CONTRIBUTION 10.7

National Report on the Status of Fisheries and Aquaculture in GRENADA

OVERVIEW

Grenada, an archipelagic state, consists of mainland Grenada, as well as Carriacou, Petite Martinique and several smaller islands along the east coast and to the north of the mainland that forms part of the southern chain of islands with St. Vincent known as the Grenadines. The state is located 12◦07'N and 61◦40'W and lies between the Caribbean Sea and Atlantic Ocean, north of Trinidad and Tobago.

General Geographic and Economic Data

CITATION: Fisheries Division, Grenada, 2026. National Report on the Status of Fisheries and Aquaculture in Grenada. Contribution 10.7, p 67-84 *IN* CRFM, 2026. Volume II: National Reports on the Status of Fisheries and Aquaculture. Presented at the CRFM 20th Anniversary Scientific Conference, 28-31 August 2023. CRFM Special Publication No. 37, CRFM Secretariat https://www.crfm.int/index.php?option=com_k2&view=item&id=961

Total Area:	348.5 km²
Maritimes Claims: Territorial Sea	12 nmi
Exclusive Economic Zone	27,426 km²
Shelf area:	3,100 km²
Length of continental coastline:	121 km
Population Estimate (2021):	124,610
Total Gross Value Added by Economic Activity at Basic Prices (EC$m) 2022	1981.2
Gross Value Added by Economic Activity in Constant Prices (EC$m) 2022 – Agriculture, Livestock & Forestry	101.8
Gross Value Added by Economic Activity in Constant Prices (EC$m) 2022 – Fisheries	34.7

Grenada fisheries sector consists primarily of an open access marine fishery that has been developing from artisanal and small-scale to commercial operations.

Over the past two decades, the sector has been one of the fastest growing sectors in the national economy. It is a major contributor to poverty alleviation, employment and income generation, foreign exchange earnings and savings, an important source of protein and minerals and provides sustainable livelihoods and social well-being to the population.

During this period, the value of total fish catch increased from twenty-six million EC dollars in 2003 to almost forty million EC dollars in 2022. Similarly, fish exports increased from almost twelve million EC dollars to almost thirty million for the same period. Currently, overall investments in infrastructure and services in the fisheries sector are now valued at approximately four hundred million EC dollars. The sector now provides direct and indirect employment to over seven thousand people who account for about 15% of the labour force.

Main resources of marine capture fishery based on stocks consist of:

- Oceanic Pelagic – Consists of Yellowfin tuna, Black fin tuna, Skipjack tuna, Bullet tuna, Frigate tuna, Wahoo, Mackerels, Billfishes, Sword fish, Dolphin fish, Barracuda etc.
- Coastal Pelagic – Consists of Big-eye scads (Selar crumenophthalmus), Round scads (Decapterus punctatus), Rainbow runner (Elagatis bipinnulatus) etc.
- Shallow coral reef fishery – Consists of Snappers (Lutjanidae), Groupers (Serranidae), Grunts (Haemulidae), Doctorfish (Acanthuridae), Hind (Serranidae) etc.
- Deep slope shelf edge fishery – Consists of Snappers (Lutjanidae), including silk and black fin (buccanella), queen snapper (etelis spp) and other deep water rock species.
- Caribbean spiny lobster (Panulirus argus).
- Queen conch (Strombus gigas).
- Turtles – Consists of Hawksbill (Eretmochelys imbricata), Green (Chelonia mydas)
- Sea moss (Gracilaria spp.)
- White Sea eggs/Sea urchin (Tripneustes ventricosus).

1. SUB-SECTORS

Post-harvest

Prior to 1990, fish catch has been marketed locally, with the majority of exports comprising demersal species exported to the French Dependencies of Martinique and Guadeloupe. However, with the popularisation of the longline fishery during the 1990s and beyond, there was exponential growth in the production of yellowfin tuna which created a glut on the domestic market. As the infrastructure (cold-storage and ice making facilities) at that time was inadequate, there were significant financial losses in post-harvest efforts. As a result, the Fisheries Division embarked on a program to expand shore-based facilities such as the development of fish market centres equipped with cold-storage and ice making facilities as well as the construction of landing jetties.

Also, quality assurance and control programs were instituted to improve Sanitary and Phytosanitary measures and the legal framework, which allowed Grenada to access the export market. As a result, Grenada was accorded the status of List 1 from the European Union which provides access to several international markets. Under this program, numerous industry personnel (fishers as well as staff of fish processing establishments) received training to enhance capacity competence.

Since then, there has been further expansion in the pelagic fishery fleet and shore-based infrastructure through bilateral and multilateral cooperation from regional and international organisations and countries.

Recreational

The recreational and sport fishery are mainly linked to the tourism sector that are conducted by local operators which use their boats to undertake charters. There is a major annual sport fishing tournament held in January over a five-day period, under the auspices of the Spice Isle Billfish Tournament. This activity attracts participants locally, regionally and internationally between fifty and seventy boats. The tournament also allocates one day during this period for local commercial fishers to participate competitively among themselves where prizes are provided by the organisers.

