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DEVELOPING THE BLUE ECONOMY IN CARIBBEAN AND OTHER SMALL STATES

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Key Points

- Ecosytem and other services provided by oceans are vast, offering opportunities for growth and sustainable development. Small developing states lag behind others in accessing and benefiting from these opportunities.
- The blue economy approach, combining conservation and growth in the context of oceans, provides a sustainable and integrated development strategy. It enables small states to provide ocean ecosystem services and to develop new industries in aquaculture, sustainable tourism, marine biotechnology, seabed mining and other growth sectors.
- Small states need global action to scale up climate financing, improve the valuation of marine ecosystem services and determine a price for blue carbon, as well as support the transition to the blue economy, including dedicated resources to finance conservation and blue growth.

Introduction

The world's oceans are crucial to human life. They cover 71 percent of the earth's surface and contain 97 percent of the earth's water (Oceanic Institute 2016); provide vital ecosystem services; serve as a growing source of renewable energy and make crucial contributions to global food production and food security, through the provision of food, minerals and nutrients. Fish provide 4.3 billion people with about 15 percent of their intake of animal protein (UN Food and Agriculture Organization [FAO] 2014b). Over 3.1 billion people live within 100 km of the ocean or sea in about 150 coastal and island nations (FAO 2014a), and global ocean economic activity is estimated to be US$3–5 trillion (FAO 2014b). Oceans and seas serve as waterways for global trade, with more than 90 percent of global trade carried by sea (International Maritime Organization 2012). Some 880 million people depend on the fisheries and aquaculture sector for their livelihoods (ibid.).

Recognition of the services and resources provided by oceans has accelerated in recent years, spurred by the opportunities and challenges posed by a rapidly growing global population, increasing global demand for food and energy, advances in technology, and changes in patterns of global trade and human consumption. Developed countries have expanded fisheries, tourism and other oceanic and maritime industries; extended mineral exploration and extraction; and scaled up ocean-related scientific, technological and industrial research. Using increased knowledge of marine biodiversity, they have developed new value chains in pharmaceuticals, health care and aquaculture; and many have established integrated national ocean economy strategies, bringing together the regulatory, environmental, spatial, policy, institutional, industrial and other factors influencing their ability to exploit maritime resources.

In contrast, small states, considered as countries with a population of 1.5 million or less, have lagged in this process, constrained by their inherent vulnerabilities — lack of resilience, acute vulnerability to climate change, proneness to natural disasters and limited access to the resources needed to participate effectively in and derive benefits from the ocean economy. Their inability to fully benefit

from the ocean's resources represents an extraordinary paradox: they are the most reliant on the coastal and maritime economy for livelihoods, income and employment; and have jurisdiction over marine space typically far exceeding their equivalent land space. This provides the potential to utilize marine resources to diversify and transform their productive base; stabilize and secure livelihoods; eradicate poverty, food and energy insecurity; and achieve their long-term sustainable development objectives. But thus far the gap between opportunity and reality has remained stark.

Support to Small States through a Blue Economy Framework

The recent emergence of the "blue economy" concept, which arose from the 2012 United Nations Conference on Sustainable Development, or Rio+20, offers a new pathway to promote and achieve the sustainable development objectives of small states. It adapts many features of the green economy, including environmentally sustainable development, fairness in the use of resources and the pursuit of sustainable development without degrading the environment. In the blue economy approach, however, these are applied in the context of ocean and maritime economies. The conservation and sustainable management of ocean resources and ecosystems are emphasized, on the basis that healthy ocean ecosystems are essential for the development of ocean economies; and sustainable development is advanced through "blue growth," including, for example, in fisheries, aquaculture, sustainable tourism, marine transport, the development of coastal communities, coastal urban development and land-based maritime industries (Global Action Network for Food Security and Blue Growth 2013). Coupled with the recent global agreement on a new Sustainable Development Goal (SDG) focused on oceans, seas and marine resources (SDG 14)[1] and an array of new sectoral blue growth opportunities, small states are beginning to take advantage of this conceptual framework to advance their sustainable development objectives, and many are developing national blue growth strategies.

The blue economy approach offers innumerable practical opportunities for small states. Sectoral interventions in fisheries, tourism, ocean renewable energy and marine biotechnology, coupled with new approaches to valuing ecosystem services, offer small states the opportunity to fundamentally overcome their vulnerabilities and transform their prospects for sustainable development.

