

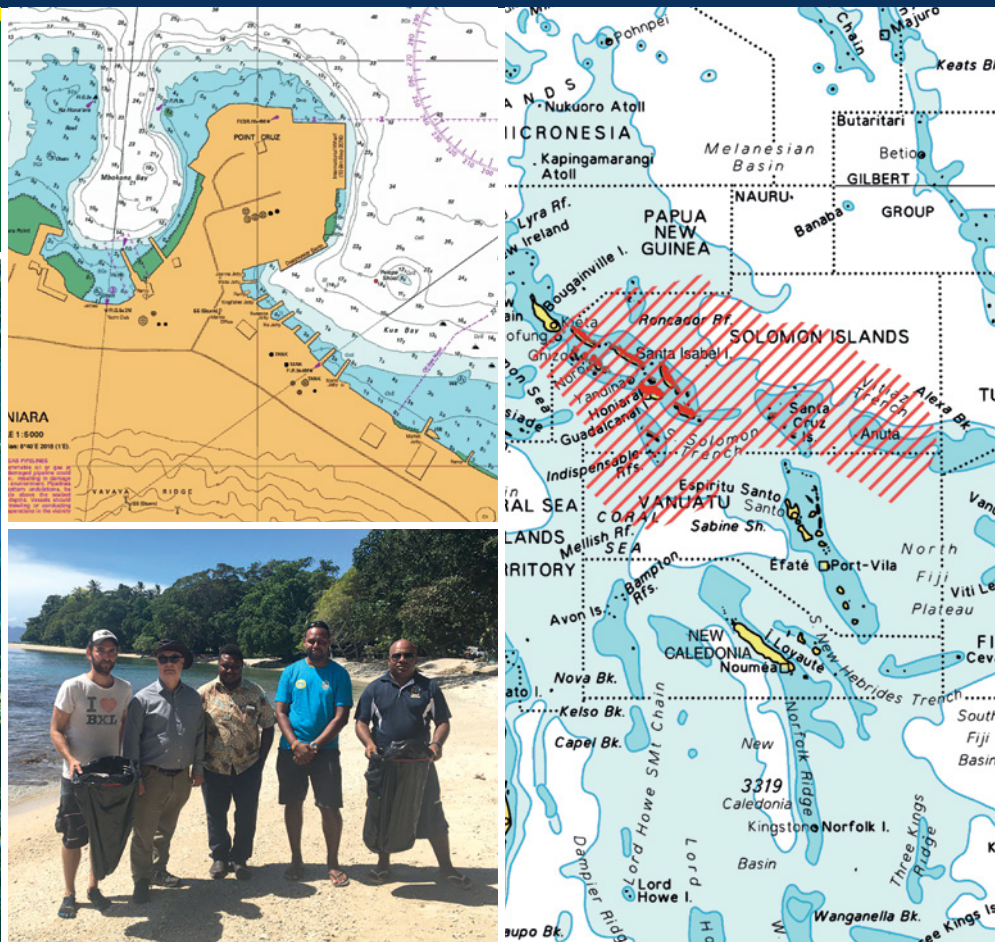
Commonwealth Marine Economies Programme



Funded by
UK Government

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

Solomon Islands Country review



Centre for Environment
Fisheries & Aquaculture
Science



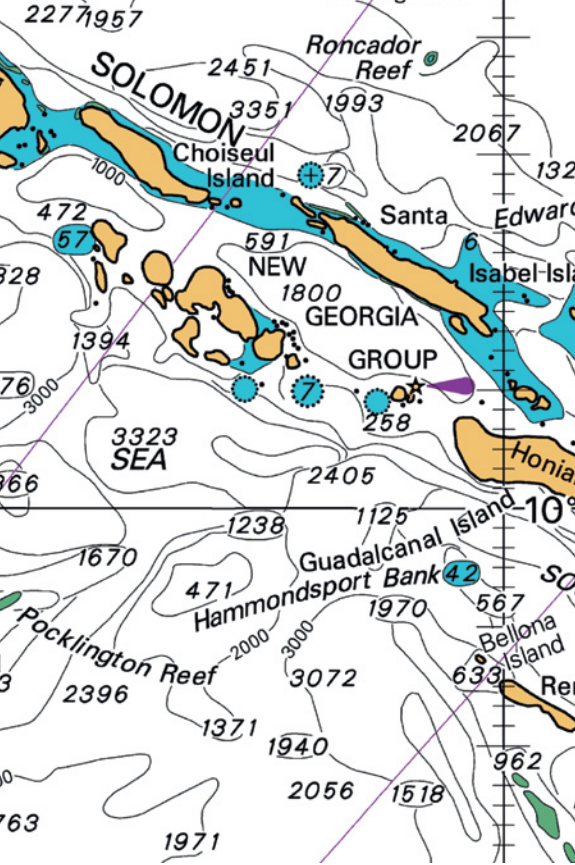
UK Hydrographic
Office



National
Oceanography Centre
NATURAL ENVIRONMENT RESEARCH COUNCIL



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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.

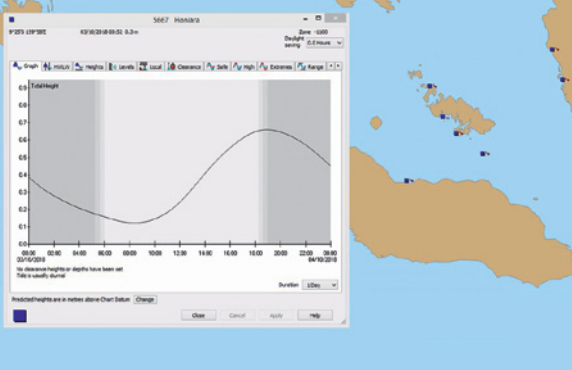
This review highlights opportunities where the UK can apply and leverage its world-leading expertise to make significant, cost-effective and lasting positive impacts on each country.

Relevant strategic plans

International – Solomon Islands 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); 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 – The two main regional organisations delivering geospatial outputs that operate in the Pacific are the Pacific Community (SPC) and the Secretariat of the Pacific Regional Environment Programme (SPREP), both of which are active in the Solomon Islands. The regional objectives of both organisations are outlined in their 2016-2020 and 2017-2026 Strategic Plans respectively, with relevant goals including: sustainable economic development; strengthened resilience to climate change; healthy and resilient island and ocean ecosystems; improved waste management and pollution control; and the commitment to, and best practice of, environmental governance.

