

Caribbean in Brief:  
**An information document for Caribbean  
Small Island Developing States**

LC/CAR/2020/16  
22 December 2020



***Prepared for:***

The United Nations  
Ocean Conference:  
Scaling up ocean action based on  
science and innovation  
for the implementation  
of Goal 14  
**Life Below Water**

Lisbon, Portugal, 2021



Photo credit: Daniel Öberg, 2020.

Evidence-based assessment is essential in supporting Caribbean Small Island Developing States (SIDS) - sustainable development priorities.

A comprehensive needs assessment including financing requirements on coastal and ocean-based research, science and technology is a required first step to drive the Caribbean SIDS active participation in the United Nations Decade of Ocean Science.

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<sup>1</sup> The agenda to this document is aligned to the draft Programme Agenda for the Lisbon meeting- Interactive Dialogue Sessions.

# Introduction

## **An Information Document on the United Nations Oceans Conference: Scaling up ocean action, based on science and innovation for the implementation of the Sustainable Development Goal 14; Stocktaking, Partnerships and Solutions.**

This brief is intended to provide general information on the upcoming United Nations Ocean Conference on scaling up ocean actions based on science and innovation for the implementation of Agenda 2030 - Sustainable Development Goal 14 (SDG 14), with a view to stimulating more active, engaged participation of the Caribbean in the discussions. The United Nations Ocean Conference will be co-chaired by Kenya and Portugal, and hosted by the Government of Portugal in Lisbon, during 2021.

The objective of this conference is consistent with the 2017 UN General Assembly proclamation on the Decade of Ocean Science (2021-2030) for Sustainable Development. The focused attention that is being given to ocean science is intended to mobilize the support of governments and global ocean stakeholders towards the shaping of a common framework that will most effectively harness ocean science to support countries in the achievement of the 2030 Agenda for Sustainable Development. The Conference aims to promote science-based innovation and the mapping of sustainable development solutions through global ocean action.

Small Island Developing States (SIDS) are often described as the custodians of the oceans because, by virtue of their respective territorial waters and exclusive economic zones, they occupy such significant ocean space. For Caribbean countries, ocean, coastal and marine resources are critical to their sustainable development. The dependence of Caribbean economies on coastal and marine resources is among the highest in the world. Initiatives to both protect and maximize benefits derived from marine resources should therefore be integral to Caribbean SIDS sustainable development strategies. Research, science and technology, innovation and more broadly, knowledge creation systems, have emerged as enablers in the road map for sustainable development in SIDS.

For the Caribbean subregion, information and data on research, science, technology and innovation on ocean related matters are limited. If they are to define and sustainably manage their ocean resources, Caribbean SIDS will need to strengthen their institutions, technologies including the technological expertise, data management systems and research capacities. These are also requirements for meeting reporting obligations established under regional and international agreements<sup>2</sup>.

The United Nations Conference on Science, Innovation and Partnership in this regard, offers an ideal opportunity for SIDS to explore and engage with the international community on prospects for collaboration in marine science and ocean research in response to sustainable development challenges faced by these vulnerable countries.

This information document addresses main issues on the draft agenda of the United Nations Conference, signalling those areas which should be of interest to Caribbean SIDS, and highlighting issues which might warrant the careful attention of the member States of the subregion.

It is hoped that this information guide will serve to enhance the Caribbean's active participation in deliberations and decision making at this UN Ocean Conference.

Corresponding documents for this conference can be found at the following link:

- UN Ocean Conference - International Decade of Ocean Science for Sustainable Development - The Ocean we want for the Future we need: <https://www.un.org/en/conferences/ocean2020>.

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<sup>2</sup> See annex 2: Caribbean SIDS membership in global and regional ocean related agreements.

# I. Agenda item 1: Promoting and strengthening sustainable ocean-based economies, for SIDS and least developed countries

SDG Target 14.7: By 2030, increase the economic benefits to SIDS and least developed countries from the sustainable use of marine resources, including through sustainable management of fisheries, aquaculture and tourism.



Photo credit: Mahdis Mousavi, 2020.

The Ocean provides a vast array of resources and contributes to sustainable livelihoods.<sup>3</sup> Globally, the total value of the major ocean assets is estimated at US\$24 trillion based on the ocean's earning capacity.<sup>4</sup> The dependence of Caribbean economies on coastal and marine resources is among the highest globally. The Caribbean Sea is estimated to account for 14–27 per cent of the Global Ocean Economy with a value of US\$ 407 billion.<sup>5</sup> The sectors contributing to this economy are living and non-living resources, commerce, tourism, trade and ecosystem services among others. In the case of tourism for example, ocean-based attractions are major employment providers and accounting for over six million jobs in the Caribbean region.<sup>6</sup>

The economic valuation of coastal and marine resources and services are necessary for evidence-based assessment and thereby supporting the sustainable development priorities of the Caribbean.

