CONTRIBUTION 10.6

National Report on the Status of Fisheries and Aquaculture in DOMINICA

Derrick Theophile and Kurt Hilton

Ministry of Agriculture, Fisheries, Blue and Green Economy,
Dominica Fisheries Division,
Commonwealth of Dominica
derrick.theophille@gmail.com, theophilled@dominica.gov.dm and
hiltonk@dominica.gov.dm, khiltonflo@gmail.com

OVERVIEW

Dominica is an island located in the Eastern Caribbean Sea, nestled between the French Overseas Territories of Guadeloupe, Marie Galante, and Les Saintes to the north and Martinique to the south, in an archipelago known as the Lesser Antilles (Fig. 1) . The country spans an area of 750 km2 and is home to approximately 72,000 people, most of whom reside primarily along the shore or in low-lying areas measuring 14.8 km. Dominica's Exclusive Economic Zone (EEZ) covers an area of 28,653 km^2 (Institute, 2023).

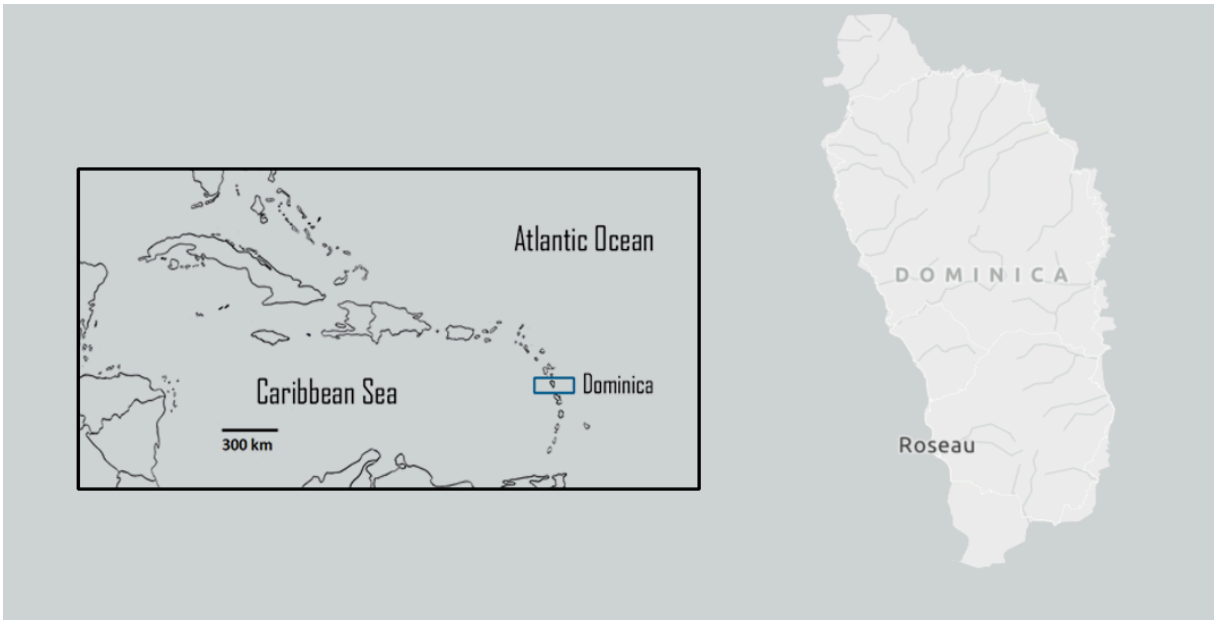

Figure 1. Map of the Commonwealth of Dominica.

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The Fisheries Sector in Dominica is considered small-scale and artisanal, and plays an integral role in food security, despite its relatively low economic output when compared to other economic activities in the country (e.g tourism). The sector consists of individual fishers who use open and fishing vessels for short trips lasting only a few hours each day. Fish landings are generally consumed locally, with the Fisheries Division exploring ways to increase landings which would feed into an export market (Dominica Fisheries Division, 2011).

The sector is primarily made up of fishers, boat and gear builders, vendors and outboard engine mechanics. Most fishers operate part-time, supplementing their income with agriculture or as construction labourers operating on an average of 3.9 days per week and are most active from April to June (Dominica Fisheries Division, 2011).

Fishers are known to operate between 5 to 30 miles. Fishers operating within a 5-mile distance target small coastal pelagics such as ballyhoo (Hemiramphidae), jacks (Carangidae), or mackerels (Scombridae). Fish pots or traps are used for demersals such as snappers (Lutjanidae) or groupers (Serranidae) (Guiste, FAO, 2023).

