

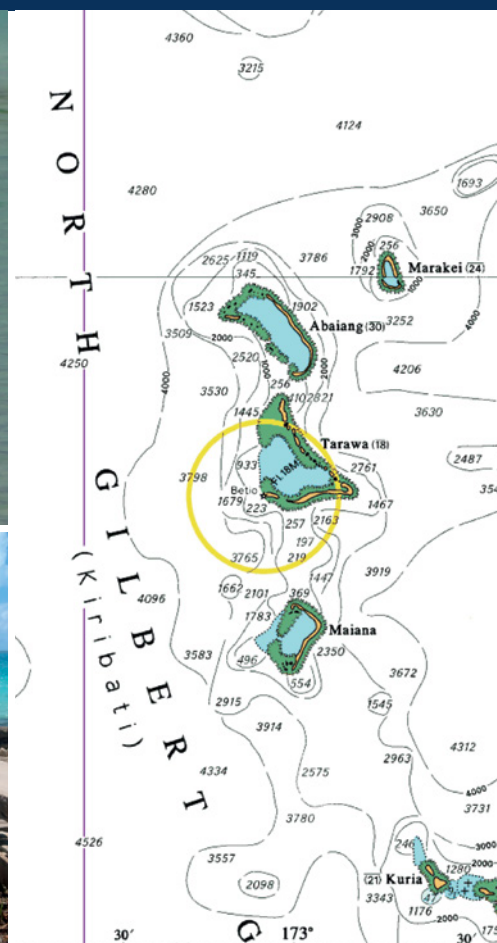
Commonwealth Marine Economies Programme



Funded by
UK Government

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

Kiribati Country review



Centre for Environment
Fisheries & Aquaculture
Science



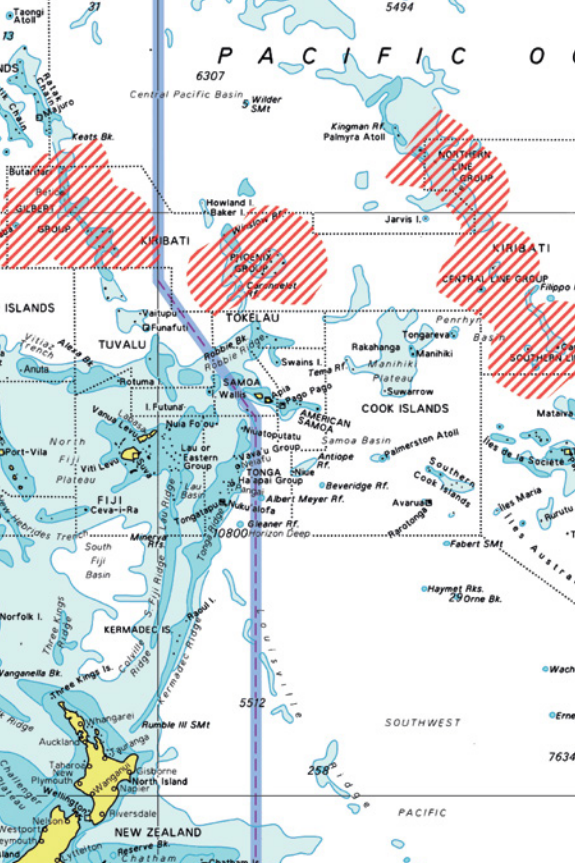
UK Hydrographic
Office



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 – Kiribati 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); Ramsar Convention on Wetlands of International Importance; The World Heritage Convention; The Regional Seas Convention; 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 – 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 Kiribati. 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. In addition, working with Land Information New Zealand (LINZ) under the Pacific Regional Navigation Initiative (PRNI), SPC will lead the development of hydrographic governance and a legacy data audit for Kiribati.

National – A key component of Kiribati's Development Plan is the Line and Phoenix Islands Integrated Development Strategy. This strategy describes how Kiribati will use the Central and Eastern Island groups to ease the burden on South Tarawa, the main administrative centre. Seabed mapping data would act as a useful and key enabler to the implementation of this strategy but also the expansion of the wider economy as a whole. Other national strategies for enabling the safe and sustainable development of Kiribati's marine environments include; the National Biodiversity Strategies and Action Plan (2016-2020); the National Fisheries Policy (2013-2025) and the Kiribati Development Plan (2016-2019).



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 Kiribati's marine estate and coastal protection. In fisheries management there is a paucity of information to enable stock assessment and biosecurity within the aquaculture sector. There is a need to develop capacity to understand the cost and benefits of different policy options.

Data collection capabilities – Kiribati does not possess indigenous capabilities to collect marine science or mapping data without outside assistance. It does have capabilities to manage and utilise such data once collected.

Climate change impact assessment – The UN lists Kiribati as one of a number of island groups most likely to be inundated by the sea in the 21st century because of global warming. Its marine environments are also vulnerable to the impacts of climate change through factors such as ocean acidification 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 Kiribati 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, and there is a need for more habitat/species data to facilitate the development of new protected areas (Phoenix Islands). 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 – Although Kiribati only faces a moderate degree of risk from storms and other natural disasters, the low level of the islands and lack of resources mean that the country is highly vulnerable to the effects of tsunamis, tidal surges and sea-level rise, and even minor events can overwhelm national capacity. Marine infrastructure and environments consequently need to be better protected from the impact of 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 Kiribati 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.

Kiribati – 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 Kiribati 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 certain 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. Areas of highest priority include Betio Harbour and areas for potential development and settlement in Kiritimati.

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. Informing coastal development and protection. Helping encourage small 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 determine sustainable development priorities. Understand the importance of the ecosystems as storage for blue carbon.

Activity – Development of a baseline strategy report and training of local officials who will be developing and implementing the 2017 Sea Bed Minerals Act.

Benefits – Local stakeholders will have a better understanding of the potential natural resources of the area and how they should be assessed. The Kiribati Ministry of Fisheries and Marine Resources Development (Government ministry in charge of seabed mining) needs this information to help improve sustainability of planned deep-sea mining operations. This is important in national waters for Kiribati and to support sponsorship of exploration claims in the Area with the International Seabed Authority.

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 – Enable effective sea-level monitoring to aid environmental resilience.

Benefits – To advise on infrastructure build and development of coastal defences.

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) on the key coastal ecosystems.

Benefits – To advise on priority actions to remove or reduce pollution.

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 assessment (core output 5)

Activity – To quantify the socio-economic value of key ecosystems.

Benefits – To enable cost benefit analysis of different policy options (e.g. placement of coastal infrastructure in relation to marine habitats).

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

Activity – Work with key maritime staff 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 – Develop capacity in spatial planning, data management, climate change monitoring and evaluate data to understand the cost and benefits of different policy options. Train staff to understand and monitor the impacts of climate change and sea-level rise.

Benefits – Enable staff to be self-reliant to monitor and manage the marine environment.

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 Kiribati, 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 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; Identification and prioritisation of pollution control mechanisms; Improved health of humans and marine ecosystems.

Output 4 – Reduced pressure on existing fish stocks and marine environments through collaborations with Pacific partners.

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 Kiribati 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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