Research, science and technology are required tools for conducting the economic valuation of coastal and marine resources and ecosystem service.

Towards a sustainable ocean-based economy the Caribbean will need to commit to the implementation of management structures that are integrated, interdisciplinary, and institutionalized. This will have to be supported through legislation, investments in human capital, technological readiness, statistical systems and institutional structures. With the combined political will, data-driven planning, the coordination and active participation of public, private and civil society stakeholders, the Caribbean subregion can move towards a sustainable ocean-based economy. This will also provide for new employment opportunities including green-blue careers across multiple disciplines.

<sup>3</sup> Our global recovery must include a plan for the ocean: available at: <https://www.weforum.org/agenda/2020/05/coronavirusCOVID-19-recovery-oceans-environment-planet-climate-change/>, cited 9 July 2020.

<sup>4</sup> Reviving the Ocean Economy the Case for Action-2015, available at: <https://www.wwf.de/fileadmin/fm-wwf/Publikationen-PDF/WWF-Report-Reviving-the-Ocean-Economy-Summary.pdf>, cited 27 October 2020.

<sup>5</sup> Patil, P.G., Virdin, J., Diez, S.M., Roberts, J., Singh, A. (2016). Toward A Blue Economy: A Promise for Sustainable Growth in the Caribbean; An Overview. The World Bank, Washington D.C.

<sup>6</sup> United Nations Conference on Small Islands Developing States, SIDS 2014, available at: <http://www.sids2014.org>, cited 10 November 2020.

## II. Agenda item 2: Addressing marine pollution

*SDG Target 14.1 calls for prevention and significant reduction of marine pollution by 2025.*



Photo credit: Dustan Woodhouse, 2020.

With an estimated 80 per cent of marine debris originating from land-based sources, it is necessary for each country to have comprehensive plans for a circular economy. This will also include having the technologies that are adaptable to the scale of economies typical of SIDS.

Given the transboundary implications of marine litter and pollution, regional and international collaboration is required to meet the prevention and control requirement of marine pollution.

Sustainable management of coastal, marine and ocean resources will require the control and prevention of activities such as overexploitation of living resources, pollution from land-based and marine-based sources.<sup>7</sup> Marine pollution compromises the role of the ocean as a provider of food, eco-system services, livelihoods and diminishing its natural beauty and attractions.

It is estimated that roughly 80 per cent of marine pollution originates from land including from such sources as: agricultural run-off, pesticides, plastics and untreated sewage.<sup>8</sup> Increased nutrient loading, combined with the impacts of climate change and other environmental change have resulted in an increase in the frequency, magnitude, and duration of harmful algal blooms.<sup>9</sup>

Other anthropogenic activities contributing to the increasing levels of marine debris are for example: high demands of non-biodegradable/non-recyclable/non-reusable products and inadequate regulation and enforcement for waste management and land use planning (ECLAC, 2020).<sup>10</sup>

With respect to plastic wastes, the Caribbean is the second most contaminated sea in the world after the Mediterranean Sea. Estimations of the volume of plastic waste in this area range from 600 to 1,414 plastic items per square kilometre in different locations.<sup>11</sup> Caribbean SIDS are among several countries that are seeking to better control single-use plastics including calling for transformation of the marine environment into a plastic free zone.<sup>12, 13</sup>

<sup>7</sup> Caribbean Large Marine Ecosystem Project available at: <https://www.clmeproject.org/phaseone/sap/brief.html>.

<sup>8</sup> Facts and figures on marine pollution, available at: <http://www.unesco.org/new/en/natural-sciences/ioc-oceans/focus-areas/rio-20-ocean/blueprint-for-the-future-we-want/marine-pollution/facts-and-figures-on-marine-pollution/>, cited 13 December 2020.

<sup>9</sup> The Ocean Conference (2017) available at : <https://www.un.org/sustainabledevelopment/wp-content/uploads/2017/05/Ocean-fact-sheet-package.pdf>, cited 17 December 2020.

<sup>10</sup> Economic Commission for Latin America and the Caribbean, LC/TS.2020/167, cited 19 December 2020.