The **fisheries sector** is a dominant source of livelihoods and food security for most small states. In some small island developing states (SIDS), national consumption of fish can be up to four times that of the global average per capita (United Nations Environment Programme et al. 2012). In 2014, the sector provided steady employment for nearly 350,000 people across 17 Caribbean countries, generated fish production valued at US$420 million and foreign exchange revenue of nearly US$270 million. With global demand for fish expanding faster than the global population and more than half of all fish production now sourced from commercial farming, aquaculture and mariculture offer small states a substantial opportunity to sustainably expand fisheries output while protecting marine ecosystems, thereby expanding employment; increasing food security, exports, foreign exchange and employment; and linking small states to increasingly vertically and horizontally integrated regional and global fisheries-related value chains. If supported by sound planning, small states are well placed to deepen and extend the blue economy and blue growth gains from fisheries. Planning needs to include economic feasibility studies and marketing analyses, the training of fish farmers, improved processing and distribution infrastructure, science-based management plans that help quickly restore fish stocks, and supportive regional and international policy and regulatory frameworks that effectively regulate the harvesting of fishing. A major constraint — largely beyond their influence — is the urgent need to end overfishing; illegal, unreported and unregulated fishing; and destructive fishing practices, as well as eliminate harmful subsidies that contribute to these practices.

Sustainable tourism offers another significant opportunity. More than half of all SIDS derive the largest share of foreign exchange, over 30 percent of employment and between one-fifth and one-half of GDP from tourism (United Nations Conference on Trade and Development [UNCTAD] 2014). A blue growth approach can transform, diversify and expand small states' tourism products, through ecotourism and niche environmental tourism, as well as emerging new sea- and ocean-based tourism products. Progress hinges on access to long-term financing for sustainable tourism infrastructure; the establishment of legal frameworks for sustainable tourism; effective prioritization among potentially competing sustainability objectives, in particular among tourism, fisheries and coastal and marine ecosystem conservation and protection; and on the quality of the marine environment itself, with international tourists increasingly sensitive to the ecological degradation unmanaged tourism can cause.

Ocean renewable energy also offers a vast new opportunity for small states to transform from reliance on imported energy and shift to energy sufficiency and long-term energy security. The Third International Conference on SIDS, held in Samoa in 2014, highlighted energy dependence as both a major source of economic vulnerability for many SIDS, but also as a potential source of their wealth. Oceans offer multiple sources

1 See United Nations (2015).

of renewable energy, including wind, tides, waves, biomass and geothermal sources. Many small states are now examining these options. Recent examples include the Seychelles (wind and solar energy), Mauritius (exploring deep ocean electricity generation) and the Maldives (using the differences in temperature between the surface and deep ocean water to convert thermal energy into electricity). Key emerging challenges include scaling up financial support and investments; technology transfer and capacity building; developing and implementing national, regional and inter-regional energy road maps, policies, plans and strategies; and finding ways to develop cost-efficient energy transmission and energy storage mechanisms.

Marine bio-prospecting and harnessing marine biotechnology provide small states a fourth, potentially enormous, untapped opportunity for blue growth. Marine species provide key ingredients for use in multiple applications, including in pharmaceuticals, cosmetics and personal care products; nutrition and dietary supplements; heath and well-being industries; and food and energy production, as well as in climate change mitigation. Consequently, the global market for marine biotechnology is growing rapidly. However, marine bio-prospecting costs are high and the exploitation of marine biotechnology is currently dominated by developed and emerging market economies. Short-term strategies for small states include seeking opportunities for benefit sharing with existing market participants, in particular for resources found in small states' exclusive economic zones, which are subject to national jurisdiction, including access and benefit-sharing laws and regulations (UNCTAD 2014).

