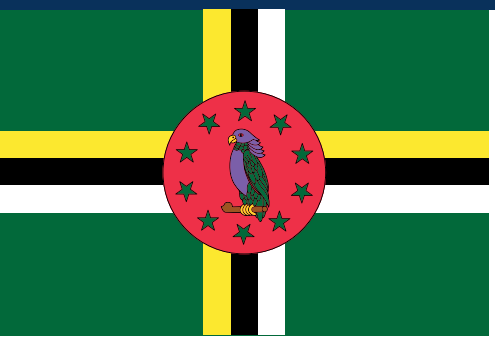
Commonwealth Marine Economies Programme

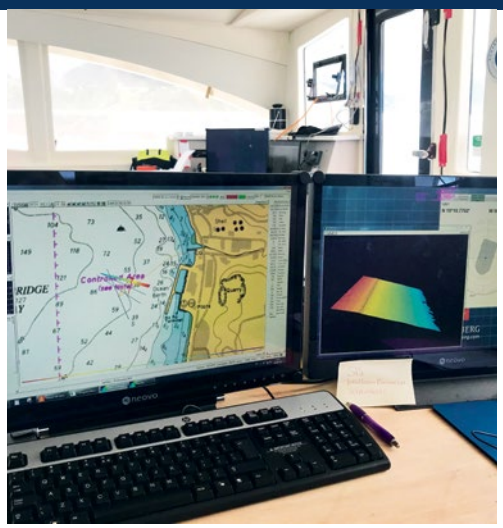
Funded by
UK Government

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

Dominica
Country review

PROUD TO SUPPORT
COMMONWEALTH
HEADS OF GOVERNMENT MEETING
LONDON 2018



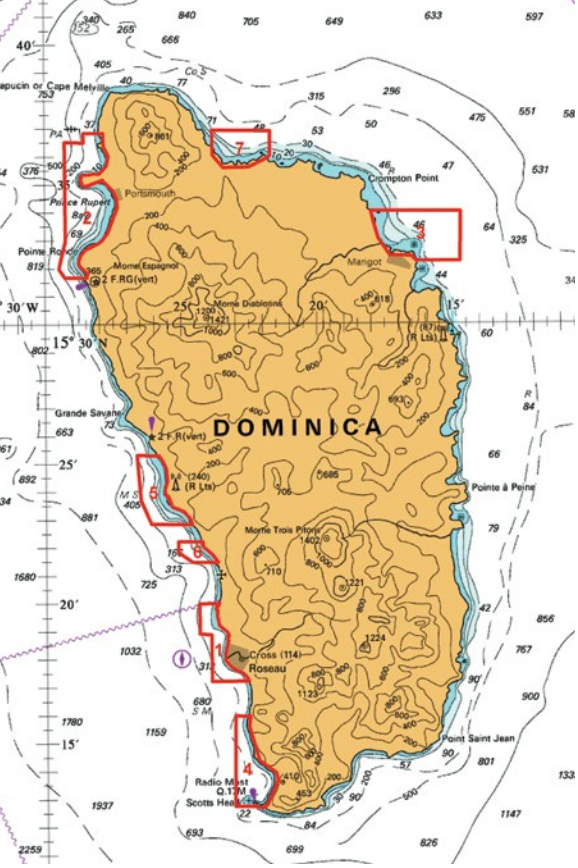


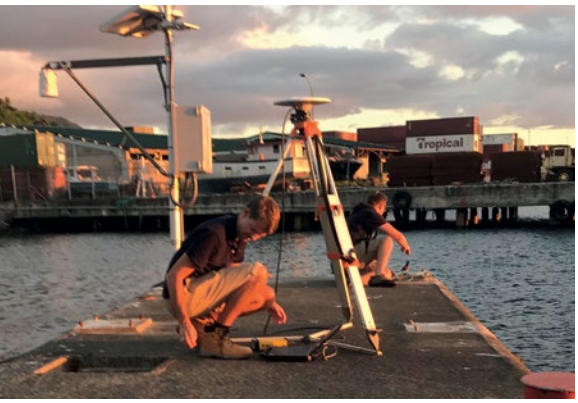
Centre for Environment Fisheries & Aquaculture Science

UK Hydrographic Office

National Oceanography Centre
NATURAL ENVIRONMENT RESEARCH COUNCIL

Foreign & Commonwealth Office





The CME Programme is designed to support sustainable, growing marine economies that create jobs, drive national economic growth, reduce poverty, ensure food security and build resilience against forces of nature. Funded by the UK Government and delivered by a partnership of world-leading marine organisations from the UK, the programme aims to ensure marine resources in Commonwealth SIDS are better understood and managed.

This review highlights opportunities where the UK can apply and leverage its world-leading expertise to make significant, cost-effective and lasting positive impacts on each country.

Relevant strategic plans

International – Dominica is subject to international requirements and obligations as listed under the UN Convention on the Law of the Sea; Safety of Life at Sea; Conservation of Biological Diversity (Aichi Targets); the SIDS Accelerated Modalities of Action (SAMOA) Pathway; and the 2030 Agenda for Sustainable Development (including Sustainable Development Goals.

