

Commonwealth Marine Economies Programme



Funded by
UK Government

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

Antigua and Barbuda Country review



Centre for Environment
Fisheries & Aquaculture
Science



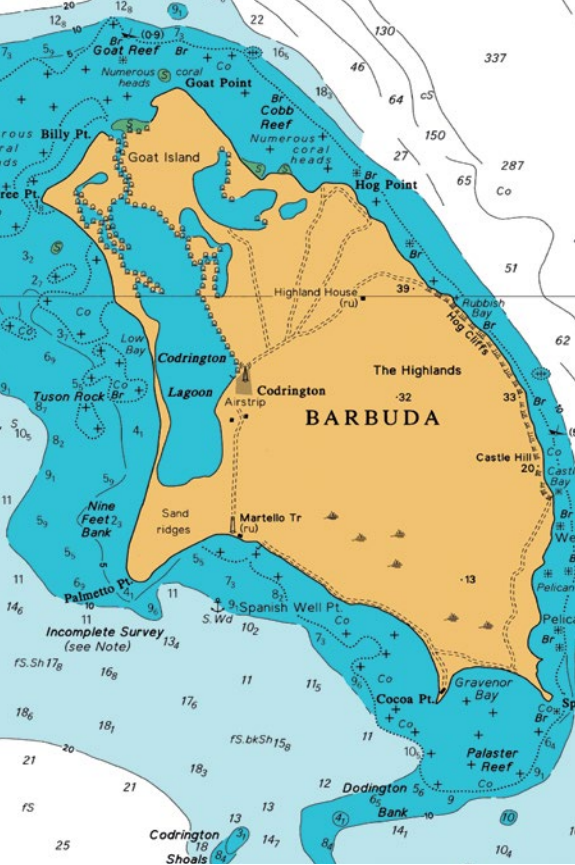
UK Hydrographic
Office



National
Oceanography Centre
NATURAL ENVIRONMENT RESEARCH COUNCIL



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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 – Antigua and Barbuda 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; 2 – Zero hunger; 9 – Industry, innovation and infrastructure; 13 – Climate action; 14 – Life below water).

Regional – Relevant regional mechanisms and bodies within the Caribbean include the Caribbean Regional Fisheries Mechanism; Caribbean Community Common Fisheries Policy; Caribbean Large Marine Ecosystem Programme and the Eastern Caribbean Regional Ocean Policy.

National – Antigua and Barbuda has an Ocean Governance Committee and there are plans in place for increasing port capability and capacity (primarily privately funded), and other relevant national strategies such as the National Physical Development Plan and National Environmental Management Strategy. Antigua and Barbuda are accredited to the Green Climate Fund to access funds to implement climate adaptation initiatives.

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 Antigua and Barbuda's marine estate. For example, much of the east coast of Antigua has delicate ecosystems that see pressure from visiting yachts. Similarly, there is a lack of data to inform placement of new infrastructure development (e.g. port development). This lack of data also undermines future planning and adaptation activities to climate change e.g. coastal areas vulnerable to inundation or the presence of ecosystems that may support coastal defence.



Sustainable use of marine resources – The over exploitation of fish stocks can have negative consequences on many ecosystems and communities. To help prevent this, the Fisheries Division is seeking assistance in improving data collection and survey design for some species, as well as technical assistance and support to undertake baseline data collection for species not adequately covered by existing programmes. This includes supporting the management and reduction of ciguatera poisoning.

Safety and security – Very little of Antigua and Barbuda's seabed has been surveyed to modern standards. This presents a significant economic risk and impacts the wider marine economy by hindering the shipping of key exports. It is also potentially restricting tourist access by cruise ship. To enable and encourage safe navigation for ships in Antigua and Barbuda's waters, official navigational charts need to be updated.

Hydrographic coordination and data collection – There is no hydrographic surveying capability, either public or private, that resides in Antigua and Barbuda. As the lead authority for SOLAS within Antigua and Barbuda, the Antigua and Barbuda Department of Marine Services and Merchant Shipping (ADOMS) are fully aware of their hydrographic responsibilities under SOLAS, and of the many other applications such data may support. There is also potential for improving hydrographic governance, so that requirements and data are appropriately shared to derive the maximum value and benefit.

Protection and preservation of the marine environment – Maintaining the health and biodiversity of marine ecosystems within Antigua and Barbuda 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. Characterisation of the impacts of marine pollution on the health of the marine ecosystems and water quality is 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. Developing a National Adaptation Plan is a key priority for the Government.

Natural and environmental disasters – In 2017, Hurricane Irma destroyed 95% of all properties on Barbuda, and together with Hurricane Maria, resulted in USD \$200 million worth of damages and losses across both islands, equivalent to 20% of the country's GDP. The estimated USD \$222m cost of recovery underlines the need for the better protection of Antigua and Barbuda's infrastructure and marine environments from the impact of natural hazards, as well as the importance of building resilience into coastal systems to mitigate associated risks.

Training and capacity building – Improved awareness, skills and knowledge are required to enable Antigua and Barbuda to implement integrated ocean governance. Increasing both national and regional cooperation through the sharing of equipment and knowledge is also needed to help reduce costs and improve decision makers' understanding.

Antigua and Barbuda – 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 Antigua and Barbuda 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 include principal harbours and approaches, followed by the remainder of the shallow coastal waters of both islands.

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.

Activity – Develop capability for ongoing use of data for habitat mapping. Supporting development of local habitat mapping capability. Training in management, and analysis of relevant data.

Benefits – National level habitat maps produced and supplied to local state to inform localised studies in priority areas.

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

Activity – Coastal vulnerability modelled and mapped, and understood by local stakeholders. Mitigation activities advised to local policy makers.

Benefits – Generate an enhanced understanding of the sensitivities of marine environmental and ecosystem services to climate change. The findings will enable local planners and stakeholders to make informed decisions regarding the sustainable management of their marine resources, and will guide future coastal management and planning.

Activity – Regional Climate Change Report Card.

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

Activity – Support in the aftermath of Hurricane Irma. Satellite imagery used to assess changes in marine and coastal environment.

Benefits – Generate an enhanced understanding of the sensitivities of marine environmental and ecosystem services to climate change. Locality of damaged reefs used to inform coastal vulnerability and inform the National Adaptation Plan.

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

Activity – Provision of modern seabed mapping equipment to the Government of Antigua and Barbuda.

Benefits – In line with those described under Output 1, and in addition will allow for these benefits to be maintained into the future and additional mapping to be undertaken in areas of secondary priority.

Activity – Work with key maritime personnel to develop local hydrographic governance.

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

Activity – Work with key personnel in the environmental departments to develop local expertise to manage and develop key sectors.

Benefits – The training and capacity building mechanisms will further enable the beneficiary governments and stakeholders to have the confidence to make sound decisions regarding the sustainable development of their marine environment.

Programme outputs

If all of the identified activities were to be delivered, the CME Programme, working with key departments in Antigua and Barbuda, 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; Development of new opportunities for aquaculture diversification; and 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 Antigua and Barbuda 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.



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

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