National – National strategies for enabling the safe and sustainable development of the Solomon Islands marine environments include the National Biodiversity Strategic Action Plan (2016-2020) and the Aquaculture Development Plan (2009-2014). National plans are also in place to re-establish the Solomon Islands Hydrographic Unit, to develop priorities and improve and capitalise on national hydrography, and the Solomon Islands are committed to developing an Integrated National Oceans Policy and Marine Spatial Plan by 2018.



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 Solomon Islands' marine estate and coastal protection, and presents additional risk and costs to shipping.

Data collection capabilities – Solomon Islands has recently re-established its Solomon Islands Hydrographic Unit, but they currently lack the equipment to be able to survey to fully modern standards, and lack sufficient resource to fully meet the national requirements for seabed mapping.

Climate change impact assessment – Marine environments in the Solomon Islands are vulnerable to the impacts of climate change 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.

Protection and preservation of the marine environment – Maintaining the health and biodiversity of marine ecosystems within the Solomon Islands is fundamental for sustainable development.

In particular, the protection and preservation of seagrass ecosystems and coral reefs is of critical importance from both an environmental perspective and the Blue Economy and there is a need for more habitat/species data to facilitate development of new and manage existing protected areas, and a refinement of this information to support sensitivity mapping of features. 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. Plastic pollution has been identified as a particularly important issue but little detailed information exists to enable management (including distribution).