Regional – Relevant regional mechanisms and bodies within the Caribbean include the Caribbean Regional Fisheries Mechanism; the Caribbean Community Common Fisheries Policy; the Caribbean Large Marine Ecosystem Programme; the Caribbean Regional Oceanscape Project and the Eastern Caribbean Regional Ocean Policy. Dominica has also engaged with other regional projects such as the Pilot Project on Climate Change resilience; initiative that will see a full topographic lidar survey conducted.

National – National strategies for enabling the safe and sustainable development of Dominica marine environments include the National Sector Policy for Sea and River Defence and the National Biodiversity Strategy and Action Plan (2014-2020).

Challenges faced

Management of coastal and marine environments – The lack of up-to-date, modern data has a number of impacts on the successful management of Dominica's marine estate. Dominica has an urgent need for modern data and modernised charts that will support the safety of navigation and sustainable decision making for infrastructure to support economic development and environmental management.

Safety and security – None of Dominica's seabed has been surveyed to modern standards. This is having a direct impact on the wider marine economy by reducing the efficiency of imports and exports and increasing the risk of a maritime accident. It is also restricting tourist access by cruise ship. To enable and encourage safe navigation for ships in Dominica's waters, official navigational charts for Dominica need to be updated.

Hydrographic coordination and data collection – None of the relevant agencies with Dominica have current capacity to undertake seabed mapping to modern standards, and some government departments are not aware of the importance to pass on data or maritime safety information to their Maritime Unit for wider dissemination in line with international obligations. There is strong potential for improving hydrographic governance, so that requirements and data are appropriately shared to derive the maximum value and benefit.

Sustainable use of marine resources – The ability for relevant departments to manage and maintain the marine environment is greatly impeded by a lack of capacity in some key areas. These include capacity in data acquisition for stock assessment; Monitoring Control and Surveillance (fisheries); and the collation of data on all aspects of fisheries management (particularly basic management parameters).

Protection and preservation of the marine environment – Maintaining the health and biodiversity of marine ecosystems Dominica is fundamental for environmentally sustainable development. In particular, the protection and preservation of coral reefs is of critical importance from both an environmental perspective and for their role in the tourism sector. Specific environmental data identified as lacking includes habitat maps to support MPA designation and port development, data to understand impacts of species e.g. sargassum, and economic benefits of different Blue Economy sectors. Characterisation of the impacts of marine pollution on the health of the marine ecosystems and water quality is also needed to help improve wastewater management practices, and to identify regions most at risk.

Climate change impact assessment – Marine environments are particularly vulnerable to the impacts of climate change, most notably through factors such as ocean acidification, sea-level rise and invasive species. Understanding, quantifying and monitoring those factors and their effects on local marine ecosystems is essential for developing appropriate risk mitigation and coastal planning strategies.

Natural and environmental disasters – In 2017, Hurricane Maria destroyed 100% of all crops and damaged 90% of all structures on Dominica, resulting in USD $931m worth of damages and USD $380m of losses, equivalent to 250% of the country's GDP. The estimated USD $1.4b cost of recovery underlines the need for the better adaption of Dominica's infrastructure and marine environments from the impact of natural hazards, as well as the importance of building resilience into coastal systems as a mechanism for mitigating these risks.

Training and capacity building – Improved awareness, skills and knowledge are required across marine sectors to enable Dominica to implement integrated ocean governance. There is also a need to increase both national and regional cooperation through the sharing of assets and knowledge in order to help reduce costs and improve decision makers' understanding.

Dominica – Activities and benefits

By providing data, training, advice and support, the CME Programme is designed to help address economic and environmental needs, leaving a lasting legacy of self-sufficiency in marine management.

Programme activities are split across six core themes, though potential action is not identified in every category in all Small Island Developing States.

Priority projects identified for Dominica include:

Marine data collection for environmental resilience, and safe and efficient trade (core output 1)

Activity – High quality hydrographic data collection leading to new modern editions of navigational charts, improved compliance with international obligations and data supplied to local states. Areas of highest priority are shown in the accompanying figure.

Benefits – Improving overall safety of navigation – reducing risk to lives and the environment. Enabling cargo ships to reduce their under keel clearance with confidence, therefore reducing costs and thereby increasing profit. Helping encourage cruise ships to visit.

Monitoring and risk assessment to increase climate change resilience (core output 2)

Activity – Regional Climate Change Report Card.

Benefits – To provide climate change information to support effective climate change adaptation.

Activity – Installation of Ocean Acidification sensor equipment, including training, support and service.

Benefits – A state-of-the-art monitoring system will be established that provides real-time biogeochemical data to scientists and other stakeholders nationally and internationally, and directly supports UN SDG 14.3 'Minimize and address the impacts of ocean acidification, including through enhanced scientific cooperation at all level' through indicator 14.3.1 'Average marine acidity (pH) measured at agreed suite of representative sampling stations'.

Activity – Understanding the risks posed by marine climate change to future of the fisheries sector. This activity would characterise the value chain of the sector and identify key aspects that are vulnerable to climate change.

