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Interactive dialogues

Interactive dialogue 5: Promoting and strengthening sustainable ocean-based economies, in particular for small island developing States and least developed countries

Concept paper prepared by the Secretariat

Summary

The present concept paper was prepared pursuant to paragraph 23 of General Assembly resolution 73/292, in which the Assembly requested the Secretary-General of the 2022 United Nations Conference to Support the Implementation of Sustainable Development Goal 14: Conserve and sustainably use the oceans, seas and marine resources for sustainable development to prepare concept papers on each of the themes of the interactive dialogues, taking into account the relevant ocean-related processes of the Assembly and other possible contributions. The present paper relates to interactive dialogue 5, entitled "Promoting and strengthening sustainable ocean-based economies, in particular for small island developing States and least developed countries". In the paper, the status, trends, challenges and opportunities for the achievement of relevant targets of Sustainable Development Goal 14 are set out, under the overarching theme of the Conference: "Scaling up ocean action based on science and innovation for the implementation of Goal 14: stocktaking, partnerships and solutions".

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I. Introduction

1. The ocean influences the livelihoods of about 40 per cent of the world's population living at or near a coast. As such, its contribution to current and future sustainable economic growth is significant. The ocean's contribution to the global economy, which has been estimated at $1.5 trillion per year and is expected to double to $3 trillion by 2030,[1] spans a wide range of productive sectors: fisheries and aquaculture, tourism, energy, shipping and port activities, and seabed mining, as well as innovative areas such as renewable energy and marine biotechnology. In addition to providing goods and services measurable in monetary terms, coral reefs, mangroves, seagrass meadows and wetlands deliver critical ecosystem services such as coastal protection and carbon sequestration.

2. For small island developing States and coastal least developed countries, marine resources are critical assets, providing countless benefits in the form of food security and nutrition, employment, foreign exchange, culture and recreation. Through evidence-based policy interventions, these assets can also make enhanced and sustained contributions to the economic growth, welfare and prosperity of small island developing States and least developed countries.

3. The coronavirus disease (COVID-19) pandemic was unexpected and small island developing States and least developed countries, like most countries, were ill prepared for its multidimensional impact. While primarily a health challenge, the pandemic has impacted every other aspect of life as well, exacerbating existing vulnerabilities and resulting in a new array of challenges which inhibit the implementation of the 2030 Agenda for Sustainable Development, the SIDS Accelerated Modalities of Action (SAMOA) Pathway (Samoa Pathway) and other sustainable development priorities. The public health protocol measures imposed by all countries, including lockdowns and physical distancing measures, had a severe impact on business activity, pushing up unemployment across all sectors. The fiscal measures instituted to alleviate the economic consequences have made access to finance even more difficult, given the rising debt burdens of small island developing States and least developed countries. Nevertheless, the pandemic has provided an opportunity for these countries to not only ensure that recovery is resilient but also achieve economic diversification through development of their ocean resources.

4. Innovation will be key to the post-pandemic recovery strategies that include increased dependence on coastal and ocean-based resources. Such strategies should be designed to "build forward better" by promoting growth, decent job creation and the diversification of economies into emerging blue and green industries. This will address several SAMOA Pathway priority areas and Sustainable Development Goal 14 and will have the potential to drive progress towards other Sustainable Development Goals.

5. Prior to the pandemic, many small island developing States and least developed countries had already begun contemplating the development of such strategies, with many Governments deploying the necessary building blocks of support, including the development of appropriate policy, legal and institutional frameworks to support ocean sector development. The challenge for most, however, has been to ensure a synergistic approach to operationalizing these agendas and attracting sufficient development finance.

6. The present paper examines key challenges and opportunities for small island developing States and least developed countries in developing their ocean potential within the context of their post-pandemic recovery strategies. New and high-value

[1] See https://www.worldbank.org/en/topic/oceans-fisheries-and-coastal-economies#1.

ocean-based growth industries such as aquaculture, marine biotechnology and ocean renewable energy still remain underdeveloped in these countries. Recognizing that access to appropriate levels of development finance is a constraint for many small island developing States and least developed countries, the paper examines some new approaches for mobilizing private investment and development assistance, including through partnerships.