Protection and conservation of ocean resources and ecosystems is a fifth opportunity. Ocean protection and conservation are integral to the concept of the blue economy, with sustainable ocean-based development premised on the maintenance of healthy ocean ecosystems. Oceans provide vital ecosystem services, acting as a thermal mass to store heat, and regulate atmospheric gases and climate change. They absorb and store carbon dioxide and other greenhouse gas emissions through carbon sinks, including mangrove forests and sea grass beds (Constanza 1999; Nellemann et al. 2009). Oceans generate between 50 and 85 percent of the oxygen in the earth's atmosphere (Sekerci and Petrovskii 2015); and provide food, energy, waste management, coastal protection and other services. As ocean economies, many small states are well placed to offer and provide the services that protect and conserve ocean resources and ecosystems and thereby to achieve their sustainable development objectives. But the value of marine ecosystems as a global public good is poorly quantified, limiting the opportunity for small states to claim value from their efforts to help manage these services. And unlike global agreements to compensate for forestry conservation and sustainable management, such as the United Nations Framework Convention on Climate Change's Reducing Emissions from Deforestation and Forest Degradation (REDD+) mechanism, there is no similar arrangement to recognize the services provided through marine ecosystem conservation and management. Concerted and collaborative global action can reverse this by accelerating agreement on the price of blue carbon and by promoting global accord on the goals, targets and measures that can most effectively protect and manage marine ecosystems. In turn, this can directly support small states' efforts to achieve their sustainable development goals.

A New SDG

Agreement in late 2015 on an SDG to promote the conservation and sustainable use of the oceans, seas and marine resources for sustainable development has strengthened blue growth prospects for small states. In the recently adopted 2030 Agenda for Sustainable Development, SDG 14 supports the blue economy approach. It includes a series of specific long-range targets to increase the economic benefits to SIDS from the sustainable use of marine resources, through sustainable management of fisheries, aquaculture and tourism; providing access for small-scale artisanal fishers to marine resources and markets; increasing scientific knowledge, research capacity and transferring of marine technology; and enhancing the conservation and sustainable use of oceans by implementing international law. Several other targets supportive of small states' interests are also included.[2] Over time, SDG 14 can help mobilize significant additional financial, technical and institutional resources, while focusing on specific targets will help attract new partnerships, new technologies and institutional, human and financial resources.

Building on the blue economy framework, many small states have launched blue economy initiatives. In the Caribbean, Grenada is developing a strategy to transform its economy to a "blue economy ocean state," by supporting sustainable productivity increases in marine food systems and sustainable use of coastal and marine resources; promoting single-use and multi-use coastal and ocean spaces; and protecting coastal people's livelihoods threatened by climate change. Jamaica has developed a significant aquaculture industry, and the Bahamas is establishing an integrated framework to manage marine resources. In the Indian Ocean, the Seychelles has developed a vision for a blue economy (Agrippine et al. 2014); and Mauritius has integrated the government's vision to transform the country into an ocean state within its national program, establishing a dedicated ministry for this purpose.

2 See United Nations (2015).

Challenges and Policy Actions

In pursuing a blue economy approach, small states face major — often intractable hurdles — each requiring specific policy actions. First is a set of twin challenges: climate change and ocean degradation. Climate change impacts are severely circumscribing small states' ambitions to pursue a blue economy and blue growth path by causing coastal erosion and land loss, often significant and direct infrastructure damage, and the destruction of ecosystems, including coral reefs and other underwater cultural heritage, and affecting tourism. At the same time, ocean and marine coastal health, on which small states' blue economy future depends, have deteriorated significantly in the past two decades, through the warming of ocean temperatures, ocean acidification, the destruction of coral reefs, pollution, overfishing, and damage to the marine coastal environment, including through dredging, sand mining and mangrove removal to make way for coastal development. These factors compromise the ability of oceans to continue delivering ecosystem services and providing the resources to promote and sustain development. Yet small states, which bear the most immediate and direct consequences in each case, cannot pursue the blue economy in the context of degraded ocean ecosystems and without adjusting to climate change; nor can they finance the adjustment costs. **Instead, addressing these twin challenges will require concerted international momentum to scale up and deliver climate financing and simultaneously to value marine ecosystem services and establish a price for blue carbon, culminating in an internationally agreed ocean degradation agreement similar to that achieved by the REDD+.**