<sup>11</sup> It is time for the Caribbean to break up with Plastics, available at: <https://www.unenvironment.org/cep/news/editorial/its-time-caribbean-break-plastics>, cited 18 December 2020.

<sup>12</sup> SDG 14: Stepping Up International Efforts To Tackle Ocean Plastic Pollution, available at: <https://www.oceanactionhub.org/sdg-14-stepping-international-efforts-tackle-ocean-plastic-pollution>, cited 25 October 2020.

<sup>13</sup> ECLAC, LC/CAR/TS.2020/5, cited October 2020.

### III. Agenda item 3: Managing, protecting, conserving and restoring marine and coastal ecosystems

*SDG Target 14.2 calls for sustainable management and protection of marine and coastal ecosystems to avoid significant adverse impacts, including the strengthening of their resilience, and to take action for their restoration in order to achieve healthy and productive oceans.*



Photo credit: Hayden Dunsel, 2020.

Ecosystems and natural resources degradation rates are influenced by the type and duration of anthropogenic pressures.

Marine Spatial Planning (MSP) is required for the establishment, sustainable management and restoration of both Marine Protected Areas and multi-use coastal and marine areas. The application of MSP in the Caribbean SIDS will require geospatial data infrastructure, other technologies, data management systems, technical support and capacities.

SIDS are custodians of some of the world's most biologically diverse marine spaces. As one of the most biologically rich marine environments in the Atlantic, the Caribbean is home to 10 per cent of the world's coral reefs, 1,400 species of fish and marine mammals, and extensive coastal mangroves.<sup>14</sup> This biodiversity holds untapped opportunities for bioprospecting and development of new markets in the field of marine-scientific research, biotechnology, pharmaceuticals, foods including nutraceuticals and cosmetics.

Unsustainable activities such as overexploitation of living resources, pollution from land-based and marine-based sources as well as direct physical

degradation from inappropriate development practices are threatening the productive capacities of these shared coastal and marine ecosystem services.<sup>15</sup> In addressing the requirements for sustainable management of coastal and ocean resources, countries have been working to better integrate coastal, marine and ocean resources management. Barbados, for example, has established its Coastal Zone Management Unit under the authority of the Minister of Maritime Affairs and The Blue Economy of Barbados.<sup>16</sup>

<sup>14</sup> The Caribbean's Marine & Coastal Environment, available at: <https://www.caribbeanchallengeinitiative.org/about/caribbean-s-marine-environment> (2011), cited 27 October 2020 .

<sup>15</sup> Caribbean Large Marine Ecosystem Project, available at: <https://clmeplus.org>, cited 16 December 2020.

<sup>16</sup> Barbados Ministry of Maritime Affairs and the Blue Economy: See web site at: <https://www.gov.bb/Ministries/maritime-affairs-blue-economy>.

#### IV. Agenda item 4: Minimizing and addressing ocean acidification, deoxygenation and ocean warming

*SDG Target 14.3 aims to minimize and address the impacts of ocean acidification, including through enhanced scientific cooperation at all levels.*



Photo credit: ECLAC Caribbean, 2019.

The ocean and coasts provide critical ecosystem services such as carbon storage, oxygen generation as well as food and income generation.<sup>17</sup>

Climate change and its impacts including rising sea levels and sea surface temperatures, ocean acidification, more intense hurricanes and storms, and the resulting impacts on coastal and marine ecosystems, pose significant threats to livelihood of the Caribbean SIDS communities and including impacting on key economic sectors such as fisheries and tourism.<sup>18</sup>

The Caribbean reefs for example, constitute 12 per cent of the total reef area in the world. In addition to their

The development of SIDS appropriate technologies; integration of traditional knowledge, linking social and economic impacts, having communication strategies in ways that can be understood and used by all stakeholders are necessary tools for addressing the impacts of Climate Change in the Caribbean subregion.

There are also requirements for scaling up investments in disaster risk financing, resilience planning and management in Caribbean SIDS.

for tourism are of great relevance.<sup>19</sup> Increasing ocean acidification has been shown to significantly reduce the ability of reef-building corals to produce their skeletons. In the Caribbean region, research is suggesting that rising seawater acidity is already impacting the ability of organisms such as shellfish and corals to build shells and skeletons.<sup>20</sup>

Resources for achieving more resilient coastal and marine eco-systems and infrastructures will have to be supported through investment in scientific research. This will also provide for the continued monitoring and analyses of the impacts of climate change and with the knowledge gained being employed to further strengthen mitigation and

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