Natural and environmental disasters – The Solomon Islands are vulnerable to a range of natural disasters, including cyclones, earthquakes, volcanic eruptions, tsunamis and storm surges. These events are particularly damaging to coastal environments and communities, with the majority of the population living within 1.5km of the shoreline and less than a few meters above sea level. Consequently, marine infrastructure needs to be better protected from the impact of storms and other natural hazards, and resilience built 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 the Solomon Islands 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.

Solomon Islands – 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 Solomon Islands include:

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

Activity – High quality hydrographic data collection, alongside use of satellite derived bathymetry in priority areas, with provision for later augmentation for habitat mapping, leading to new modern editions of navigational charts, improved compliance with international obligations and data supplied to local states to inform onward management of the marine environment. Key areas identified include Bourgainville Strait, Choiseul Bay, Ontong Java, Indispensable Reefs, Manning Strait, conservation area and cruise stop around Arnavon Islands, Tulaghi Lagoon and Marau Sound.

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 – Mapping of key ecosystems (e.g. seagrass) areas for small and large-scale habitat maps.

Benefits – To enable decision makers to protect the marine environment and determine sustainable development priorities. Understand the importance of the ecosystems as storage for blue carbon.

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

Activity – Enable assessment of impacts of climate change on key sectors and ecosystems. Define knowledge gaps.

Benefits – To enable the development of adaptation plans to reduce the impacts of climate change on the economy.

Activity – Provision of the anyTIDE app to the Solomon Islands.

Benefits – Improved access to tide charts via phones and mobile technology will benefit all maritime users, coastal and sea-going economic sectors and coastal communities including fishermen, cruise liners, hotels and the government.

Activity – Regional Climate Change Report Card.

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

Decreasing pollution and improving human health (core output 3)

Activity – Determine the distribution, concentration and impacts of pollutants (including plastics and sewage contamination) on key coastal ecosystems.

Benefits – To advise on priority actions to remove or reduce pollution and reduce risk on human health in coastal areas.

Activity – To model the dispersion, extent and impact of pollutants (including plastics and sewage contamination) on coastal communities.

Benefits – To provide information for the prioritisation of actions to reduce or mitigate coastal pollution and improve resilience of coastal habitats.

Activity – To provide input into State of the Marine Environment Reporting.

Benefits – Development of baseline understanding and assessment of water quality issues in the Pacific.

Sustainable fisheries development (core output 4)

Activity – Support relevant regional agencies in the assessment of stocks.

Benefits – To enable sustainable exploitation of capture fisheries.

Natural Capital (core output 5)

Activity – Coastal resource mapping, water quality and information gathering.

Benefits – Supports the estimation of the socio-economic value of ecosystem services provided by coastal habitats.

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

Activity – Work with key maritime staff to develop local hydrographic governance and support studentships and training.

Benefits – Key elements of governance in place in line with IHO Phase 1 compliance, reducing potential barriers to international trade. Legacy of further education and training around ecosystem management.

Activity – Seabed mapping data handover workshop.

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

Activity – Collaborations with regional universities to support studentships and training.

Benefits – Legacy of further education and training around ecosystem management.

Programme outputs

If all of the potential activities were to be delivered, the CME Programme, working with key departments in the Solomon Islands, 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 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 through delivery of a Pacific Climate Change Report Card.

Output 3 – Characterisation of the dispersion of sewage and industrial outfalls and their effects on water quality; Improved health of humans and marine ecosystems through detailed mapping of high risk areas leading to the identification and prioritisation of pollution control mechanisms.

Output 4 – Reduced pressure on existing fish stocks and marine environments; Development of new opportunities for aquaculture diversification; Enhanced economic potential of existing products; Access to insurance services following climatic events.

Output 5 – Enhanced awareness of the social and economic value of marine ecosystems with specific focus on the ecosystem services provided by coastal habitats such as seagrass; 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 the Solomon Islands 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 3ZH,
United Kingdom

www.noc.ac.uk



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CME.ProgrammeEnquiries@fco.gov.uk | [@CME_Prog](https://twitter.com/CME_Prog)    YouTube


Foreign &
Commonwealth
Office

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

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