism for succinctly cutting through detail and prioritising needs. The Maritime Economy Plan was subject to review, feedback and update during 2020 / 2021, with the Ministry of Sports, Culture and the Arts, Fisheries & Co-operatives acting as the focal point for engagement.

This document is presented as a basis for further dialogue and to support Grenada along the difficult but necessary pathway towards the realisation of a blue economy.

The Plan was subject to wide-ranging scrutiny and consultation and following associated revisions, it is anticipated that it will ultimately assist Grenada in the implementation of its National Ocean Policy.

4.1. Methods

The following methods were developed and applied to assist consultation and discussions with stakeholders and the analysis of information:

- To help gather information during country visits and seek the views and opinions of stakeholders to inform the development of the Maritime Economy Plan, a series of **structured questions** was developed. Questions were grouped by sector (e.g. fisheries) or theme / issue that is common to many SIDS or that has the potential to affect the maritime economy (e.g. disaster risk, infrastructure and engineering).
- Where appropriate, stakeholders were aided in the process of prioritising maritime sector issues with the help of a **Card Sorting exercise (see Figure 4)**. 'Card sorting' prioritisation of maritime economy sectors and discussions of priorities were held with stakeholders, either individually, in groups, or in workshops. Discussions focussed on four 'key drivers' for the country's maritime economy, their relative importance and any potential tensions between the key drivers, to understand the over-arching issues of importance affecting all maritime economy sectors. Figure 4 overleaf presents the key drivers.
- Information collected through the structured interview questions; desktop study of published and grey literature and reports and data provided by the departments and ministries contacted was subject to a **bespoke multicriteria analysis** developed to help inform the maritime economy plan process. The multicriteria analysis was termed a **GESTER analysis (see Table 4)**.
- Traditional and emerging maritime economy sectors were subject to the GESTER of the current situation or status of the sector, considering both positive and negative aspects of the sector. The analysis served to expose the process **to basic environmental and social screening**.

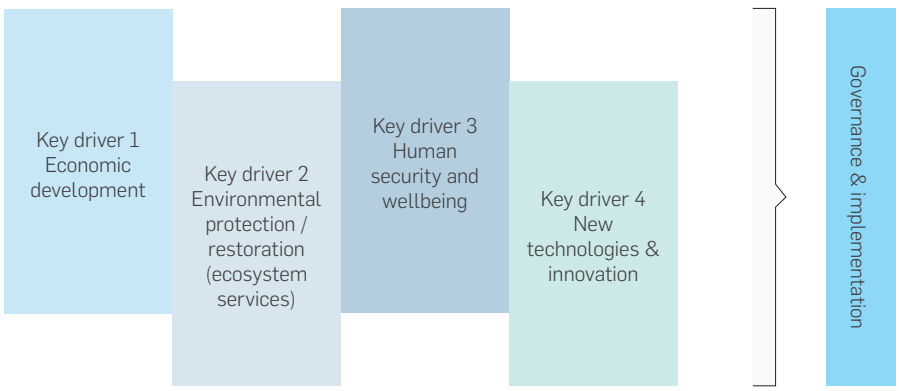
The criteria against which each sector was considered are shown in Table 4. Card sorting (Figure 4) provided a series of lenses for examining different sectors. The Maritime Economy Plan was then drafted following this analysis.

Coastal road in Grenada

Table 4 – Multicriteria (GESTER) analysis

Criteria	What is considered / included?
Governance	Regulation, management, monitoring, enforcement, resources (human and technology)
Environment	Impacts / risks to the environment from the sector, dependency on environmental quality / risks from other sector impacts to the environment
Social	Consider gender, rural and urban, educational factors, health and safety, community issues, skills and training of workers today, access to training / education for future workforce, availability of workforce locally, loss of workforce overseas, influx of workers from overseas
Technology	Consider impacts of new technology on the sector, technology requirements for the sector, if low tech can achieve similar outcomes
Economy	The effects on the economy, or economic effects on this sector – local and global factors, resilience to economic change
Resilience & Risk	To / from natural hazards (earthquake, tsunami, extreme weather) and climate change (increase in extreme weather, sea level rise, ocean acidification, sea temperature rise), preparedness and response to events, integration across policy / government

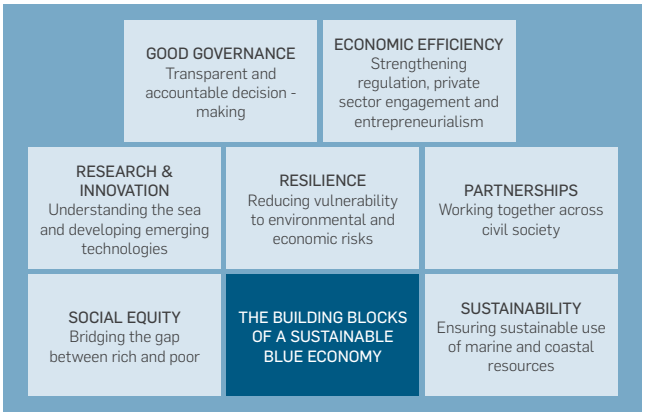
Figure 4 – Card sorting key drivers



Building a vibrant and productive maritime / blue economy may be assisted by concerted focus upon key maritime economic sectors. These sectors may then be aligned with a series of over-arching Principles that once adhered to will assist a country to follow a clear and inclusive pathway to sustainable maritime economic growth (see Figure 5).

The United Nations has adopted ocean development as part of its **Sustainable Development Goals (SDGs)**. SDG 14 aims to *"Conserve and sustainably use the oceans, seas, and marine resources for sustainable development."* The blue economy interlinks with the majority of the SDGs, including SDG5, SDG11, SDG8, SDG7 and others. Aquatic and marine resources play a crucial role in supporting maritime economic sectors. Progress towards a blue economy can help achieve a range of SDGs. Figure 6 illustrates some of the linkages between blue economy development and the 17 SDGs[35].

Figure 5 – Principles of a sustainable Blue Economy[36]



[35] Adapted from OECD, 2016, The Ocean Economy in 2030, OECD Publishing, Paris, http://dx.doi.org/10.1787/9789264251724-en
[36] UN Commission for Africa, 2016, Africa's Blue Economy: A Policy Handbook

Figure 6 – The Blue Economy and achieving SDGs

Potential POSITIVES of proper development of the Blue Economy	SDG	Potential NEGATIVES of improper development of the Blue Economy
Improved livelihoods and employment Investment in enterprises		Space conflict Marginalization
Enhanced sustainable food production Improved food distribution		Increased food waste Harmful commoditization of food
Improved water quality Increased funding to health services Improved occupational safety of seafarers		Pollution Weak revenue capture at national level
Enhanced knowledge infrastructure Increased funding for the education sector Skill development		Outsourcing of skilled labor Unwillingness to invest in local training and education Brain drain
Increased equal rights to economic resources Increased participation in decision making		Increased gender disparity in wages Proliferation of income gap
Increased funding for access to dean water and sanitation Investments in nature-based water provision services		Water pollution Destruction of nature-based water provision services
Improved knowledge base to build and maintain infrastructure Enhanced access to renewable energy		Continued incentivisation of carbon-based energy Population displacement Environmental impacts
Job creation Economic diversification		Wealth concentration Over-reliance on quantitative growth
Increased and improved infrastructure Technological progress		Environmental impacts High dependency on technology
Enhanced benefit distribution Enhanced participatory engagement of all stakeholders		Business as usual Concentration of influence
Improved cycling, harvesting, and use of water Cities have access to dean renewable energy		Increased pressure on freshwater resources Pollution
Removal of inefficient fossil-fuel subsidies Promotion of more equitable trade of goods and services		Unsustainable production practices Increased waste flows Transition to low carbon economies Resilience to uncertain climate future
Increased stock abundance supporting sustainable fisheries Enhanced health of aquatic and marine ecosystems		Overexploitation of aquatic and marine resources Environmental degradation
Increased water security Enhanced sustainable transboundary water sharing		Nutrient pollution Biodiversity loss
Improved governance Promotion of continental peace and security		Resource conflicts Failure to implement and enforce laws and regulations Dutch disease and resource curse
Improved partnerships between public, private, and civil society actors Strengthened continental cooperation		Insufficient partnerships Bureaucratic complexity