Benefits – Government will have tools to develop priority mitigation and adaptation plans to safe guard this sector that is key for providing a local supply of protein.

Activity – Installation of a tide gauge. Training will also be provided in tide gauge maintenance as well as in the use of levelling equipment to facilitate determination of long-term sea-level trends and establish a national datum.

Benefits – Replacement of the damaged tide gauge and GNSS receiver at the main port of Roseau are consequently critical for post-disaster recovery. In the long term these installations will facilitate the production of accurate tidal forecasts that reduce hazards to shipping, monitor the impacts of sea-level change and coastal hazards such as storm surges, and contribute to the regional tsunami warning system.

Science infrastructure development, training and knowledge exchange (core output 6)

Activity – Work with key maritime personnel to develop local hydrographic governance and create a National Hydrographic Committee or similar.

Benefits – Key elements of governance in place in line with IHO Phase 1 compliance, reducing potential barriers to international trade.

Activity – Seabed mapping data handover workshop.

Benefits – Ability of local personnel to understand and utilise acquired seabed mapping data in country.

Activity – Training on sea-level data quality control, analysis and applications for the tsunami and other coastal hazards early warning system for the Caribbean and adjacent regions (CARIBE-EWS).

Benefits – Provision and training on the TASK (Tidal Analysis Software Kit) that facilitates quality control, harmonic analysis, tidal prediction, data manipulation and the calculation of daily and monthly means. Development of stronger relationships with regional sea-level station professionals and tsunami warning national contacts, and with the Intergovernmental Oceanographic Commission.

Programme outputs

If all of the potential activities were to be delivered, the CME Programme, working with key departments in Dominica, would result in the following development of marine capacity by the end of the scheduled Programme.

Phase 1	Phase 2	Phase 3	Phase 4	Phase 5
Limited, or no, characterisation of physical parameters in marine and maritime sectors.	The physical parameters of the key marine and maritime environments and sectors are mapped and quantified.	The physical parameters are analysed in terms of the biological, sociological and economic context, resulting in a more in depth appreciation of their vulnerabilities and opportunities/ limitations for sustainable use.	Defensible policy is produced for the marine and maritime sectors that details consideration for the sustainable development of the ocean economy.	Full competency in undertaking the previous phases is developed and sustained across multiple sectors, leading to the safe and sustainable development of marine and maritime economies.

Output 1 – Marine data collection for environmental resilience and safe and efficient trade.

Output 2 – Monitoring and risk assessment to increase climate change resilience.

Output 3 – Decreasing pollution and improving human health.

Output 4 – Sustainable fisheries development.

Output 5 – Natural capital assessment.

Output 6 – Infrastructure development, training and knowledge exchange.

Expected impact

Through delivering these activities, outputs and benefits the CME Programme would help to facilitate:

Output 1 – Adherence to the UN convention on the Law of the Sea and Safety of Life at Sea; Reduction in the cost of imports and increase in the profitability of exports; Reduction in the risk of maritime accidents and damage to the environment.

Output 2 – Identification of communities and environments vulnerable to the impacts of climate change; Integration with regional and global hazard monitoring networks; Informed coastal management and planning decisions.

Output 4 – Reduced pressure on existing fish stocks and marine environments; Enhanced economic potential of existing products.

Output 5 – Enhanced awareness of the social and economic value of marine ecosystems; Quantification of the cost/benefit ratio of existing policy options, supporting decision making.

Output 6 – Confidence and ability to make sound independent decisions regarding the development of marine environments; Access to state-of-the-art marine equipment, models and techniques; Development of national and international networks.

Strategic outcomes

By better understanding and managing the marine resource potential within Dominica the CME Programme will help create jobs, drive national economic growth and reduce poverty through:

Prosperity – Diversifying revenue potential by opening up new economic opportunities.

Sustainability – Ensuring all marine and maritime activities are environmentally safe and sustainable.

Security – Making infrastructure and human capital resilient to natural disasters and climate change.

Legacy – Building the capacity of national authorities to plan and optimise their marine spaces.

Commonwealth Marine Economies Programme

The CME Programme is being delivered on behalf of the UK Government by a partnership of world-leading marine expertise.

Centre for Environment Fisheries & Aquaculture Science

Pakefield Road,
Lowestoft,
Suffolk, NR33 0HT,
United Kingdom

www.cefas.co.uk

UK Hydrographic Office

Admiralty Way,
Taunton,
Somerset, TA1 2DN,
United Kingdom

www.gov.uk/ukho

National Oceanography Centre
NATURAL ENVIRONMENT RESEARCH COUNCIL

European Way,
Southampton
Hampshire, SO14 32H,
United Kingdom

www.noc.ac.uk

Funded by UK Government

Foreign & Commonwealth Office

King Charles Street,
London, SW1A 2AH,
United Kingdom

For more information please contact us via:

www.gov.uk/guidance/commonwealth-marine-economies-programme

CME.ProgrammeEnquiries@fco.gov.uk | @CME_Prog