Another smaller tournament is also held in September which attracts between twenty-five to thirty-five from local and regional participants.

These tournaments have resulted in steady growth in the recreational and sports fishery over the past two decades, with a potential for further expansion in the short to medium term.

Aquaculture

A major thrust in aquaculture development commenced during the 1990s when the Government through the Fisheries Division embarked on a program to actively promote aquaculture in order to complement fish production from capture fisheries, and also to provide an alternative source of livelihood to fishers, under an economic co-operation programme between the Government of Grenada and the Republic of China on Taiwan. This was also necessary as a strategy to supplement production of threatened species (Lobster and Conch) from capture fishery.

This led to the establishment of the Paradise Aquaculture Centre as a demonstration project in order to provide hatchery and outgrowing facilities to be used for production of brood stock and seedlings for commercial farmers. Two species were cultured, Shrimp (Macrobrachium rosenbergii) and fish (Tilapia mossambicus).

In an effort to increase production an aggressive extension programme was pursued to encourage farmers to invest in outgrowing facilities for the culture of these two species. The farmers responded positively and there was an increase in production from these two species. However, while the programme was successful, four main problems were identified that hindered the expansion among local farmers. First, while many farmers expressed strong interest in culturing, there was a serious lack of bulldozing machinery required for pond construction; second the market price for aquaculture fish could not compete with fish from traditional capture fisheries therefore, a niche market was needed to supply these species at a price that makes this venture viable; third, the high cost of feed rendered commercial production unprofitable unless subsidised; and fourth, there was inadequate and insufficient flat land-space to undertake extensive aquaculture production.

However, Grenada still intends to pursue aquaculture as an alternative source of employment for sustainable livelihoods and for food production. As a result, more intensive forms of culture are explored, such as aquaponics and hydroponics.

More recently, the culture of seamoss within the marine environment has been expanding with increase in production. Currently, there are approximately sixty farmers with women accounting for about thirty percent.

2. PRODUCTION

Grenada fishery is predominantly marine multispecies harvested under open access conditions by artisanal and small-scale fishing vessels. The composition of the fishery consists overwhelmingly of oceanic pelagic species, increasing from 50% of total catch in the 1990s to over 80% currently, as shown in the table below. A major factor in the predominance of the oceanic pelagics was the introduction of the surface longline for tuna during the 1980s, which gradually replaced the single handline for this species. Other species harvested are coastal pelagics, demersal and the high valued species of Caribbean spiny lobster and conch.

Fishery Type	Target Species	1990	2000	2013	2019
		%	%	%	%
Oceanic Pelagics	Yellowfin tuna, Billfishes, Dolphin fish, Wahoo, King mackerel, Small tunas	49	76	79	86
Coastal Pelagics	Bigeye scads, Rainbow runner, Round scads,	23	11	5	2
Demersal	Groupers, Hinds, Snappers, Coney, Parrotfish	27	10	14	10
Shellfish	Caribbean spiny lobster, Queen conch	1	3	2	2

Production Trends

Overall, fish production has remained fairly stable for the past twenty years and fluctuates between four and a half million pounds to just over six million pounds annually. As a single species, Yellowfin tuna represents 40% of the total annual average catch during this period.

Annual imports of fish from 2013 and 2021 ranges between one million and two million pounds. However, the majority of imports consist of products that are salted/dried, smoked, canned or in brine. The consumption of fresh fish continues to increase with a per capita consumption of 26 kg in 2005 to approximately 38kgs currently.

Export of fish ranges between one and two million pounds during this period, with Yellowfin tuna comprising approximately 75%.

3. INDUSTRY OPERATIONS

Fish Landing Sites

There are approximately forty-seven (47) fish landing sites around the islands. Nine (9) are primary landing sites with fish market and port facilities (Melville Street, Gouyave, Victoria, Waltham, Duquesne, Sauteurs, Grenville, and Hillsborough and Windward in Carriacou); thirty-seven (37) are secondary landing sites (beaches/bays without infrastructure) and one (1) tertiary landing site at Grand Mal where two of the four fish processing plants are located.

The nine Primary landing sites (owned and managed by Government through the Fisheries division) are strategically located so as to provide a variety of functions to fishers, consumers and other operators along the value chain such as – fish marketing, storage, ice making, berthing of vessels and also act as a focal point to facilitate fisheries management in gathering fisheries data and conducting surveys.

The main landing sites categorised by percentage of landing are Gouyave (22%), Grand Mal (20%) Grenville (20%), Melville Street (10%), Carriacou and Petite Martinique (10%), Waltham (7%), other secondary sites (7%), Victoria (2%), Duquesne 1%) and Sauteurs (1%).

Fishing Fleet

The total number of vessels increased from 600 in 2003 to 990 currently. While the number of vessels has increased over the years, there were significant advancement in the size of vessels using surface longline, targeting the oceanic pelagics, mainly Yellowfin tuna.