Fishers targeting offshore pelagic fish operate up to 30 miles using fibre-reinforced plastic (FRP) pirogues or keel boats. These multi-purpose vessels are usually under 25 ft in length, open and undecked, and powered by outboard engines ranging from 40 to 150 horsepower. Small coastal pelagics, large migratory (ocean) pelagics, and demersals are caught from these boats at varying distances and depths, using an assortment of fishing gear and methods such as fish pots, hook and line, and nets (Theophile, 2016).

The most commercially important large pelagic fish are dolphinfish (*Coryphaena hippurus*), yellowfin tuna (*Thunnus albacares*), and blue marlin (*Makaira nigricans*). Hook and line gear/methods are the most commonly used on fishing vessels, for these species, sometimes in conjunction with Fish Aggregating Devices (FADs) (Dominica Fisheries Division, 2011).

In 2011, there were approximately 434 fishing vessels, of which 20% were canoes, 52% keels, and 28% FRP. Prior to 1994, fish production was approximately 1000 tonnes per year. Although production declined thereafter, it began to rebound in2022.

Productivity was disrupted by extreme weather events such as Tropical Storm Erika and Hurricane Maria, with the latter effectively destroying or damaging more than 70% of the fishing fleet (Defoe, 2020).

Landing sites

The Fisheries Division collects catch and effort data from 14 of 31 landing sites designated by law. Major landing sites such as Portsmouth, Roseau and Marigot have fisheries complexes offering mooring, ice, net lofts, repair sheds and locker rooms (Dominica Fisheries Division, 2019). (Fig.2)

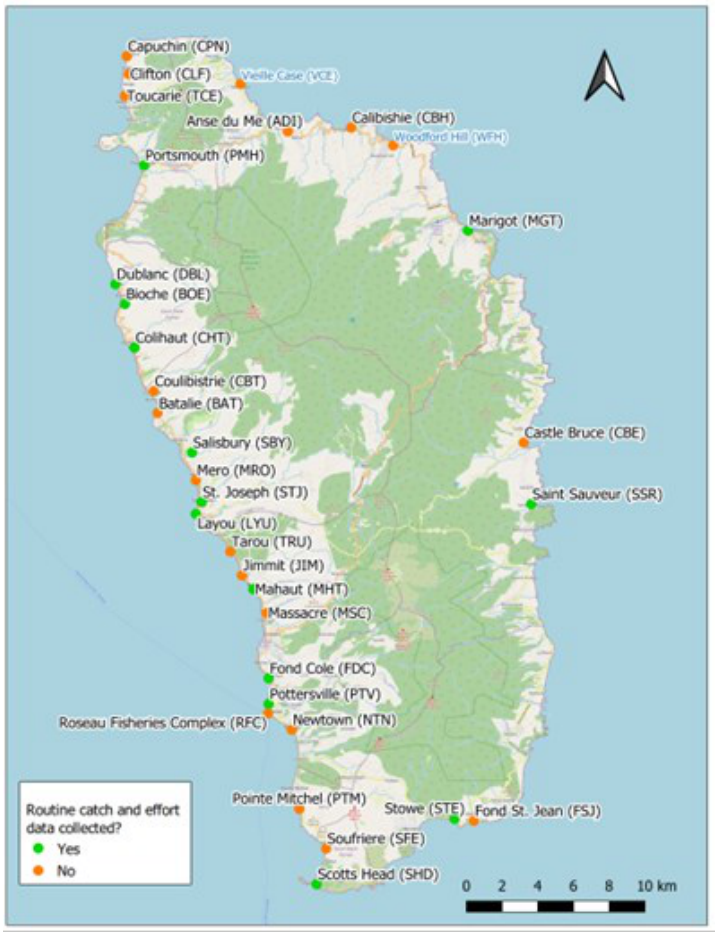

Figure 2. Map showing landing sites in Dominica. Green dots indicate areas of routine data collection.

Fisheries Management and Regulations

The Fisheries Division operates under the Fisheries Act No. 11 of 1987 of the Laws of Dominica and subsequent Statutory Rules and Orders (SROs). The Act outlines the formulation and functions of the Division. An updated Fisheries Regulations, SRO of 2023 has been drafted and brought before Cabinet, and seeks to address matters arising since 1987, including expansions to the Fisheries Advisory Committee, safety-at-sea considerations to mitigate loss of life at sea, local and foreign vessel registries, water sports and marine fishery conservation measures.