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5. Key messages, Priorities and Actions

Commonwealth Marine Economies Programme
Enabling safe and sustainable marine economies across Commonwealth Small Island Developing States (SIDS)

5. Key messages, Priorities and Actions

This section of the plan sets out the key messages and priorities for the maritime economy of Grenada. It highlights the overarching messages and key drivers for the country and for each of the maritime economy sectors, taking account of the current economic activities, opportunities and risks and consultation with stakeholders.

The importance of key existing and developing policies and plans in Grenada, particularly the NOP, NAP and ICZM plan is recognised. Where the priorities, actions and recommendations in this MEP help to achieve or link to policies in the NOP, the relevant NOP goals are identified.

5.1. Key messages and Key drivers for Grenada's Maritime Economy

The overarching key issues driving Grenada's maritime economy are:

- **Marine tourism** is playing an increasing role in the prosperity of Grenada and needs to be managed in a sustainable way to ensure its viability in the long term. In particular, the impacts of yachting and cruise tourism need to be fully understood.
- There is the potential for **new maritime activities** to add to the economic prosperity of Grenada. The NOP is designed to recognise the potential for these new activities. For example, potential oil and gas extraction, mariculture and marine renewables all need to be governed by policies that ensure they are carried out in an environmentally sustainable way, should they be activities that Grenada wishes to strategically pursue.
- The **developing NOP** will act as a planning policy guidance document to help implement actions and recommendations in this MEP and other policies, such as the cabinet-endorsed ICZM Policy.
- There is no **National Maritime Transport Policy**. This will be needed to meet International Maritime Organisation (IMO) requirements around safety at sea, pollution response and flag, coastal and port state measures and will help to address some of the water quality / port waste issues in the country.
- Efforts to improve **public awareness of marine and coastal safety** (including boating, swimming etc.) are important to address a perceived cultural fear of the sea, which is limiting the realisation of the opportunities of a blue economy.

5.2. Priorities

The priorities here are cross-sectoral and identify where actions are required to move towards a sustainable blue economy while also implementing the **Grenada National Ocean Policy (NOP)**, deliver the NOP Vision and realise the overarching ECROP polices, to which Grenada is signed up. These priorities and themes are picked up in many of the actions identified for maritime economy sectors in section 5.3.

Priority 1 – Collaboration

To create the necessary platform for future collaboration amongst all sectors in Grenada, there is a need to coordinate activity within a formally established **National Ocean Governance Committee (NOGC)** and improve linkages between current policies and plans of relevance to Grenada's marine space. This is a significant step in the implementation of the ECROP in Grenada and embedding the concept of the blue economy across government. Important initial actions for the NOGC are:

- Agree terms of reference and develop an operations guidance manual for the NOGC by relevant bodies.
- Formalise the annual interim review of the Grenada NOP. Identify clear actions for key organisations in Grenada to provide information on regional and international commitments and sectoral analyses. Produce an annual Ocean Status Progress Report that can be used to compile a 5 yearly Ocean Status Report.
- Review the recommendations and actions set out in this MEP to ensure Grenada specific guidance is prepared and disseminated for inter-departmental mainstreaming into sectoral work plans. Guidance should be articulated in a way that it is understood and able to be incorporated into government departmental business with minimal impact.
- Oversee and guide the ongoing production of Marine Spatial Plans and Coastal Master Plans for Grenada to support the implementation of the NOP and actions in this MEP that the NOGC prioritises.

Additionally, the following actions are designed to improve cross-departmental understanding in Grenada and facilitate collaboration, by ensuring a common understanding and approach to marine management:

- Ensure that a ridge to reef (Islands Systems Management) approach is adopted in the development of the NOP, Marine Spatial Plans, Coastal Master Plans and the delivery of MEP actions identified as priority for Grenada.
- Carry out a review of the current regulatory system of marine environmental management and requirements of the National Environmental Policy and Management Strategy (NEMS), identifying gaps and actions to take to improve regulations. This will help provide the basis for the coordinating mechanism with ICZM to provide a link between land and marine planning.

- Undertake a natural capital evaluation of Grenada's marine and coastal environment to understand the value of marine ecosystem services overall to inform decision making and marine management. The findings should be included in the Ocean Status Reports.
- Establish a clearly communicated, co-ordinating mechanism for the implementation of the MEP.

Priority 2 – Capacity

Human capacity and skills are key challenges to the implementation of the MEP and mainstreaming the concepts of the blue economy and marine spatial management across all departments and agencies in Grenada. Outside of government, there is a need to focus on growing skills for new jobs in the maritime economy, St. George's University has a key role to play in this. An urgent review of Grenada's institutional capacity needs is required in the following areas:

- **Fisheries** – fishing is important for both local food security and income generation in Grenada. Fisheries management is challenged by limited human resources and operational capacity for research, monitoring, compliance and enforcement. Understanding the capacity challenges will inform the development of a revised Fisheries Policy and action plan.
- **Marine Protected Areas** – review existing MPA boundaries and management in Grenada. This will inform the management systems and capacity requirements needed for existing MPAs, the need to update them, to inform the designation of any new MPAs and ongoing management requirements for all new and future MPAs in Grenada.
- **Marine research** – there is no strategic overview of marine research requirements for Grenada, or an understanding of the capacity, capability and partnerships available to inform, undertake and disseminate marine research. Research and the dissemination of findings (linking to Priority 4 - Communication) is important to inform and develop sustainable marine management and Grenada's maritime economy sectors.
- **Land and water management and use planning** – the link between land use management and inland water resources and flood management to coastal water quality and ecosystems services is recognised in the Island Systems Management approach, however more resources are needed to implement this practically including through the Land Policy and Integrated Resource Water Management Plan (in the process of gaining Cabinet approval).

Priority 3 – Commitment

Future funding to tackle marine issues will be dependent on Grenada being able to demonstrate, through this MEP and the Grenada NOP, that funding will lead to a beneficial legacy for citizens and the marine environment. It is of importance, therefore, that governmental commitment ensures that the implementation of the MEP is fully costed, suitably aligned to government sectoral budgets and endorsed by all Grenada NOGC members (see Priority 1 – collaboration). In addition, finance and co-financing mechanisms must be clearly identified and disbursement modalities secured for relevant MEP delivery.