There are two hundred and fifty (250) multi-day vessels between 32 and 65 feet, engaged in the tuna longlining for which the fishing trip lasts between three and fourteen days. There are two hundred and fifty (250) day boats between 16 to 32 feet, using surface longline mainly targeting the oceanic pelagics and handline for demersal species to a lesser extent. Another one hundred and fifty (150) day boats between 18 and 28 feet, engaged in trolling for coastal and oceanic pelagics. One hundred and forty (140) day boats, ranging from 16 to 22 feet using handline and bottom longline for demersal species. There are one hundred (100) open boats between 16 and 28 feet, targeting lobster and conch. There are sixty (60) double-ender boats using Beach seine nets, targeting the inshore pelagics. Another forty (40) boats engaged in subsistence fishing.

Number of and Capacity of Vessels

Size Category	Number	Fish storage capacity per vessel
Up to 16 ft	200	0.25
Over 16 ft to 22 ft	300	0.5
Over 22 ft to 28 ft	200	1
Over 28 ft to 32 ft	100	3
Over 32 ft to 45 ft	100	5
Over 45 ft to 55 ft	80	8
Over 55 ft to 65 ft	10	10
Total	**990**	

Employment in the sector

Category	Full-time	Part-time	Total
Fishers	3,960	400	4,360
Private Vendors	60	25	85
Fish Processing / Exporting Establishments	60	20	80
Total	**4,080**	**445**	**4,525**

Marketing of fish is solely a private undertaking, and self-employed fish vendors operate within the onshore facilities provided by the government. Additionally, there are four fish processing / exporting establishments operated by companies and fisherman's co-operatives, primarily engaged in marketing of fresh fish for export.

There are nine fisher cooperatives / associations. Some are engaged in fish marketing mainly for export, sale of fuel and fishing gears and equipment while others are mainly involved in representation for their membership.

Name of Company	Fish Exporting	Suppliers of Gears / Equipment	Primary Processing	Sale of fuel	Suppliers of Ice	Engine Supplier	Representation
Spice Isle Fish House Ltd.	√	√		√	√		
Southern Fishermen Association Inc.	√			√	√		√
Grenada National Traceability Technology Ltd. (GNExTT)	√		√				
Caribbean Seafoods Ltd	√		√		√		
Vinyard Ltd	√		√				
Marine World		√					
Island Water World		√					
Budget Marine		√					
McIntyre Bros. Ltd.						√	
Anro Agencies						√	
The Bullet Fishing Tackle		√					
Soubise Fishermen's Cooperative				√			√
Petite Martinique Fishermen's Cooperative					√		√
Gouyave Fishermen's Cooperative				√			√
Calliste Fisherman's Cooperative							√
Grand Anse Fisherman's Cooperative							√
Carriacou Fisherfolk Association							√
Sauteurs Fisherman's Cooperative							√
Victoria Fisherman's Cooperative							√

MANAGEMENT MEASURES

General strategic objectives for fisheries management and development are as follows:

- Sustain and increase yields from fisheries resources for the purpose of satisfying and enhancing food and nutrition security and in general contributing to the social and economic development of the Grenada community.
- Promote export led growth with expansion of the oceanic pelagic fishery for Yellowfin tuna.
- Provide for recognition of the fishing industry as a key factor of production within an integrated national economy.
- Highlight Traditional Fisheries-based Knowledge as a contributor to both fishing community and national development.
- Apply the concept of maximum sustainable yield in the management of specific stocks and habitat and use it as reference points in conservation and management programmes.

- Highlight and promote the approach of gear selectivity as a point of reference for managing the application of appropriate technology in targeting species and stocks within the fisheries.
- Incorporate measures of Disaster Rister Management, Adaptation and Resilience to climate change/variability into fisheries management and development.
- Ensure that fisheries waters, fish stocks, habitat and sea space are protected from misuse by either local or foreign fishers.
- Ensure that various fisheries sector services providers are controlled and facilitated for the socio-economic development of the Grenada community as a whole.
- Ensure that all fish trade and all fish production utilisation activities are consistent with United Nations Food and Agriculture Organization Code of Conduct for responsible fisheries and other international agreements and instruments.
- Promote the Eco-systems Approach to management of stocks and habitat in the fishery waters of Grenada.
- Apply the Co-management Approach to all fisheries management and development programmes.
- Establish and maintain a data and information system so as to facilitate management and development within the sector.
- Promote an integrated, appropriately- scaled and cost-effective physical fisheries infrastructure and also provide for human resource development within the sector.
- Ensure the security of the fishing fleet by facilitating safety at sea, ship to shore communications support and with demarcation of marine boundaries defining the fishing zone.
- Improve fishers' welfare by promoting access to social protection within the industry.
- Establish and maintain human resource capabilities for conducting or facilitating needs-research with respect to fisheries management and development.
- Cooperate with other nation states in the management of shared, straddling and highly migratory fish stocks.

Management objectives, strategies and institutional arrangements for Major fisheries

Oceanic pelagic fishery

Objective – this fishery uses selective gear and therefore the policy would be to initiate and make use of existing options for expansion of effort to increase production, thereby contributing to enhancing economic returns from the industry.