II. Status and trends

A. Overview

7. Under the public health controls established during the COVID-19 pandemic, many ocean-based economic activities in most small island developing States and least developed countries were managed as essential services, thereby supporting continued operations in the sectors concerned. In most small island developing States, the fisheries sectors were allowed to continue harvesting, processing and trading operations; at the same time, however, they had to invest in additional training, sanitation and safety measures to maintain required health standards for continued operation. Ongoing maritime transportation ensured the provision of vital food supplies, medical goods, energy and raw materials during the pandemic and many countries classified services provided by this sector as "essential", which was crucial for the movement of domestic, regional and international cargo.

8. Border closures and stay-at-home requirements imposed in response to the pandemic in small island developing States and least developed countries had a deleterious effect, particularly on the tourism sector. For Caribbean small island developing States, the countries worst impacted by the pandemic were those whose economies are most dependent on tourism, while the least affected were larger, more diversified economies, for example, Guyana, Suriname and Trinidad and Tobago.[2] This presents a strong case for emphasis on recovery strategies and initiatives that diversify economies in such a way as to include a focus on coastal and ocean potential.

9. Addressing this challenge, however, would require a collective and concerted effort of a magnitude not previously seen in small island developing States and least developed countries, as the scope and scale of interventions appropriate for developing their ocean potential remain suboptimal. While many small island developing States and least developed countries are investing in the appropriate human capital, legal and institutional frameworks, the real potential of oceans and seas as a key economic driver remains to be recognized and exploited. Countries experience challenges in developing and implementing effective policies and legal and institutional ocean governance structures at the national and regional levels, ensuring the required human resource capacity, and cohesive, synergistic approaches to operationalizing these agendas and mobilizing adequate financing.

10. Such cohesive and synergistic implementation requires balancing the needs of multiple economic sectors with diverse stakeholder interests and coordinated governance approaches. In this regard, the United Nations Convention on the Law of the Sea provides the legal framework for all activities in the oceans and seas. It provides legal certainty regarding the extent of sovereignty or sovereign rights and jurisdiction of coastal States, which is essential for the development of sustainable ocean-based economies. The Convention stipulates a comprehensive framework for ocean governance, including a dispute settlement mechanism, which supports

[2] Economic Commission for Latin America and the Caribbean, *The Caribbean Outlook: Forging a People-centred Approach to Sustainable Development Post-COVID-19* (Santiago, 2020).

economic and social development, while also protecting ecosystem health. Full and effective implementation of the Convention and its two implementing agreements,[3] as well as other relevant conventions and instruments, together with effective national legal and institutional frameworks and the requisite national capacity for implementation, are essential prerequisites for success. For most small island developing States and least developed countries, however, national legal and institutional frameworks are generally fragmented and, often, adequate capacity is not in place for effective implementation.

11. Creating sustainable ocean-based economies also necessitates sustainable and integrated management of ocean and coastal spaces, resources and activities. This requires education and awareness and effective human, institutional and technical capacity to implement new strategies and access to adequate financial resources for implementation. Small island developing States and least developed countries will need to ensure that education and related capacity-building programmes consider present and future needs in the areas of marine sciences, research, governance, innovation and technology development. Relevant capacity-building initiatives and the transfer of appropriate marine technology to small island developing States and least developed countries will be key to developing local knowledge and technical capacities. In this regard, acquisition and strengthening of technical and vocational skills training will be important for creating a large enough pool of professional, scientific and skilled personnel. Related to this is the importance of adaptive and evidence-based decision-making enabled by access to quality data, information and knowledge, including local and traditional knowledge.

12. Economic benefits derived from oceans cannot be realized without recognizing the pivotal role of coastal and marine resources and how they are impacted by climate change, global warming and sea level rise and other anthropogenic impacts, such as land-based pollution and biodiversity loss. The first and second World Ocean Assessments[4] highlight the importance of better understanding and addressing cumulative impacts. Any strategy that includes a focus on ocean potential must therefore consider protection of oceans from further degradation and prioritize strategies that are sustainable and regenerative and build resilience.