Priority 4 – Communication

Increasing public awareness, understanding and appreciation of the importance of the ocean, the Grenada NOP and the MEP through education and outreach is an important short-term action. This should embrace the creation of a process for active public participation in planning, policy and decision making which is likely to include the need for a public awareness, education and outreach strategy to be developed and implemented. This builds on cross-departmental dissemination and awareness raising (see Priority 1 - collaboration) and extends to businesses, communities and the general public across Grenada. Developing and improving skills and training for jobs is important - both academic and vocational training, particularly if new areas are to be made the most of e.g. mariculture, expansion of tourism. St. George's University has a role to play here.

5.3. Action Plans

Actions, primary actors and desired outcomes are presented for each maritime economy sector in the following pages. Recommendations and actions have been drafted to be relevant and applicable to both women and men, and to all of Grenada's communities. Key messages and recommendations that could provide opportunities for women are highlighted. Each sector is given a prioritisation for action based on the categorisation below.

Priorities have been categorised as follows:

■	This work is urgent. It is critical to both GDP and /or Grenada's ability to adapt to climate change
●	This work is new / needs attention. Sustainably developing it further now would help to build a future sustainable maritime economy 'game changer' for Grenada.
▲	This work is well established and already very important to Grenada's blue economy. Attention to implementation plan suggestions will further strengthen the sector.

5.3.1. Coastal Development

Status – Bedrock (Established)

SUGGESTED PRIORITY
This work is urgent. It is critical to both GDP and /or the ability to adapt to climate change

Human capacity and skills are a constraint in the management and planning for sustainable coastal development. There is a need for better coordination between decision making bodies.

Legislation and planning controls are a constraint to planning and managing development sustainably and do not facilitate cross-departmental coordination; there is currently no overarching Environment Act, EIA Regulations are in draft and there is no up to date National Physical Development Plan in place.

The Department of Environment's lack of legislative power means that they rely on influencing, advising and guiding others to ensure environmental compliance through other delivery routes. Given the lack of a legislative framework, environmental policy documents are very important to the Department of Environment (DoE) to help direct others in a suitable manner.

MPA designation and management is the responsibility of the Department of Fisheries (DoF). The PPU is not directly involved in MPA designation but the presence of MPAs affects planning policy and activities for which the PPU is responsible.

The PPU does not have the expertise / capacity to assess coastal / marine applications or Environmental Impact Assessments (EIAs), although the PPU does consult other government departments on applications and EIAs for their input into the decision-making process.

In order to meet current challenges and realise future opportunities the following considerations should be taken into account by decision makers with regards to future coastal development in Grenada:

- Consider all relevant climate resilience or coastal management plans or policies when developing any coastal or marine spatial plans.
- Consider a precautionary and risk-based approach, including the use of environmental impact assessments to ensure that activities and developments in the coastal zone are climate resilient and sustainable.
- Ensure that policy and regulatory delivery is integrated between relevant ICZM policy and the new NOP (2019), considering links to the Draft Land Policy and Integrated Water Resource Management Plan for an Island Systems Management (ISM) approach to help address water resources and flood risk management at all levels and pollution control in the nearshore area from both coastal and land-based sources.
- National Parks and Protected Areas (NPPAs) on land need to be preserved and co-managed with the marine environment.

View of Saint George's, the Capital of Grenada

- Coastal access rights to the water is a significant issue. Clear policy needs to be developed to ensure standardisation and transparency regarding access.
- Ensure that evidence-based decision making is applied for coastal developments. This includes ensuring a robust Environmental Impact Assessment (EIA) framework that is adhered to. It is important that an EIA is updated or a new EIA is undertaken for development extensions.
- Landscape management and reversal of land degradation issues should be considered for all coastal development schemes.
- Grenada would benefit from introducing a decision -making framework to support Rapid Assessment in development control.

Improving legislative powers, clear strategic development planning and improving skills and capacity to regulate and enforce planning and development is imperative to achieve sustainable coastal development.

Grenada Maritime Economy Plan — COASTAL DEVELOPMENT— Implementation Pathway

Suggested Strategic Requirement	Adhere to the NOP to support and continue to enhance the plans and policies to facilitate sustainable coastal development and the blue economy to realise the full value for Grenada's economy, society and natural environment			
Track	Description	Primary Issues	Primary Actors	Years
Track 1	Manage the risk of coastal hazards through climate resilient policies, plans and management of the coast in the National Adaptation Plan or ICZM plan	Ensure integration between NOP, NAP and ICZM through the implementation of NOP Policy Goal 8.1 (Strategic Action Plan SA36.1)	Ministry of Climate Resilience, the Environment, Forestry, Fisheries, Disaster Management & Information. The Physical Planning Unit (PPU)	1 – 3
Track 2	Develop and implement national systems of coastal and marine spatial planning to improve planning and control of coastal development	Implementation of NOP Policy Goal 6.2 (Strategic Action Plan SA37.1)	Ministry of Climate Resilience, the Environment, Forestry, Fisheries, Disaster Management & Information. The Physical Planning Unit (PPU)	5
Track 3	Maximize the benefits of restoring and conserving coastal ecosystems to increase the resilience of communities and key assets using Ecosystem-Based Adaptation	Implementation of NOP Policy Goal 8.3 (Strategic Action Plan SA38.1)	Ministry of Climate Resilience, the Environment, Forestry, Fisheries, Disaster Management & Information. The Physical Planning Unit (PPU)	10
Desired Outcomes	Protection of life, property and ecosystem services			

5.3.2. Shipping and Ports

Status – Bedrock (Established)

SUGGESTED PRIORITY
This work is well established and already very important to Grenada's sustainable maritime economy. Attention to implementation plan suggestions will further strengthen the sector.

Coordination with other decision makers is very important for the Grenada Port Authority (GPA) - decisions both at a policy and delivery level that affect port operations or the marine environment can be made without GPA knowledge.

The ability to monitor, control and respond to human activity at sea is fundamental to the ability to manage and plan marine resources, protect the marine environment and enforce the rule of law. Grenada must ensure that adequate charts and hydrographic services are available in line with national, regional and international commitments. Capacity building, regional cooperation and training, and ensuring effective hydrographic governance are required to understand what is occurring within Grenada's marine space. Capacity in both staff and equipment / vessels are required to respond to this information for effective compliance and enforcement and emergency response.

Key messages:

- Leisure / yacht and cruise traffic is predicted to increase and is being encouraged to grow the tourism sector. The requirements needed to support this growth sustainably need to be considered strategically, including:
  - Port / harbour and onshore infrastructure and facilities to support the growth e.g. potential new shipping routes, berthing facilities, accommodation, transport, need for increased cargo / shipping, etc.
  - Boat building is important for maritime trade and there is a wish to maintain and grow boat building projects. This will need to link to both facilities and human resources / training.
  - Ability of existing and future port / harbour facilities to increase resilience to / adapt to climate change as they are developed / expand.
  - Spatial, social and environmental impacts of predicted increases and the need to manage / mitigate these. This includes both terrestrial and marine issues, such as navigational safety, access to areas for other activities (e.g. fishing), conservation and management (e.g. MPAs, reefs, etc.).
- Port waste / waste water facilities are not sufficient to cope with existing levels of traffic – addressing future growth requirements is imperative to prevent environmental and human health impacts.
- Capacity building for GPA, DoE, DoF and PPU to strategically plan, manage, monitor and enforce port / harbour development, operation and navigation. This requires staff, training and equipment.