The Fisheries Division offers the following services to fisherfolks and the general public:

1. **Registrations, licensing, and inspections**: Registration and licensing apply to fishers, fishing vessels, and water sports operators. Specific mandates and procedures are outlined in the Fisheries Act, subsequent SROs, and departmental policy. Registration certificates and licences are issued to successful applicants.

   Licence cards are issued to successful fishers. Inspections are performed for fishing vessels and water sports operations, and a certificate is issued if successful. If a vessel is sold to another owner, a transfer of ownership certificate is prepared to document the change. Fishery commodities imported or exported are inspected at the port of entry or departure. Registration and licensing of fishing vessels is a management measure determining national fishing capacity, which is a measure of the impact on national fishery resources, enumerating vessels present in the sector, their whereabouts (port of operation), regular crew, and ownership.

2. **Fisherfolk training**: Training sessions include marine outboard engine repair and maintenance, fishing gear and technology, alternative and sustainable fishing practices, safety-at-sea, food handling and quality assurance, product processing and development for added value, record-keeping, among others.

   The Basic Fisherman Training Course (BFTC) is the flagship training program of the FD for fisherfolk and has since been adopted by regional FDs. It incorporates the training sessions mentioned above. In 2023, the 50th training session was conducted. The primary objectives of this training were to introduce new fishers to the role and function of the Fisheries Division and its legal mandate, familiarise fisherfolks with new and emerging technologies within the fisheries sector, and develop the necessary competencies and skills in fisheries to enable fishers to optimise the potential of the fisheries sector. During these sessions, presentations are given by key partners of the Division as well as individuals who have an impact on marine activities.

3. **Permits**: Permits are issued to successful applicants for the import or export of fishery commodities and Research permits.

4. **Reports and Statistics**: Several reports and statistics are prepared and disseminated. A major product is the annual report on fisheries statistics, which gives extensive details on the state of the fisheries sector through the regular fish catch and effort field sampling program. Other reports include vessel activity reports which summarise catch and effort statistics for a specified fishing vessel over a defined time series. Some statistics are prepared to fit reporting obligations to international organisations such as the Food and Agriculture Organization (FAO) of the United Nations and the International Convention for the Conservation of Atlantic Tunas (ICCAT).

Key Partners

The FD partners with many organisations locally and abroad. Some of our key partners in recent years are detailed below:

Table 1. Key partners of Fisheries Division in Dominica.

Partnership level	Organisation	Partnership activities
Local	Central Statistical Office (CSO)	Commodity and productivity statistics.
Local	Cooperative Division	Policy, management, training and fisher cooperative support.
Local	Ministry of Agriculture, Fisheries, Blue and Green Economy	Policy, procurement and support.
Local	Division of Agriculture	Policy, management, training, collaboration, support and inspections (imports and exports).
Local	Forestry, Wildlife and Parks	Policy, management, training, collaboration and support.
Local	Environmental Health	Training (food handlers and product quality assurance), inspections (imports and exports).
Local	Physical Planning Division	Policy formulation (blue economy and ocean policies).
Local	Climate Resilience Execution Agency for Dominica (CREAD)	Policy formulation, programme development and support.
International	Global Environmental Facility (GEF) of UNDP	Programme support and execution.
International	United Nations Development Programme (UNDP)	Training, support. Focus on product development and fisher cooperative support.
Regional	Organisation of Eastern Caribbean States (OECS)	Policy, management, training, procurement and support. Focus on ocean policy.
Regional	Caribbean Aqua-terrestrial Solutions (CATS)	Policy, management, training, procurement and support. Focus on Marine Protected Areas (MPAs).
Regional	Caribbean Regional Fisheries Mechanism (CRFM)	Policy, management, training, procurement and support.
Regional, International	Food and Agriculture Organisation (FAO) of the United Nations and the Western Central Atlantic Fisheries Commission (WECAFC)	Policy, management, training, procurement and support.
International	International Commission for the Conservation of Atlantic Tunas and Tuna-Like Species (ICCAT)	Policy and management.
International	Japan International Cooperation Agency	Policy, management, training, procurement, development and support.
International	University of Florida (UF)	Policy, management, training, procurement, research and support. Focus on Fish Aggregating Devices (FADs).
International	Centre for Fisheries and Aquaculture Science (Cefas)	Policy, management, training, procurement, research and support. Focus on research of fishery resources and activities.
International	University of Waterloo	Policy, management, training, procurement, research and support. Focus on research of fishery resources and activities.
International	National Oceanography Centre (NOC) / University of Southampton and Hydrographic Office of the United Kingdom	Policy, management, training, procurement, research and support. Focus on research and mapping marine habitat and resources.
International	World Bank	Policy, management, training, procurement and support. Focus on rehabilitation of the sector post hurricane Maria.