Strategies - promote and create avenues for increased access to investment from the commercial financial sector; apply appropriate technology by encouraging investment in larger longlining vessels up to 60 feet, that are more efficient for targeting the oceanic pelagics.

Institutional arrangements – support regional approach at management of this stock which is shared, straddling and highly migratory; promote and engage in regional/sub-regional mechanisms for decision-making and action, and commit to follow management guidelines provided through regional stock assessments generated by agencies such as ICCAT, UN FAO and the Caribbean Regional Fisheries Mechanism (CRFM); a licensing and registration system is in effect for the purpose of providing for fishing effort controls among other arrangements; management approach is to ensure the sustainability of this resource at the regional and international level.

Demersal fin-fish fishery

Objective – reduce effort on the stock especially the shallow coral reef fishery which is believed to be harvested close to maximum sustainable yield thereby relieving fishing pressure to provide for sustainable utilisation of this fishery.

Strategies – during the early 1980s surface longlining for oceanic pelagic was introduced to fishers engaged in the demersal fin-fish fishery as an alternative which proved to be very successful. It is also believed that opportunities exist for expanding effort to deep slope fisheries and other areas not currently targeted extensively but which will be pursued in a sustainable manner.

Institutional arrangements – as the stock is widely distributed at the sub-regional level the need for shared management between Grenada and neighbouring states of St. Vincent and the Grenadines is essential and is therefore being addressed; controls on the use of nets such as the trammel net have been prohibited, while promoting the use of more selective gears; licensing and registration within this fishery provides for further controls of effort; the co-management approach is currently been explored as part of the Integrated Coastal Zone Management strategy; and the application of closed areas example, establishment of Marine Protected Areas are used in an overall strategy for sustaining this most vulnerable stock and maintaining marine biodiversity.

The coastal pelagic fishery

Objective – maintenance of traditional beach seine fishing sites (hauls) as fishing priority areas for the fishery; facilitate the provision of low-cost protein to coastal and rural communities, and the supply of bait to the off-shore fleet by ensuring the fishery is harvested on a sustainable basis.

Strategies – designate the traditional beach seine fishing sites as fishing priority areas; community control is promoted because of the nature of the fishery being gear and area specific; and a regulatory approach will be adopted for managing multiuse conflict in the beach seine fishing zone(s).

Institutional arrangements – licensing of nets applies, with restrictions on net mesh sizes;

The shellfish fishery

Objective – promote the sustainable harvest for local (tourism market) use and where possible for export in order to obtain long-term economic benefits.

Strategies – the use of artificial habitat and nursery sites are being explored to increase yields.

Institutional arrangements – existing regulations such as biological restriction on size, moulting and reproductive animals, gear and mesh size limitation are being enforced; a four-month closed season from 01st May to 31st August annually is applied to the fishery for Spiny lobster, and a five-month closed season from 01st April to 31st August annually each year, is applied for marine turtle and sea urchin; the existence of Marine Protected Areas provide additional protection for breeding/spawning and feeding stocks.

Aquaculture

Objective – promote the development of aquaculture (for seamoss production and other aqua products) as a means of providing a direct and alternative source of income to communities, especially that encourages the participation of women.

Strategies – provide support to establish production sites and facilities and assist in exploring suitable market opportunities externally.

Institutional arrangements – develop the requisite policy, legislative, regulatory and governance frameworks that increase production, product development and ensure environmental sustainability along the value chain.

INSTITUTIONAL AND LEGAL FRAMEWORK

Institutional

Fisheries Governance is entrusted to the Fisheries Division (Fisheries Management Unit) as lead agency which is responsible for management and development within the sector. The Division is staffed by a Chief Fisheries Officer as Head, other Fisheries Officers and support staff. Administratively, it is located within the Ministry of Agriculture & Lands, Fisheries and Co-operatives, and authority for execution of management and development functions is derived from the parent legislation enacted originally in 1986.

In order to fulfil its mandate, the Division carries out the following functions: Extension Services, Fishing Technology, Data Management, Marine Protected Areas Management, Resource Assessment and Management, among others. Government facilitates management and development of the sector by maintaining onshore support infrastructure facilities for marketing

of fish, such as, cold storage, ice making, marine safety communication and provision of general service to fishing communities.

The Fisheries Division also maintains close collaboration with Coast Guard, Customs, Ports Authority and other relevant agencies for enforcement of law and regulations, while fishermen's organisations are engaged in ongoing consultations on fisheries management issues.
Governance agencies and their roles include:

- Grenada Coast Guard – surveillance, search and rescue, enforcement of regulations.
- Royal Grenada Police Force – enforcement of regulations.
- Customs Department – enforcement of regulations, processing of concessions and fuel rebate.
- Physical Planning Unit/Land Development Control Authority – regulation of development within the coastal zone.
- Ministry of Tourism and the Tourism Authority – support in developing marine-based and coastal ecotourism initiatives and conservation measures.
- Ministry of Health – administration of the Fish and Fishery Product Regulations to regulate Sanitary and Phytosanitary measures and improve quality assurance.
- Ministry of Foreign Affairs – external relations with respect to matters of management and development.
- Grenada Ports Authority – marine development
- Bureau of Standards – testing, SPS measures and quality assurance.
- Produce Chemist Laboratory – testing, SPS measures and quality assurance.
- Sustainable Development Trust Fund – support for sustainable development towards conservation of the biodiversity and natural ecosystems of the coastal, marine and terrestrial environment.