Water quality / waste management controls are likely to become increasingly important as the tourism industry grows, all forms of marine traffic increase and more pressure is put on port / harbour / marine facilities.

Grenada Maritime Economy Plan — SHIPPING AND PORTS — Implementation Pathway

Suggested Strategic Requirement: Shipping and Ports play an important role in the activities taking place within the marine environment of Grenada

Track	Description	Primary Issues	Primary Actors	Years
Track 1	Maintain effective maritime situational awareness, coordinated compliance and enforcement capability to secure, exercise and protect rights and jurisdiction over marine areas and resources	Implementation of NOP Policy Goal 3.1 (Strategic Action Plan SA11)	Ministry of National Security. Grenada Maritime Administration / Grenada Ports Authority	1 – 3
Track 2	Ensure marine pollution contingency planning, monitoring and response capabilities are in place, in line with relevant international and regional conventions	Implementation of NOP Policy Goal 3.3 (Strategic Action Plan SA12)	Ministry of National Security. Grenada Maritime Administration / Grenada Ports Authority	5
Track 3	Develop a strategy to enhance capacity-building and training of marine professionals and seafarers, in line with international standards and national needs	Implementation of NOP Policy Goal 3.6 (Strategic Action Plan SA17)	Grenada Maritime Administration/ Grenada Ports Authority	10

Desired Outcomes: Implementation of specific maritime transport related policies as defined within the National Ocean Policy for Grenada

5.3.3. Fisheries

Status – Bedrock (Established)

SUGGESTED PRIORITY
This work is well established and already very important to Grenada's sustainable maritime economy. Attention to implementation plan suggestions will further strengthen the sector.

The National Fisheries Policy remains in draft, and is centred on five themes:

1: Enhancing the status and capability of fishers;

2: Sustainable stewardship & conservation of aquatic resources;

3: Realising the development potential inherent within the fisheries sector;

4: Maintaining the sector's role in sustaining livelihoods of the poor;

5: Generating a positive interaction with Grenada's wider economic community.

Key messages:

- Fisheries management, stock assessment, management plans, monitoring and enforcement capacity is required to support existing fisheries, MPAs and leisure fishing; and to ensure the development of new markets and tourism fishing is sustainable. Science-based management plans are required and the draft National Fisheries Policy requires updating and finalising.
- Increase collaboration with neighbouring island states in relation to their involvement in fisheries and the trans-boundary nature of fish stocks – actively engage through CARICOM's Caribbean Regional Fisheries Mechanism (CRFM) and the Caribbean Common Fisheries Policy.
- MPA management supports both fisheries and tourism. The designation and management of MPAs needs to support the co-existence of both sectors. Cross-government engagement and cooperation is required. Access to important traditional fish resources / for food source should be supported, where fishing practices are in line with management aims. Tourism development / leisure craft use of important fishing areas should not impact on habitat or fish stocks. EIA, water quality management, non-destructive mooring should be encouraged and enforced. Management / enforcement capacity is needed across government.
- The potential social, environmental and economic impacts of other activities and development on fishing and fisheries (e.g. spawning, nursery grounds) need to be considered (e.g. tourism, harbour, coastal development).
- Sport / leisure fishing management and enforcement is not on a par with commercial fisheries. As tourism grows this may impact key stocks. Leisure fishing vessels are not registered in the same way as commercial vessels; this needs to improve in order to manage / enforce this sector appropriately.
- Support for the development of fisheries products and markets, including oceanic pelagic species and local inshore species. Training for longline and pelagic fishermen is required.
- Training and development for fishers to improve safety, catch quality and non-destructive fishing methods - safety at sea, business and financial management, co-management with regulators, etc.
- Sargassum management is a cross-cutting issue affecting fisheries, tourism and ports / harbours – collaboration is needed across government and sector participants to address this, including research into management techniques and / or uses for Sargassum.

Grenada Maritime Economy Plan — FISHERIES — Implementation Pathway

Suggested Strategic Requirement: Economic opportunities that consider fisheries should be developed in a sustainable manner to realise the full value for Grenada's economy, society and natural environment

Track	Description	Primary Issues	Primary Actors	Years
Track 1	Mainstream the sustainable use of marine resources in national policies and planning frameworks, to ensure long term socio-economic development	Implementation of NOP Policy Goal 5.1 (Strategic Action Plan SA17)	Ministry of Climate Resilience, the Environment, Forestry, Fisheries, Disaster Management & Information	1 – 3
Track 2	Develop and implement ocean governance training programme including MPA management, fisheries management and marine spatial planning	Implementation of NOP Policy Goal 1.5 (Strategic Action Plan SA9)	Ministry of Climate Resilience, the Environment, Forestry, Fisheries, Disaster Management & Information	3 – 5
Track 3	Formalise maritime boundaries in order to secure, exercise and protect their rights and jurisdiction over marine areas and resources	Implementation of NOP Policy Goal 2.1 (Strategic Action Plan SA10)	Ministry of Climate Resilience, the Environment, Forestry, Fisheries, Disaster Management & Information	5 – 10

Desired Outcomes: The Government of Grenada remains committed to the conservation and sustainable use of fisheries resources for the benefit of the people of Grenada

5.3.4. Aquaculture

Status – Emerging (Not Established)

SUGGESTED PRIORITY
This work is new / needs attention. Sustainably developing it further now would help to build a future sustainable maritime economy 'game changer'' for Grenada.

The government is supportive of an increase in aquaculture and mariculture. There is a recognition that this needs to be done in a way that offers diversification for the fishing industry but does not compete directly with fishers.

Key messages:

- Opportunities for aquaculture development (tilapia, freshwater prawns and seamoss) as an alternative to capture fisheries should be assessed (via more detailed feasibility studies) and as an avenue for agricultural diversification.
- Aquaculture development – onshore and in coastal locations – is constrained by space and competition with other sectors. Collaboration is needed across government to consider strategic locations for all opportunities and the potential for co-location of activities.
- Gender related aspects in the aquaculture sector require further consideration.

Grenada Maritime Economy Plan — AQUACULTURE & MARICULTURE — Implementation Pathway

Suggested Strategic Requirement	There is future potential for aquaculture and mariculture development in Grenada in line with the principles and goals set out clearly within the National Ocean Policy			
Track	Description	Primary Issues	Primary Actors	Years
Track 1	Implement feasibility assessments to assess future direction for the aquaculture / mariculture industries	Implementation of NOP Policy Goal 4.1 and 5.1 (Strategic Action Plan SA18)	Department of Fisheries	1 – 3
Track 2	Update National Fisheries Policy and supporting legislation in line with findings from Track 1	Appropriate space for aquaculture development. Need for coordination between sectors to help develop the sector	Ministry of Climate Resilience, the Environment, Forestry, Fisheries, Disaster Management & Information. The Physical Planning Unit (PPU)	3 – 5
Desired Outcomes	Recognition of the need to find space for all sectors that need coastal land / water for a diversified economy to benefit Grenada			

5.3.5. Tourism

Sector Status – Bedrock (Established)

SUGGESTED PRIORITY
This work is well established and already very important to Grenada's sustainable maritime economy. Attention to implementation plan suggestions will further strengthen the sector.

Tourism activities are the major contributor of income for the Grenadian economy and are central to coastal communities, supporting their quality of life, with many local businesses relying on the marine environment for their livelihoods.