AQUACULTURE

The Aquaculture sector has seen a major revamp after the rehabilitation of the Belfast prawn farm hatchery under the Climate Change Adaptation in the Eastern Caribbean Fisheries Sector project (CC4FISH). After destruction by Hurricane Maria and Tropical Storm Erika production levels in aquaculture dropped to zero. However, this rehabilitation has assisted in the hatching of over three hundred thirty thousand (330,000) post larvae between 2021- 2023 serving ten farmers across the island.

Further support was provided under the Mexican government and the Food and Agriculture Organization (FAO) project (AMEXCID). This project was implemented with the aim to increase the contribution of aquaculture to food security, nutrition, and livelihoods.

Under this project, the following were achieved:

1. Expansion of the state-owned hatchery to include strengthening of existing ponds and covering.
2. Procurement and supply of inputs to aquaculture farmers (aquaculture feed, coolers, nets).
3. Excavation of ponds and inputs to farmers such as pond liners.

Outside of external support to aquaculture farmers, technical support is provided to farmers through the Fisheries Division´s Aquaculture unit.

MARICULTURE

In collaboration with The Food and Agriculture Organization (FAO) and the Ministry of Agriculture, an initiative was undertaken to enhance the seamoss value chain in Dominica. This was part of the project "Sustainable Development of Resilient Value Chains - Implementation of CARICOM COVID-19 Agri-Food Recovery Plan."

The project's goal was to augment institutional knowledge, technical proficiency, and experience at the national level to effectively spearhead and execute risk-responsive food systems approaches. It succeeded in bolstering the technical, tacit, and process capability of government institutions to implement and guide the value chain development (VCD) of seamoss. A key aspect of this approach was enhancing the capacity of public sector agencies to evaluate value chain potential, devise and implement tailored upgrading strategies, engage effectively with private sector actors (farmers, processors, exporters), and align agendas behind a common market-oriented vision of strengthening key agricultural value chains.

The primary challenge in the seamoss value chain was the lack of a fast-growing seamoss species to satisfy local agro-processors' demand. To address this, the project introduced the Eucheuma Cottonii species from St. Lucia, known for its rapid growth, with the aim of meeting local demand. This new species of seamoss was introduced to three pilot groups (Calibishie, Woodfordhill, and Grandbay), where they received technical training and inputs for seamoss cultivation.

RESEARCH EDUCATION AND TRAINING

Over the past year the Fisheries Division has focused on developing and increasing the capacity of staff members.

1. One officer was trained at the graduate-level six-month training programme in Iceland, specialising in Aquatic Resource Assessment and Monitoring. More recently, two officers participated at the regional data training workshop, focussed on using the R statistical software for stock assessment.
2. Training sessions have been conducted internally with staff members to increase statistical skills using R.
3. Officers have received training in Aquaculture, Food processing and handling, Marine Spatial Planning and Blue Economic Development.

KEY DEVELOPMENT TRENDS

In recent years, the fisheries division has undergone several key developments. One of the most significant is the enactment of the Fisheries Regulations of 2023, which establishes a legal framework for managing and conserving fishery resources. Another important advancement is the implementation of a digital catch landing logbook using KoboToolbox, which enables more efficient and precise data collection. Furthermore, the Roseau and Marigot Fisheries Complexes have been rehabilitated, providing enhanced infrastructure and facilities for fishers and other industry stakeholders. Other developments include ocean acidification monitoring, diamondback squid exploratory fishing, and climate vulnerability studies of Dominica. These initiatives demonstrate a dedication to sustainable fisheries management and the ongoing expansion of the sector.

FUTURE ADVANCEMENTS

The future of marine conservation and fisheries management is looking bright with several advancements on the horizon. These include the implementation of vessel monitoring systems, the establishment of a whale reserve, and an increase in aquaculture and mariculture activities. Additionally, there will be a focus on increasing the export of marine products and digitising all fisheries forms, including vessel registration, fisher registration, and research applications. Marine ecosystems studies will also be conducted to further our understanding of these complex environments. These advancements will help to ensure the sustainability of our marine resources for generations to come.

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