Legal Framework

One of the most important international agreements influencing fisheries management is the United Nations Convention on the Law of the Sea (UNCLOS) of 1982 (and its protocols). The UNCLOS process generated two pieces of legislation in 1988: the Territorial Waters Act, and the Marine Boundaries Act, later consolidated and updated into the Grenada Territorial Sea and Marine boundaries Act #25 of 1989. Earlier in 1986, the parent legislation, the Grenada Fisheries Act #15 was promulgated and in 1987, the Fisheries Regulations SRO #9, 1987 was gazetted, which became part of the Organization of Eastern Caribbean States (OECS) Harmonized Laws.

Generally, the Fisheries Act and Regulations provide for the following:

- Formulation and review of fisheries development and management plans;
- A co-management facility through a Fishery Advisory Committee;
- Regional cooperation in fisheries and fisheries access agreement;
- Local and foreign fishing operations;
- Illegal fishing activities;
- Control of fish processing and marketing operations;
- Local management area and management measures;
- Fisheries research and control of gear and methods for fishing;
- Grants rule making powers to the Minister responsible for Fisheries.

Other fisheries legislation include:

- Fisheries (Fishing vessels Safety) Regulations SRO #3, 1990;
- Fisheries (Amendment) Regulations SRO #24 1996;
- Fisheries (Amendment) Act #1, 1999;
- Fish and Fishery Products Regulations SRO #17, 1999;
- Fisheries (Amendment) Regulations SRO #2, 2001;
- Fisheries (Marine Protected Areas) Regulations SRO #78, 2001;
- Fisheries (Levera Beach Closed Area) Regulations, SRO #15 of 2010 amended by SRO #8 of 2011.

National Legislation Related to Fisheries:

- CARICOM Common External Tariff Order SRO #18, 1995 Archipelagic base lines ordinance.
- Grenada Ports Authority Act (Cap. 247).
- Fish and Fishery Products Regulations SRO #17, 1999 (Administered by Ministry of Health).
- Merchant Shipping Act (1994).
- Waste Management Act #16, 2001

National & Sector Policies / Plans

- National Sustainable Development Plan: 2020 – 2035
- National Medium-Term Action Plan:2023 – 2025
- A Fisheries & Aquaculture Policy for Grenada, 2012

Research, Education and Training

Participated and executed several regional projects as follows:

- Caribbean Fisheries Co-management Project (CARIFICO)
- Regional Strategy on Monitoring, Control and Surveillance to Combat Illegal, Unreported and Unregulated Fishing in the CARICOM / CARIFORUM Region (2014)
- Climate Change Adaptation in the Eastern Caribbean Fisheries Sector – CC4FISH
- Sub-Regional Fisheries Management Plan for Flyingfish in the Eastern Caribbean and its accompanying Resolution (2014)
    - Implemented trial programme for the use of logbooks on longliners, to include data collection on flyingfish
- Regional Strategy for the Control of the Invasive Lionfish (2014)
    - The Grenada Lionfish Management Program (GLMP) is currently being implemented. It focuses on operationalising the Grenada Lionfish Action Plan (2015), which was developed in collaboration with the Grenada Lionfish Task Force. The primary goal of the GLMP is to reduce the impact of the lionfish on the marine environment in Grenada by controlling the lionfish population. The GLMP aims to achieve this goal through public education and the stimulation of a local consumptive market for lionfish.

- St. George's Declaration on Conservation, Management and Sustainable Use of the Caribbean Spiny Lobster (*Panulirus argus*) (2015);
    - Conducted several consultations with fishing communities on implementation of the Declaration.
- National consultations on the proposed 2015 Draft Sub-Regional Management Plan for FAD Fisheries in the Eastern Caribbean
- National consultations on the proposed CRFM Sub-Regional Fisheries Management Plan for Blackfin Tuna Fisheries in the Eastern Caribbean.

Implemented several projects to strengthen the development, management and operation of Marine Protected Areas as follows:

- Improving the Outlook for Caribbean Coral Reefs: A Regional Plan of Action 2014 – 2019 (2014) - Building Capacity for Coastal Ecosystem-Based Adaptation in SIDS - development of coral nursery.