Tourism is heavily reliant on the marine environment in terms of cruise ship tourism, beach side hotels, scuba diving, recreational bathing, yachting and competitive open-water swimming. The quality and status of the marine environment therefore has a significant impact on the value of this sector, depending on how tourists perceive the quality of the marine environment and the experience it offers, relative to other countries.

Key messages:

- Tourism development must be sustainable. There is considerable potential for growth (from emerging markets in China, Japan) and for growth to benefit other sectors in the supply chain (agriculture, fishing, construction, etc.).
- Maintaining a high quality coastal and marine environment underpins the tourism sector. The government recognises the risks to the environment from tourism and to tourism from environmental degradation. Tourism developments should not adversely affect the environment or ecosystem services (natural coastal protection from reefs, water quality, fish stocks, etc.). A robust EIA, planning, building code and enforcement system is important, with capacity for the PPU to deliver / enforce.
- Water quality poses a potential risk to sustainable tourism development – risks to environmental and human health. Water quality monitoring and improvements are required to meet regional / international standards for recreational water quality and to reduce the risk to ecosystems and food fisheries. By 2025, there is a need to significantly reduce marine pollution of all kinds, including land-based activities such as marine debris and nutrient pollution. It is important that management of water quality is considered with agriculture and land use management and the effects of pollution on human and ecosystem health as well as livelihoods. This links to priorities in the Coastal Development sector for the NOP to link with the Draft Land Policy and Integrated Water Resource Management Plan for an island systems management approach and capacity requirements to deliver this.
- Support is needed to strengthen the participation of local communities in improving water and sanitation management and awareness of the benefits and impacts to coastal livelihoods.
- A holistic island systems management (ISM) approach is important to deliver tourism policy aims sustainably – most infrastructure and coastal access is land-based but requires marine spatial planning to support access (cruise, leisure) and tourism activities (beaches, yachting). The coast is the gateway to the interior of the islands, which offers opportunities for the diversification of tourism

Grenada Maritime Economy Plan — TOURISM — Implementation Pathway

Suggested Strategic Requirement: Actively encouraging sustainable tourism options and alternatives through targeted data and information programmes and improved knowledge to support emerging tourism activities which will contribute to blue economic growth

Track	Description	Primary Issues	Primary Actors
Track 1	Develop and implement national systems of coastal and marine spatial planning to improve planning and control of coastal development	Implementation of NOP Policy Goal 6.2 (Strategic Action Plan SA29)	Ministry of Climate Resilience, the Environment, Forestry, Fisheries, Disaster Management & Information. Ministry of Tourism
Track 2	Manage the risk of climate change to tourism facilities through climate resilient tourism policies, plans and management of the coastal zone	Implementation of NOP Policy Goal 8.1 (Strategic Action Plan SA36)	Ministry of Climate Resilience, the Environment, Forestry, Fisheries, Disaster Management & Information. Ministry of Tourism
Track 3	Identify, promote and support opportunities for increasing the health and wellbeing benefits of the coast to citizens, particularly through access to beaches and the coastal zone	Implementation of NOP Policy Goal 7.4 (Strategic Action Plan SA35)	Ministry of Climate Resilience, the Environment, Forestry, Fisheries, Disaster Management & Information. Ministry of Tourism

Years: 1 – 3 – 5 – 10

Desired Outcomes: Implementation of the updated Grenada Blue Growth Strategy with regards to tourism development; A climate resilient and sustainable tourism sector

activities away from mainly coastal / beach / marine based activities. ISM manages the interactions of tourism with other activities requiring access to shared spaces (shipping, fishing) and for supporting ecosystem services (water quality, fishing, coastal protection, beaches).

- Natural capital valuation of marine tourism ecosystems and interactive Climate Smart public awareness activities will support ISM and sustainable tourism development.
- Consideration and management of the carrying capacity of the marine, coastal and terrestrial environments in planning and managing the demand for new services or activities and predicted increases in visitor numbers is needed.
- Appetite for agro-tourism is high in Grenada and can play a role in regional and local tourism. Links between hiking, agro-tourism and ecosystem services should be explored. (This is a terrestrially driven policy but links to policies to expand / diversify coastal tourism sustainably).

Sustainable tourism and recreation can only thrive with a well-managed, healthy and safe marine environment.

Sandy beach in Grenada

5.3.6. Energy (including Renewable Energy)

Bedrock (Established) – diesel import / Emerging (Not Established) – renewables

SUGGESTED PRIORITY
This work is well established and already very important to Grenada's sustainable maritime economy. Attention to implementation plan suggestions will further strengthen the sector.

On a global scale Offshore Renewable Energy (ORE) is attracting great technology and project development interest. SIDS can make great cases for piloting new technologies or showcasing new technological solutions, attracting investors and sponsors.

Grenada has potential access to geothermal energy, which is not available to many other Caribbean countries.

Key messages:

- The government is committed to renewables and reducing carbon emissions. There are specific targets for improving efficiency in demand and production and for increasing renewables contribution to the energy generation mix.
- Exploration has identified a natural gas resource to the south of Grenada. While the government is keen to understand the extent of the resource available, an appropriate regulatory framework must be in place to allow full consideration of the environmental, social and economic benefits of any gas extraction activities before it is authorised. All relevant government departments with responsibility for assessing, permitting and monitoring these activities must be appropriately staffed and trained to deal with the specific technical issues associated with gas extraction and must work together to ensure joined up management - Ministry of Finance, Planning, Economic Development & Physical Development, PPU, DoE, etc.
- Offshore renewables are of less priority than onshore renewables. Onshore renewables are much cheaper, with considerable potential. At a national level, the priority should be focussed on improving energy efficiency and low carbon energy generation.
- Careful analysis will be required for site selection (location) and environmental impact of renewable energy development.
- There is an urgent requirement to update the National Energy Policy.
- The transition towards the use of renewable energy requires multilateral funding support.
- This is a terrestrially driven priority area but it will support the maritime economy.

There are opportunities for marine renewables, but the focus of low carbon, low cost energy generation should be a terrestrial-driven policy priority

Grenada Maritime Economy Plan — ENERGY — Implementation Pathway

Suggested Strategic Requirement: The Sector is in total compliance with the CARICOM Energy Policy and the Caribbean Sustainable Energy Roadmap and Strategy (C-SERMS)

Track	Description	Primary Issues	Primary Actors	Years
Track 1	Continued research and development and investment (as nationally determined through the NOP) into renewable energy technologies	Commitment and private sector engagement into the energy portfolio	Ministry of Finance. Ministry of Public Utilities, Energy, Transport and Infrastructure. Ministry of Climate Resilience, the Environment, Forestry, Fisheries, Disaster Management & Information	1
Track 2	The National Energy Policy (2011) is updated to clearly set out the direction of energy policy	Commitment and private sector engagement into the energy portfolio	Ministry of Finance. Ministry of Public Utilities, Energy, Transport and Infrastructure. Ministry of Climate Resilience, the Environment, Forestry, Fisheries, Disaster Management & Information	10

Desired Outcomes: Reduced reliability on fossil fuels in Grenada; Energy security for all citizens and businesses

5.3.7. Ecosystem services

Status - Emerging (Not Established)

SUGGESTED PRIORITY
This work is new / needs attention. Sustainably developing it further now would help to build a future sustainable maritime economy 'game changer'' for Grenada.