13. Within the current context of low growth and high debt in most small island developing States and least developed countries, significant public investments in the blue economy are constrained by the lack of adequate fiscal space and readily available financing. Innovative financing mechanisms, including those leveraging private capital investments and enabling improved philanthropic engagement, will be needed to operationalize the blue economy. In this regard, national priorities need to be clearly established and the necessary enabling conditions have to be implemented to reduce risk and make investment more attractive.

B. National policies and plans for policies

14. Prior to the pandemic, many small island developing States and least developed countries had already begun to rethink their development trajectory, focusing on policies that build resilience. Emerging development frameworks focus more on skills

[3] Agreement relating to the implementation of Part XI of the United Nations Convention on the Law of the Sea of 10 December 1982 (the Part XI Agreement) and the Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of 10 December 1982 relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks (the Fish Stocks Agreement) (ibid., vol. 2167, No. 37924). See www.un.org/depts/los/convention_agreements/convention_overview_convention.htm.

[4] See www.un.org/regularprocess/.

development, research, greater technological sophistication, diversified production of goods and services, and sustainable management of natural resources. They also encompass the sustainable blue economy as one means for achieving economic diversification.

15. While many of these blue economy plans exhibit a range with respect to status of implementation, they include diverse approaches including, inter alia, sustainable management of coastal and ocean resources, increasing marine protected areas and establishing clear maritime boundaries, investments in renewable energy, development of sustainable infrastructure, development of new enterprises and jobs, and an emphasis on technological innovation, such as ocean mapping, for policy planning purposes.

16. Notable examples include the 2020 national ocean policy of Saint Lucia, which encompasses the overarching vision, policy statement and strategic outcome for development of the country's blue economy; the blue economy plan of Cabo Verde, with its priority areas of action which include blue economy infrastructure, sustainable tourism and environmental protection; the plans of Barbados to focus, inter alia, on the development of legislation and technology aimed towards more effective fisheries and tourism sectors; and the blue economy strategy road map and implementation plan of Seychelles and launch of that country's first blue bond ($15 million) to finance sustainable marine projects, extend its marine protected areas and develop its fishing sector. In this respect, small island developing States are clearly leading the way.

C. Climate resilience and disaster risk reduction

17. Small island developing States and least developed countries are among the countries most vulnerable to natural disasters and climate change. As such, efforts to scale up adaptation, resilience-building and disaster risk reduction are critical components in building a sustainable blue economy. Through strategies outlined in national adaptation plans and domestic policies, countries have begun to implement resilience-building, adaptation and risk reduction policies and programmes involving projects that range from the development of early warning systems to the creation of nature-based solutions to mitigate the impact of climate change. Specific emphasis has also been placed on local and traditional knowledge systems, such as ridge to reef programmes. For example, after experiencing significant economic losses from intense hurricanes in recent years, Dominica has put forth its vision of becoming the world's first climate-resilient nation, with an emphasis on raising capital for reconstruction and modernization through the country's citizenship by investment programme. Singapore has focused on climate resilience through mitigation efforts and has developed the first carbon tax in South-East Asia to finance the transition to a carbon-neutral economy.

D. Renewable energy

18. The COVID-19 pandemic has had a severe impact on the energy sector of most small island developing States and least developed countries. The disruption in global demand and supply chains and fluctuating oil prices have hit these economies hard, further attesting to the need for accelerated progress in renewable energy uptake.

19. While most small island developing States have set some very ambitious renewable energy targets, which will require diversifying their energy mix by 2030, ocean spaces of small island developing States and coastal least developed countries still remain largely untapped sources of renewable energy. Options for productively

developing marine energy resources lie mainly in the areas of offshore wind, ocean and wave action energy. Tidal technologies show the highest level of readiness and are the closest to approaching commercialization. Once mature, ocean-based energy generation technologies could play an important role in further decarbonizing the world's electricity supply,[5] while providing an ecosystem solution that addresses the food-water-health-energy nexus and boosts investor confidence in small island developing States.