- GEF Ridge-to-Reef - overall objective is to provide multiple global and local benefits by strengthening land, forest and reef management processes (eco-systems functions) and biodiversity conservation on all terrestrial landscapes and marine and seascapes in Grenada, especially within and around marine and terrestrial protected areas; project period: Feb 2014 - Jan 2019.
- Sustainable Financing and Management of Eastern Caribbean Marine Ecosystem – Objective: To contribute to enhancing the long-term sustainability of Protected Area networks in the Eastern Caribbean Sub-region by (i) establishing sustainable financing mechanisms; (ii) strengthening of the Marine Protected Area networks; and (iii) deploying a regional monitoring and information system for the Protected Area networks; Period: 2012-2016;
- Climate-Resilient Eastern Caribbean Marine Managed Areas Network (ECMMAN) – Objective – The project aims to establish an **Eastern Caribbean Marine Management Areas Network (ECMMAN) that more than doubles the area of effectively managed marine managed areas (MMAs) that provide for improved livelihood opportunities.** With actions in 6 countries the project will focus on:
    - **Establishing new and strengthening existing marine managed areas (MMAs)** that contribute to the implementation of the Caribbean Challenge Initiative (CCI) commitment to effectively conserve and manage at least 20% of the near-shore marine and coastal environment by 2020.
    - **Building strong constituencies for sustainable livelihoods and ocean use, including MMA co-management that includes conservation at its core** in all six countries.
    - **Improving and updating an Eastern Caribbean Decision Support System** that provides accessible decision-making tools.
    - **Instituting Sustainability mechanisms** to support the MMA network, including regional political commitments and actions, regional collaboration mechanisms, and follow-on funding.
        - Period: 2013-2016;

- Caribbean Aqua-Terrestrial Solutions (CATS) Programme - The Overall Objective of the CRMCMB Programme is 'To improve the management of existing Marine Protected Areas in selected CARICOM member states.
    - **The emphasis on Component 2 are as follows:**
        - Protection, management and rehabilitation of coastal ecosystems, and biodiversity conservation in marine protected areas;
        - Linking land-based waste / water management systems to marine conservation;
        - Capacity development and training for public and private stakeholders;
        - Up-scaling of experience and lessons learnt from other initiatives, and piloting innovative approaches;
        - Public/private sector partnerships; and
        - Gender mainstreaming and gender balanced development.
            - Project period: 2013-2017;
- Reef restoration using coral garden and bio-rock technology.

Undertook several training programs to develop skills, knowledge and competence of fishers as follows:

- Captaincy – 750 fishers trained under the following modules:
    - Rules of the Road
    - Coastal Navigation
    - Seamanship & Boat handling
    - Safety at Sea
    - Search & Rescue
    - Use of GPS
    - VHF Radio Operating procedures
    - Fisheries Laws & Regulations
    - Fisheries Conservation Measures
    - First Aid
    - Conflict Resolution
    - Troubleshooting outboard engines
- CARIFICO – 80 fishers trained in fabrication, deployment and fishing around FADs.
- Under ACP Fish II, 40 fishers trained in business planning and financial management skills to optimise returns on their fishing operation.
- SPS measures and quality assurance.
- Post-harvest technology.
- Primary processing

Capacity building initiatives for staff of the Division include:

- Data management
- Climate Resilience and Disaster Risk Management
- Refrigeration maintenance and repairs.
- Stock assessment.
- Extension methodology.
- MPA development, management and enforcement.

- Leadership
- Information and Communication Technology.
- Programme monitoring.
- Project Cycle Management and Cost Benefit Analysis.
- Policy Formulation and Analysis.
- SPS Measures and Quality Assurance.
- Fisheries Development and Management.
- Management of Fishing Ports and Facilities.

Key development trends over the last 20 years

- Established a co-management arrangement for the development of the FAD fishery at Grenville, St. Andrew.
- Legally declared four MPAs and established a multisectoral advisory committee for each to provide advice on matters of governance.
- Setup a national trust fund governed by a multistakeholder Board (government, churches, labour, financial sector, NGO grouping) to govern the affairs of the Fund.
- Established a ship-to-shore marine communication network which has a coverage of 70 miles island-wide to provide for the safety of the fishing fleet, especially the vessels targeting the oceanic pelagic species.
- The widespread use of GPS (fixed mount and handheld) among the fishing fleet.
- Attained List 1 status from the European Union which provided unimpeded access to multiple export markets for fresh fish and fishery products.
- Established a national multi-stakeholder committee (comprising government ministries and agencies, civil society, academia, yachting, scuba diving and NGO) to provide oversight and advice to the management authority.
- Improved fish storage capacity and quality assurance measures.

Projections for future advancement of the sector

The fisheries sector within the Grenada economy is one of the fastest growing sectors over the past two decades. Most of this growth has been in the longline fishery for oceanic pelagic, especially Yellowfin tuna. The sector also contributes significantly to food and nutrition security, employment generation, sustainable livelihoods, foreign exchange earnings and the overall social and economic development of the country.