While ecosystem services are ubiquitous and support both bedrock and emerging maritime economy sectors, their integration into decision making and attempts to quantify their value, are not yet mainstreamed. They are therefore described as 'emerging'.

Key messages:

- Ecosystem services underpin the tourism industry, which is fundamentally important to the economy of Grenada. The sector also puts pressure on these ecosystem services from activities such as coastal development, water use, waste / waste water disposal, accidental / deliberate damage.
- Natural capital valuation is needed to understand the value of ecosystem goods and services and use this information to inform decision making.
- Ensure that any coastal or marine spatial planning process aligns with existing mechanisms by considering areas and features of importance for nature conservation and wider biodiversity in developing policies and locations for other marine activities, and in permitting new development.
- ISM is important to support the integration of ecosystem services and natural capital valuation into the decision making process, ensuring that all sectors are given sufficient consideration.

The value of ecosystem services needs to be better understood and incorporated into decision making.

Grenada Maritime Economy Plan — ECOSYSTEM SERVICES — Implementation Pathway

Suggested Strategic Requirement: Ensure that marine and coastal ecosystems are sustainably managed and protected to minimise adverse impacts, including strengthening their resilience, and take action for their restoration, to achieve healthy and productive oceans

Track	Description	Primary Issues	Primary Actors	Years
Track 1	Manage impacts to coastal / marine ecosystems through ISM, EIA and planning processes influencing decision making	Implementation of NOP Policy Goal 4.1 (Strategic Action Plan SA18)	Ministry of Climate Resilience, the Environment, Forestry, Fisheries, Disaster Management & Information	1 – 3
Track 2	Ensure that land and marine based sources of pollution are effectively monitored and controlled in line with national, regional and international commitments	Implementation of NOP Policy Goal 4.4 (Strategic Action Plan SA20)	Ministry of Climate Resilience, the Environment, Forestry, Fisheries, Disaster Management & Information	3 – 5
Track 3	Develop novel financial instruments to support the delivery of environmental objectives	Implementation of NOP Policy Goal 4.6 (Strategic Action Plan SA22)	Ministry of Climate Resilience, the Environment, Forestry, Fisheries, Disaster Management & Information	5 – 10

Desired Outcomes: Ecosystem Based Management principles from the NOP are mainstreamed into national decision making; Coastal and marine ecosystems are protected and improved

5.3.8. Summary of all recommended actions

The table below summarises the recommended actions and outcomes for all maritime economy sectors in Grenada. Some additional explanation and clarification of the recommended actions are given below, which expands on the summary text in the figures in sections 5.3.1 – 5.3.7.

SECTOR	PRIORITY	ACTIONS	OUTCOMES
Coastal development Bedrock (Established) 	This works is urgent. It is critical to both GDP and the ability to adapt to climate change	> Manage the risk of coastal hazards through climate resilient policies, plans and management of the coast in the National Adaptation Plan or ICZM plan. This could include the production of strategic level Shoreline Management Plans to identify and prioritise coastal erosion and risk management projects. Coastal Zone Management Act development and implementation through an updated ICZM plan and resourced Coastal Task Force. > Develop and implement national systems of coastal and marine spatial planning to improve planning and control of coastal development e.g. through an integrated island development plan for each island that takes account of all the needs of developments – utilities, transport connections (terrestrial and marine), and links to the climate risk and resilience issues. Development control that is linked to EIA processes. Awareness raising and training for EIA and enforcement for moth development control and EIA > Maximise the benefits of restoring and conserving coastal ecosystems to increase the resilience of communities and key assets using Ecosystem-Based Adaptation. Ecosystem services valuation process. Link the findings to EIA and decision making processes. Awareness raising of the value of ecosystem services across government and with economy sectors, and integration into decision making.	> Protection of life, property and ecosystem services.
Shipping and ports Bedrock (Established) 	This work is well established and already very important to Grenada's maritime economy. These actions will help strengthen the sector	> Maintain effective maritime situational awareness, coordinated compliance and enforcement capability to secure, exercise and protect rights and jurisdiction over marine areas and resources. Human and technical capacity for monitoring, control and enforcement of navigational risks, shipping / vessel traffic and patrols / coastguard / customs. This includes navigational systems, communications, staff, training and vessels, as well as data management capabilities. > Ensure marine pollution contingency planning, monitoring and response capabilities are in place, in line with relevant international and regional conventions. Assess the capacity of ports / harbours / landing sites to manage all ship waste / waste water to required international standards. Develop action plans to address deficiencies and integrate into development requirements. Water quality monitoring to ensure compliance. Awareness raising of standards and actions across government. Training and staff to implement actions and monitor progress towards standards. > Develop a strategy to enhance capacity-building and training of marine professionals and seafarers, in line with international standards and national needs.	> Implementation of specific maritime transport related policies as defined within the National Ocean Policy for Grenada.

SECTOR	PRIORITY	ACTIONS	OUTCOMES
Fisheries Bedrock (Established) 	This work is well established and already very important to Grenada's maritime economy. These actions will help strengthen the sector	> Mainstream the sustainable use of marine resources in national policies and planning frameworks, to ensure long term socio-economic development. Ensure cross-government understanding of the importance of fisheries to livelihoods and the economy. Link fisheries health to environmental health. Benefits to tourism of local fish supplies. > Develop and implement ocean governance training programme including MPA management, fisheries management and marine spatial planning. Links to coastal development and ports sectors. > Formalise maritime boundaries in order to secure, exercise and protect their rights and jurisdiction over marine areas and resources. Ensure boundaries are mapped. Improve capabilities to enforce boundaries and fisheries resources – links to port / shipping sector and capacity of Coastguard / Customs.	> The government remains committed to the conservation and sustainable use of fisheries resources for the benefit of the people of Grenada.
Aquaculture and mariculture Emerging (Not Established) 	This work needs attention. Sustainably developing it further would help to build a maritime economy 'game changer''	> Implement feasibility assessments to assess future direction for the aquaculture / mariculture industries. > Update National Fisheries Policy and supporting legislation in line with findings from Track 1.	> Recognition of the need to find space for all sectors that need coastal land / water for a diversified economy to benefit Grenada.
Tourism Bedrock (Established) 	This work is well established and already very important to Grenada's maritime economy. These actions will help strengthen the sector	> Develop and implement national systems of coastal and marine spatial planning to improve planning and control of coastal development. Links to coastal development – see actions above, which cut across sectors. > Manage the risk of climate change to tourism facilities through climate resilient tourism policies, plans and management of the coastal zone. Identify, promote and support opportunities for increasing the health and wellbeing benefits of the coast to citizens, particularly through access to beaches and the coastal zone. Ensure tourism development planning decisions are in line with coastal risk assessments and that developments / building codes are climate resilient. Improve capacity and skills for development control, EIA, building codes and enforcement of same to ensure implementation. Links to coastal development – see actions above, which cut across sectors > Identify, promote and support opportunities for increasing the health and wellbeing benefits of the coast to citizens, particularly through access to beaches and the coastal zone. Developments should ensure safe access for all to beaches / the coast. Access should be climate resilient. Promote coastal / marine activities (swimming, walking, etc.) and raise awareness of the health benefits of such activities. Ensure coastal risks are properly signed. Develop beach standards and apply to public / tourist beaches.	> Implementation of the updated Grenada Blue Growth Strategy with regards to tourism development. > A climate resilient and sustainable tourism sector.