20. Given the high cost of energy infrastructure, the ability of small island developing States and least developed countries to make new investment in the energy sector is constrained by their limited fiscal space. Advancing marine energy requires external finance and expertise. To this end, many small island developing States have been tapping into global capital sources such as the Green Climate Fund. The United Nations Development Programme (UNDP) has developed a framework for assisting Governments in achieving the right policy, incentive and financing mix needed to cost-effectively promote renewable energy investments. The framework provides countries with a platform for creating a risk-return profile which catalyses private sector investment at scale, while funding reliable and affordable renewable energy solutions, particularly marine renewable energy in developing countries.

E. Tourism

21. Tourism is a major growth engine and foreign exchange earner in most small island developing States and coastal least developed countries. For tourism-dependent countries, the industry is also one of the largest employers, supporting one third or more of the labour force in most instances, with the majority of jobs held by women.[6] The border closures and stay-at-home requirements imposed in response to the COVID-19 pandemic have had a deleterious effect on the tourism industry of small island developing States and least developed countries. The sharp fall in visitor and domestic spending resulted in a near shutdown of economic activity and severely affected the livelihoods of small business owners and tourism industry workers.

22. The pandemic's impact on this sector has made it critical for small island developing States to revamp the tourism sector to improve its productivity, value added, efficiency and the technological intensity of the sector's products and services, as a means of moving up the global value chain. Opportunities exist to transform the tourist sector so as to enable it to make greater use of digital technologies and innovative business models, based on the unique selling points of coastal and marine assets.

23. Sustainable, nature-based tourism is a cross-cutting sector which has the ability to address broad issues affecting sustainable development in small island developing States. Indeed, the move towards a sustainable tourism sector must be cross-cutting by design. While some countries have made significant efforts at reform in specific sustainable tourism industry sectors, broader policies and programmes still need to adopt a more holistic approach to their development. In addition, the private sector has a key role to play in driving corporate sustainability frameworks which support preservation of natural capital and help build human capital.

24. In the Pacific region, 90 per cent of the tourism industry comprises small and medium-sized enterprises, while in other regions of small island developing States the industry tends to be dominated by large, internationally owned hotel chains and the cruise industry. The extent to which economic benefits flow to local businesses

[5] See International Renewable Energy Agency (IRENA), *World Energy Transitions Outlook*.

[6] See ECLAC, *The Caribbean Outlook* (2020).

(including auxiliary and/or support goods and services) and local populations varies. This kind of diversity in the tourism industry makes for complexity in the efforts to ensure that environmental best practices are adopted, particularly in the absence of effective national legal and institutional frameworks.

F. Maritime transportation

25. Global transportation has been one of the industries most severely affected by the COVID-19 pandemic to date. Potential disruption first became apparent in the international cruise segment, where activity ground to a halt early in the pandemic. Although commercial shipping was not affected to the same extent, lockdowns, physical distancing and other pandemic management measures in ports and hinterlands resulted in increased port congestion and supply chain disruption at major global shipping hubs.

26. Financial shocks arising from the COVID-19 pandemic were felt in the form of reduced revenues resulting from the disruption of cruises, coupled with a surge in global container freight rates in 2020. As imports of small island developing States depend heavily on maritime transport, their import prices are simulated to increase by 26.7 per cent, more than double the impact at the global level. Increases in consumer prices of small island developing States are also simulated to be five times the increase in global consumer prices, at 8.1 per cent.[7] Even before the pandemic, small island developing States and least developed countries experienced relatively higher costs for their imports and exports when compared with other developing countries. The United Nations Conference on Trade and Development (UNCTAD) estimates that in 2016, the average freight cost as a share of value of imports was greater than 20 per cent for small island developing States compared with a world average of about 15 per cent. For example, shipping costs per container is 312 per cent higher between major ports in the Pacific than in South-East Asia,[8] while several small island developing States in the Pacific suffer from the lowest shipping connectivity.