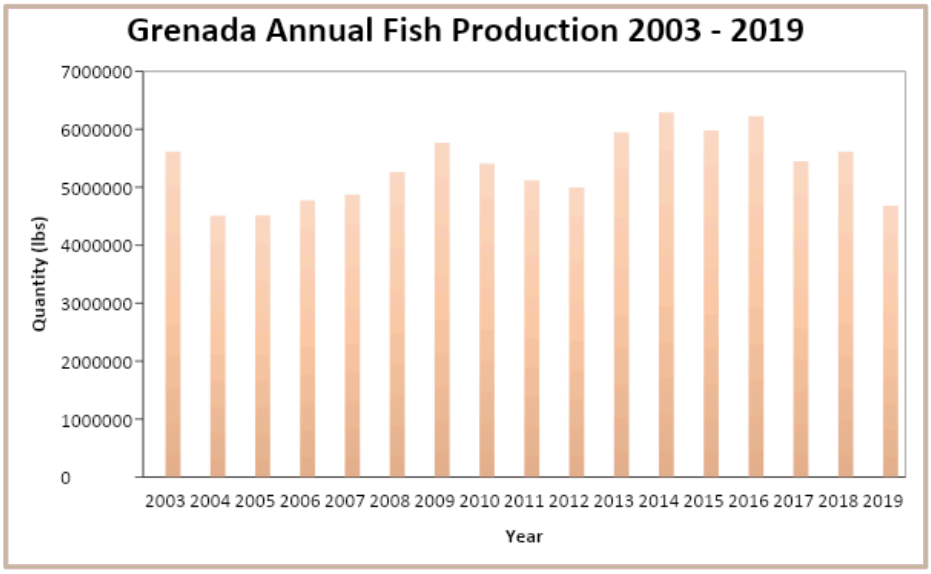
With the advent of extended marine jurisdiction, this holds tremendous opportunities for future development within the Exclusive Economic Zone as well as in areas beyond national jurisdiction for expansion of the pelagic fishery for Yellowfin tuna and other pelagics, using surface longline and development and management of the FAD fishery. There is also favourable demand for Grenada's exportable quality species of tuna and other pelagics

Other areas targeted for development is aquaculture, especially for seamoss which is a versatile product that has multiple uses.

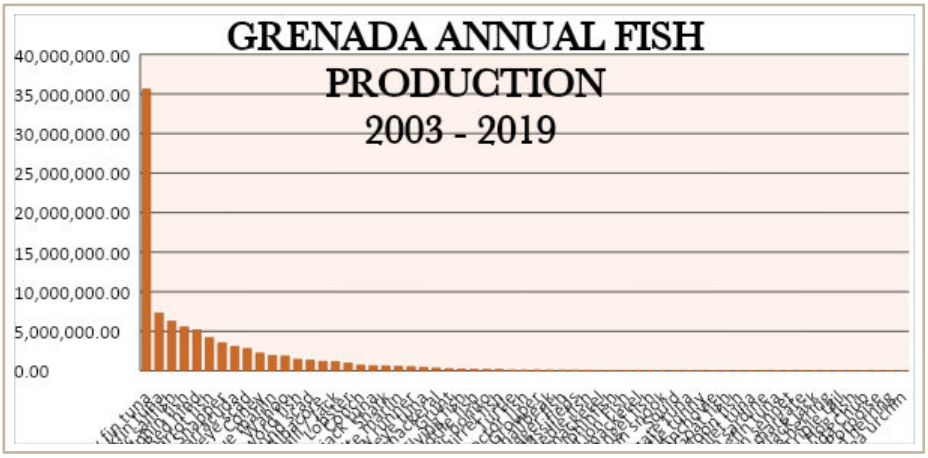
There is a need to explore a homegrown framework on the blue economy for development of the living and nonliving resources.

While these opportunities exist, the sector faces critical challenges and constraints, it is to advance. These include:

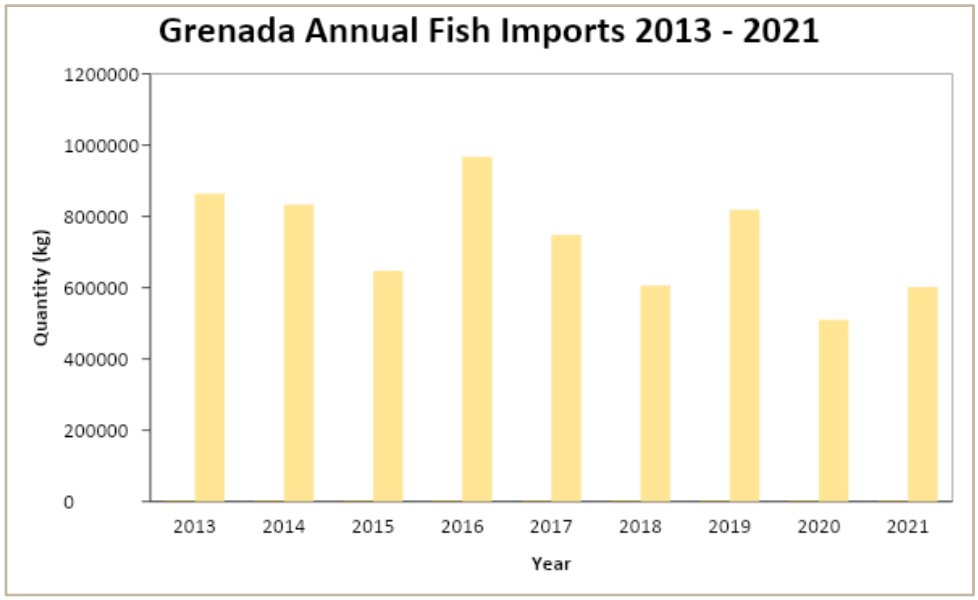
- Rising input costs in fishing operations due to adverse international political and economic conditions.
- Illegal, Unregulated and Unreported (IUU) fishing,
- Climate change and its impact on the marine environment, for example the intrusion of sargassum seaweed that may carry invasive alien species, in addition to other physical and environmental issues.