SECTOR	PRIORITY	ACTIONS	OUTCOMES
Energy (incl. Renewable energy) Bedrock (Established) / Emerging (Not Established) 	This work is well established and already very important to Grenada's maritime economy. These actions will help strengthen the sector	> Continued research and development and investment (as nationally determined through the Grenada NOP) into renewable energy technologies. This is mainly terrestrial. Resorts / developments should be encouraged to use local scale renewables, including SWAC / OTEC. > The National Energy Policy (2011) is updated to clearly set out the direction of energy policy.	> Reduced reliability on fossil fuels in Grenada. > Energy security for all citizens and businesses
Ecosystem services Emerging (Not Established) 	This work is new / needs attention. Sustainably developing it further would help to build a maritime economy 'game changer''	> Manage impacts to coastal / marine ecosystems through ISM, EIA and planning processes influencing decision making. This links to the Coastal Development, tourism and ports / shipping actions. An ecosystem valuation assessment would inform decision making. > Ensure that land and marine based sources of pollution are effectively monitored and controlled in line with national, regional and international commitments. Water quality monitoring is required. Port waste water facilities require improvement. Links to ports / shipping for the maritime sector. Specific terrestrial-based actions are required for inland impacts (e.g. land management). ISM approaches and development control that is resourced and able to enforce standards is required. > Develop novel financial instruments to support the delivery of environmental objectives.	> Coastal and marine ecosystems are protected and improved > Ecosystem Based Management principles from the NOP are mainstreamed into national decision making

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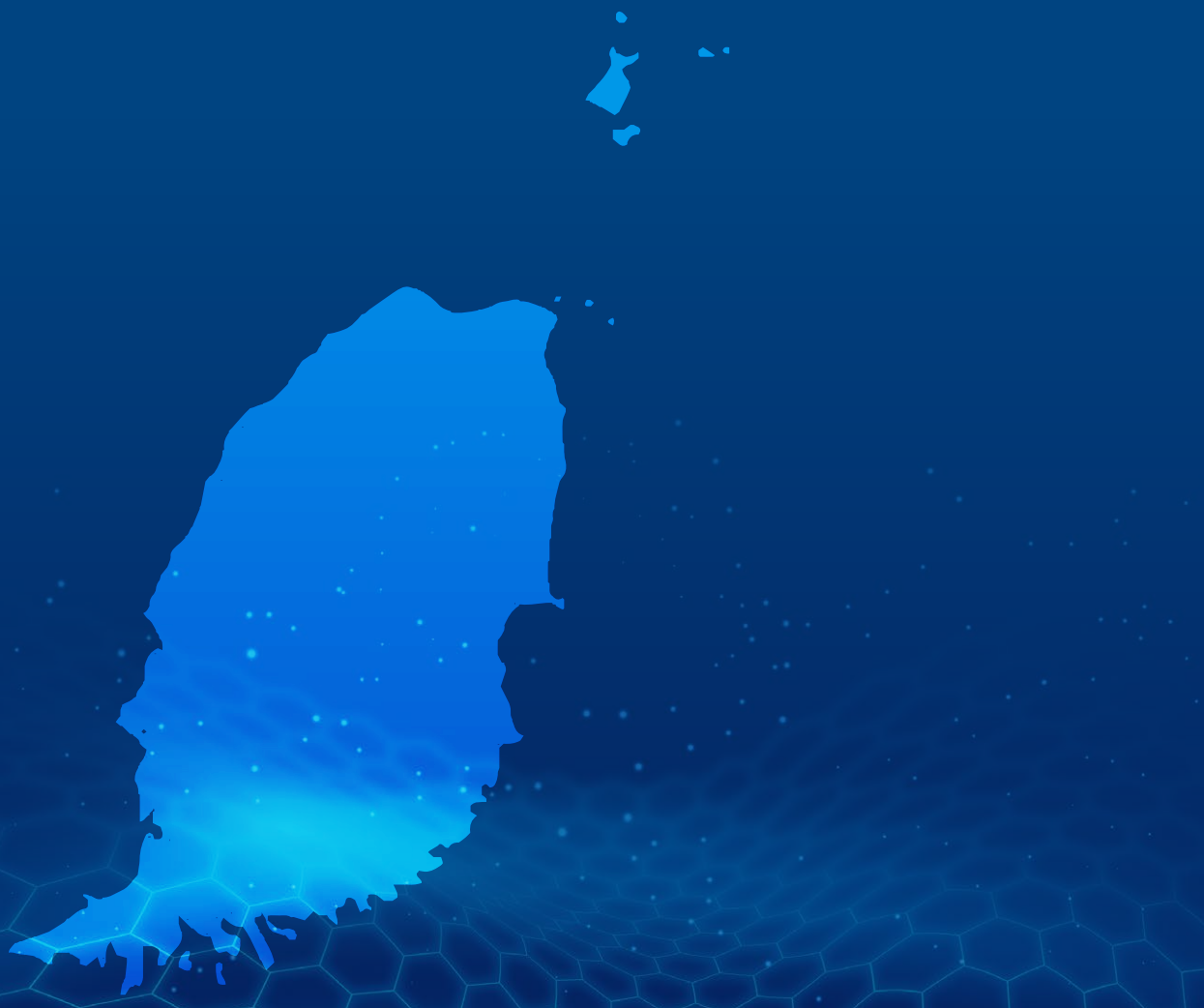
Maritime Economy Plan
Grenada

6. Implementation



Commonwealth Marine Economies Programme
Enabling safe and sustainable marine economies across Commonwealth Small Island Developing States (SIDS)

6. Implementation

6.1. Transition to a Blue Economy

Applying blue economy principles and strengthening the contribution that the maritime sector makes to national GDP is one of the most positive interventions that SIDS can make in response to climate change. With its mountainous hinterland and heavily populated coastal zone, Grenada is being squeezed by sea level rise and negative climate change impacts. The more that Grenada is able to look out to sea for its climate adaptation solutions the more resilient it will be. This approach will serve to truly embrace the vision of a Large Ocean State.

Figure 7 below shows an example of a desirable blue economy framework. This shift in the way of thinking about the maritime economy allows a country to move away from a linear, compartmentalised, and sectoral approach to ocean management with weak connections, linkages, and synergies between various scales of intervention (global, international, and national). It facilitates a move towards a more integrated, systemic, dynamic, inclusive, participatory, and ecosystem-based approach in which sectoral barriers are minimised, at both the participants' and governance level. This new way of thinking recognises that environmental, social, and economic dimensions are intertwined and pursued collectively for all blue maritime economy activities.

The blue economy (of which this Maritime Economy Plan represents a key building block) adheres closely to the principles of Integrated Coastal Zone Management (ICZM). This centres on the ecosystem approach and embeds the principles of the UNEP 'Green Economy in a Blue World' report and sustainable development. It takes into account the three pillars of environmental, economic, and social sustainability, as highlighted in the 2012 Rio+20 outcome document, 'The Future We Want', and the UN five-year Action Agenda 2012–2016.