27. A key concern for small island developing States is their marginalization from global shipping and trading networks due to geography, size and market structure, among other factors. The UNCTAD liner shipping connectivity index indicates a widening gap between the best and least connected countries, with many small island developing States having seen their indexes stagnate between 2006 and 2021. Among the 50 least connected economies, 37 were small island developing States. The exceptions were the Bahamas, Jamaica and Mauritius which have high and growing liner shipping connectivity indexes, as they have developed into regional hubs, attracting trans-shipment of containerized trade.[9] Bridging small island developing States' shipping connectivity divide is a precondition for sustainable ocean-based economies. This may require more sustainable domestic and interregional shipping solutions which capitalize on small-scale inter-island regional trade opportunities. The pandemic has shown that ensuring linkages between domestic, regional and international networks is crucial.

[7] UNCTAD, *Review of Maritime Transport 2021* (United Nations publication, Sales No. E.21.II.D.21), as updated in March 2022.

[8] See https://fijisun.com.fj/2020/03/05/outer-island-connectivity-in-pacific-island-nations/.

[9] UNCTAD, *Review of Maritime Transport 2021* (United Nations publication, Sales No. E.21.II.D.21).

G. Sustainable fisheries and aquaculture

28. Aquatic food systems are a critical element for transformation into a sustainable ocean-based economy. Sustainable aquatic foods can make a substantial contribution to gross domestic product (GDP), particularly for small island developing States and least developed countries, where small-scale and artisanal fisheries are an essential component of national economies, employing about 9 per cent of all people working in value chains of capture fisheries. Sustainable fisheries at all scales and aquaculture can offer opportunities to alleviate poverty, hunger and malnutrition, generate economic growth and ensure better use of natural resources, but only if they are well managed.

29. The factors that constrain the development and management of the fisheries sector in small island developing States and least developed countries are complex and include a lack of institutional and human capacity in both the public and private sectors, lack of reliable data, complexities of fisheries management, post-harvest losses, poorly developed safety regulations for fishing vessels, and fledgling and underdeveloped national fishing industries for the harvesting and processing of offshore resources. Similar constraints exist in aquaculture, where lack of capacity and poor access to knowledge, technology, feeds and financing prevent sustainable growth.

30. Another critical barrier to growth in this sector stems from the fact that fish value chains in small island developing States and least developed countries are poorly understood. Sustainable value chains include not only efficient production and transport but also access to market information systems, sustainable management, transparency, equitability and affordable products for food-insecure groups. Examining existing value chains and analysing the opportunities for and constraints on their future development can help maximize and equitably distribute revenue flow in the sector through improved utilization of scarce resources, reduced fish loss and waste, improved processing, value addition and efficient marketing and distribution. The COVID-19 pandemic demonstrates that the seafood sector, among others, is subject to economic volatility related to external economic shocks.

31. Notwithstanding, aquaculture is well reflected in the national development strategies and legislative frameworks of small island developing States and least developed countries, given the opportunities it provides for diversifying livelihoods and increasing the supply of nutritious foods and the potential for foreign exchange from the export of high fish values. However, the growth of aquacultural activity must follow sustainable aquaculture practices and ensure equitable distribution of benefits.

H. Finance

32. The COVID-19 pandemic and its economic fallout have had a negative effect on public balance sheets of small island developing States and least developed countries and have further exacerbated already high debt risks. Many small island developing States and least developed countries have had to seek the support of international financial institutions, including the International Monetary Fund (IMF). While support for greater access to multilateral development bank resources is welcome, access to those resources for most small island developing States is not on concessional terms. Furthermore, access to international capital markets is limited and costly for many small island developing States owing to the perception of higher sovereign risk.

33. In this regard, the importance of innovative finance and the need to explore new and cost-effective instruments for risk transfer cannot be overstated. From blue bonds

and resilience bonds to blended finance approaches and risk-mitigation solutions such as climate insurance, the reach of blue finance can be transformational. Catalysing private sector investment for infrastructure (natural and human-induced only) is also critical, although such efforts remain relatively nascent. Private sector investment is at the heart of mobilizing the blue economy and unless national strategies are crafted to build a favourable climate for private sector investment, this potential will continue to go untapped. While some countries have had moderate success in leveraging domestic resources and public investment, significant barriers still remain.