Second, blue economy outcomes that achieve both ecological and sustainable development goals emerge through an explicitly integrated development framework. Developed and emerging economy experiences highlight the need for strategic foresight in national visioning; long-term integrated intersectoral and spatial planning; and recognition and integration of policy, sectoral, legislative and regulatory trade-offs and compromises. Small states have limited policy space to achieve this and many require cohesive, long-term support from regional and international development partners. Building coordination among agencies and departments responsible for managing the marine environment, planning, policy, institutional and resource capacity are all essential to develop, regulate and enforce blue economy legislation and policies. Small states also lack national and regional governance systems to coordinate national marine management agencies and integrate national and regional blue economy strategies in the context of multiple regional agencies and multiple neighbouring maritime boundaries. They require regional and international technical, institutional and human resource support, at scale, to achieve this. **Early establishment of a dedicated global fund for small states is needed to support their transition to a blue economy, constituting an early, tangible deliverable under the 2030 Agenda for Sustainable Developments' SDG 17.**

Third, small states lack access to many of the technologies needed to participate in and gain from the blue economy, and, until recently, have lacked access to data and information important to planning and production, including price, information related to demand and supply, data on fish stocks and scale of stock depletion, as well as weather-related and ocean-health information. Recent improvements at the international level in strengthening knowledge sharing are beginning to help address some of these challenges. However, new forms of support, including in data management and interpretation, are also emerging as key challenges for small states. **New initiatives are needed to accelerate technology transfer to and data access for small states, including through a wider range of South-South and triangular cooperation arrangements.**

Fourth, for small states to effectively develop the blue economy, significant investments are needed in enabling infrastructure in many sectors, including in energy, sustainable tourism, coastal and maritime transport, fisheries and the promotion of food security, ensuring the protection and management of habitats, water supply and infrastructure to reduce pollution and manage waste. Yet small states have limited access to long-term infrastructure finance for these purposes. Some early initiatives have been launched in partnership with conservation-based organizations, for example with the Nature Conservancy to develop blue bonds and debt-for-conservation swaps. But further innovative sources of financing will be required, including blue carbon pricing, and climate financing for the blue economy. **New long-term infrastructure financing mechanisms and products, initiated and delivered by multilateral development banks, as well as emerging new global infrastructure banks such as the New Development Bank, are needed to address the unique infrastructure needs of the blue economy.**

Conclusion

Successfully developing the blue economy can help small coastal and island economies integrate land, coastal and marine development strategies, promote integrated regional value chains and progressively develop and participate in a host of dynamic coastal, marine and ocean-related industries, including land-based oceanic industries, aquaculture, mariculture, marine biotechnology and marine renewable energy. Doing so can reverse global ecosystem loss, foster conservation and promote long-term sustainable development. The tasks ahead are enormous, however, and will require accelerated national, regional and international policy action.

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About the Author

Cyrus Rustomjee is a CIGI senior fellow with the Global Economy Program.

At CIGI, Cyrus is looking for solutions to small states' debt challenges and exploring the benefits of the blue economy. His research looks into how small countries in the Pacific, the Caribbean and elsewhere can benefit from greater reliance on the use and reuse of locally available resources, including those from maritime environments.

Based in the United Kingdom, Cyrus is currently managing director at Cetaworld Ltd., an independent consulting practice. He was previously director of the Economic Affairs Division at the Commonwealth Secretariat in London, as well as head of the G-20 Secretariat at the National Treasury of South Africa at the time the country held the rotating presidency of the group. Cyrus also served as an executive director of the International Monetary Fund (IMF) in Washington, DC, representing 21 African countries at the IMF Executive Board. Previously, he was an adviser to the executive director of the World Bank Group.

In addition to the blue economy and domestic resource mobilization, his research has previously focused on diaspora finance, innovative financing for development as well as migration issues.

Born in Durban, South Africa, Cyrus holds a Ph.D. in economics and an M.Sc., with distinction, in development economics from the University of London, England; a B.Proc. in law and a B.Com. in business economics and private law from the University of South Africa, Pretoria; and a B.A. (Honours) in economics and politics from the University of Oxford.

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CIGI was founded in 2001 by Jim Balsillie, then co-CEO of Research In Motion (BlackBerry), and collaborates with and gratefully acknowledges support from a number of strategic partners, in particular the Government of Canada and the Government of Ontario.

Le CIGI a été fondé en 2001 par Jim Balsillie, qui était alors co-chef de la direction de Research In Motion (BlackBerry). Il collabore avec de nombreux partenaires stratégiques et exprime sa reconnaissance du soutien reçu de ceux-ci, notamment de l'appui reçu du gouvernement du Canada et de celui du gouvernement de l'Ontario.

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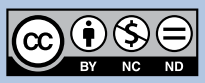

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