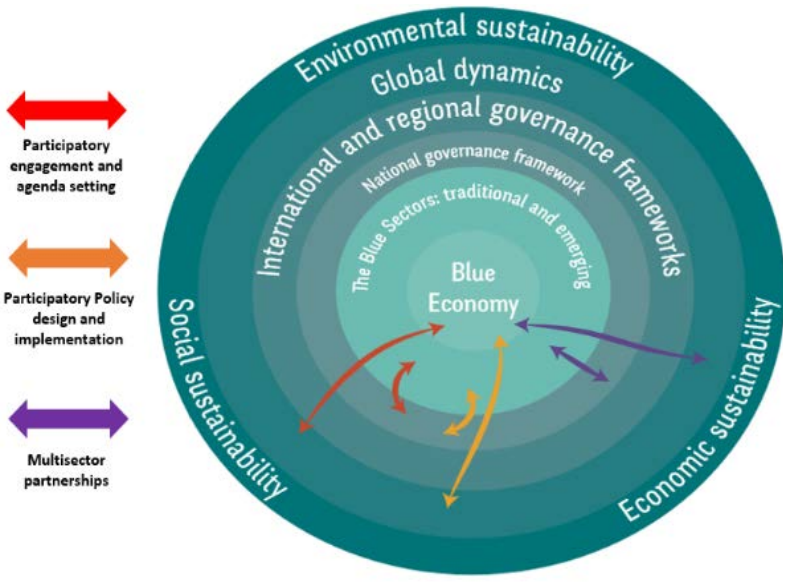
The blue economy promotes the conservation of aquatic and marine ecosystems and the sustainable use and management of resources. It builds on principles of equity, low carbon development, resource efficiency, and social inclusion.

The concept integrates the blue economy sectors through a socially inclusive process aimed at sparking a structural transformation, promoting integrated development, and improved regional cooperation and coordination.

The transformative work required to move towards full application of Blue Economy Planning principles in Governmental Strategy, Policy and Implementation is potentially a difficult but necessary step. Whilst Blue Economy concepts are beginning to become mainstream, particularly across Island Nations, very few countries have begun to prepare national level Maritime Economy Plans, and all remain some way off implementation.

As a nation that is on the climate change front line, yet also growing in terms of overall national GDP Grenada is well placed to play an exemplary role in blue economic transformation. This MEP lastly explores briefly the critical subject of accessing finance and concludes via a brief review of potential situation and distance to travel in embedding the Principles of a Sustainable Maritime Economy in societal decision-making. This is presented diagrammatically in section 6.3.

Figure 7 – A Desirable Blue Economy Framework



6.2. Accessing Ocean and Climate Finance

A key benefit of strategic planning of any kind is that it can provide greater clarity and strength as a basis for coordinated bilateral and multilateral funding. This MEP has been drafted with an eye to potential funding streams and it is anticipated that following consultation and finalisation this plan may be used by the government to assist bid prioritisation and coordination.

Grenada already receives external funding support and has experienced success in this area. The following instruments and types of fund are likely to prove valuable at implementation stage:

- Many development partners operate in the region and most include aspects of the maritime sector in their areas of support. Major development partners in the region include the **Caribbean Development Bank (CDB), Inter-American Development Bank (IDB), EU, UN, World Bank** as well as national agencies such as **USAID (USA), GIZ (Germany), JICA (Japan)** and the **UK (FCDO, CME, CIF)**.
- Grenada has gained access to climate and sustainable development finance from a range of international funding sources. The following funds are particularly relevant to the implementation of this Maritime Economy Plan - **Adaptation Fund; Global Environment Facility; Green Climate Fund, Special Climate Change Fund (SCCF), Clean Technology Fund (CTF)**.
- Grenada, like many Caribbean countries, operates a CBI programme, which is used to support national economic growth. This could be targeted towards blue maritime sector development.
- A **blue bond** is a debt instrument issued by governments, development banks or others to raise capital to finance marine- and ocean-based projects that have positive environmental, economic and climate benefit. Other SIDS are already exploring the potential of blue bond creation and revenue as part of their maritime economy support mechanisms e.g. Seychelles, Fiji.

It is recommended that the following suggested **Implementation Pathway Activities** will benefit from coordinated proposals for development assistance:

- A formally established Grenada National Ocean Governance Committee (NOGC) and with resources and remit to develop and implement the Grenada NOP, integrating specific MEP recommendations and actions, to deliver integrated marine spatial planning with sustainable blue economic growth.
- Port and shipping Master plan with a phased upgrade and development of small, medium and large infrastructure to take account of tourism / visitor development growth and the required support services. This should include necessary waste and waste-water infrastructure to ensure water quality is maintained and improved. This must be backed up with resources to monitor and enforce standards e.g. water quality.
- Update and implementation of environmental regulation for EIA and integration into planning / development process and a training and development programme / scheme to ensure it has cross-departmental understanding, uptake and enforcement to deliver strategic development outcomes as well as inform individual planning decisions. This has benefits across several sectors – coastal development, tourism, ports / shipping – as EIA, climate resilient design, building codes and enforcement of the same is needed for all developments. Resources, awareness raising and training is needed for specific staff and across government.
- Update the National Physical Development Plan, taking account of a ridge to reef (Islands Systems Management) approach and linked to the NOP, Marine Spatial Plans, Coastal Master Plans and development needs projections (housing, tourism growth, port masterplan, etc.). Link to new EIA regulations and implementation.
- Undertake a natural capital valuation to understand the value of ecosystem goods and services and underpin / integrate into decision making and planning.

6.3. Achieving the Principles of a Blue Economy

Blue Economy Principles	ECROP Policy Outcomes	Considerations for Grenada
GOOD GOVERNANCE	Coastal and marine spatial planning and integrated management of marine and coastal resources is adopted	The vision and policy outcomes in the 2019 Grenada National Ocean Policy (NOP) will not be achieved unless there are formal governance arrangements in place, endorsed across Government, that are resourced and given the power and influence to implement. There is a need to improve institutional, policy and legal arrangements through better coordinating mechanisms for policy and plan delivery. This requires improved collaboration between sectors, institutions and stakeholders to enable and support the ECROP, NOP and MEP actions
	Limits of maritime jurisdiction are established	
ECONOMIC EFFICIENCY	Sustainable socio-economic development is achieved	Alignment of the Grenada NOP must consider and map against the 2030 Agenda and implementation with the UNSDGs and SAMOA Pathway, with implementation of the activities phased (short, medium and long term) and consistent in the NOP and associated Strategic Action Plans. Commitment is also to implement regional and international agreements that incorporate a range of economic instruments that help to mainstream ocean governance into national sustainable development commitments (SDG14) and the climate change agenda
RESILIENCE	Resilience in the region is strengthened to mitigate the effects of climate related hazards and environmental change	
SOCIAL EQUITY	Sustainable socio-economic development is achieved	Capacity building for human resource and continuity to deliver the vision and objectives in the Grenada NOP, actions, the MEP and the needs of the Government and regional and international agreements
PARTNERSHIPS	Ocean stewardship, awareness, participation and wellbeing of the citizens of OECS Member States is increased	There is a need to improve awareness - from the highest level of government to local communities - on ocean governance issues using a range of communication tools and techniques
RESEARCH & INNOVATION	Decision-making across the region is informed by the best available evidence	The need to develop a marine research strategy framework that includes national and regional actions as set out within the Grenada NOP and progress towards a blue maritime economy
SUSTAINABILITY	Ecosystem integrity of the region is maintained and improved	R2R / ISM is essential to ensure that activities on land do not adversely impact the marine environment. This must be incorporated into policy, ICZM and MSPs, with strong links to EIA, planning and management

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