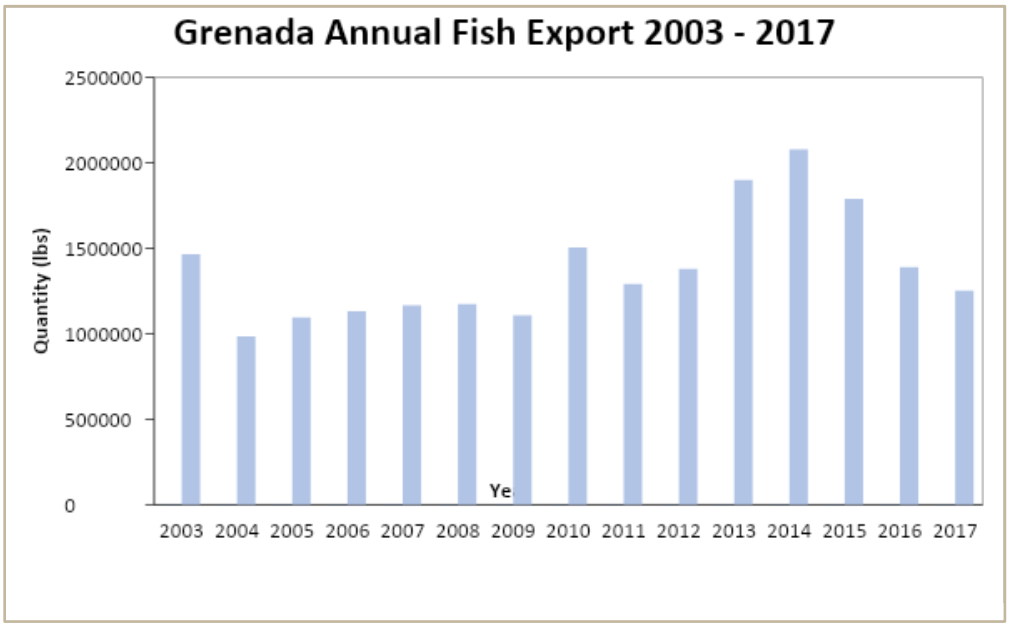
Graph 1. Annual Fish Production 2003-2019



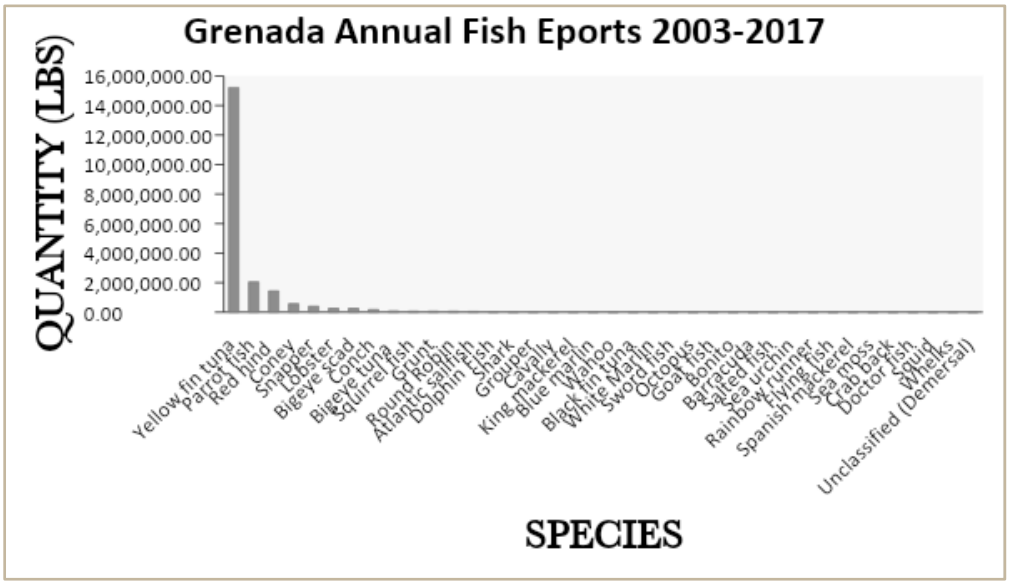
Graph 2. Annual Fish Production by Species



Graph 3. Fish Imports



Graph 4. Annual Fish Exports



Graph 5. Annual Fish Exports by Species