III. Challenges and opportunities

34. The disruptive effects of the COVID-19 pandemic in small island developing States and least developed countries have demonstrated the need for integrated recovery strategies which can allow these countries to not only build a more sustainable, inclusive and resilient future but also respond effectively to future shocks. The present section discusses some potential opportunities and key challenges associated with the pursuit of sustainable ocean-based economies, in particular for small island developing States and least developed countries.

A. Challenges

1. Climate change adaptation

35. While the effects of climate change on the economies of small island developing States and least developed countries are relatively well known, the impacts of climate change on oceans are slowly becoming better understood. The 2019 Intergovernmental Panel on Climate Change (IPCC) *Special Report on the Ocean and Cryosphere in a Changing Climate* provided the latest and most rigorous estimates of the anticipated impacts of climate change on marine and coastal ecosystems and the communities directly dependent on them. A key finding of the report is that governance arrangements (e.g. management systems, marine protected areas and marine spatial planning) are in many contexts too fragmented across administrative boundaries and sectors to provide integrated responses to the increasing and cascading risks from climate-related changes in the ocean.

36. Multifaceted approaches to building adaptation and resilience of coastal infrastructure are required to address this challenge effectively. At the national level, a recent UNCTAD assessment of climate-induced impacts on eight seaports and coastal airports in two Caribbean small island developing States (Jamaica and Saint Lucia) highlights the importance of climate change adaptation for critical international transportation assets. Mainstreaming climate change considerations into coastal zone planning and operations, marine conservation and fisheries and aquaculture management, as well as pursuing policy coherence in overall sustainable development decision-making, is critical. Innovative and mixed adaptation responses (regulation, management and technical measures) are needed, including “soft” and “hard” adaptation measures. Nature-based solutions such as protecting and restoring wetlands, mangrove forests, seagrass beds and coral reefs, including by leveraging greater private investment, will advance multiple policy goals, including improving ocean health, sequestering carbon, building resilience and enabling adaptation, protecting biodiversity and enhancing food security, while supporting livelihoods in vulnerable communities. These efforts will also enhance implementation of the Paris Agreement and achievement of the Sustainable Development Goals.

37. Collaboration and participation of a broad range of actors are important, both in relation to the assessment of impacts and in the planning, development and

implementation of effective adaptation measures. Successful adaptation strategies must be based on strong science-driven legal and regulatory frameworks which can help reduce exposure and/or vulnerability of coastal infrastructure to climate risks.

38. Appropriate policies and standards also have an important role to play, particularly in the context of infrastructure planning and coastal zone management. Knowledge gaps still exist regarding specific vulnerabilities and the specific nature and extent of exposure. Guidance, best practices, checklists, methodologies and other tools in support of adaptation are urgently required and targeted capacity-building is critical.

39. Building resilient communities requires resources, access to which is often hindered by insufficient and uncoordinated international financing mechanisms, difficulties in gaining access to and managing climate finance, and limited local financing capabilities. Limited data on the full impacts of disasters and climate change in small island developing States and least developed countries may prevent the correct allocation of resources. Therefore, tools for assessment of socioeconomic and environmental impacts, such as damage and loss assessments and post-disaster needs assessments, should be deployed more consistently and supported with funding alternatives which allow the necessary recovery and resilience enhancement measures to be adopted in small island developing States and least developed countries. In this sense, countries should aim towards improving the design and implementation of policies for financial protection against the risk of disasters and harmful effects of climate change and have specific budgetary allocations to this end, while at the same time improving statistics and technical capacities for incorporating resilience and risk mitigation measures in public and public-private investments.

2. Preventing and managing marine pollution

40. Land-based activities continue to constitute approximately 80 per cent of the sources of marine pollution, highlighting the need for integrated source-to-sea approaches to protecting ocean health. Plastics continue to be the most prevalent debris item recorded, contributing approximately 60–80 per cent of all marine litter, which represents a tenfold increase since 1980. While the plastics agenda is covered by a range of international and regional processes, more remains to be done, including the development of indicators needed to measure progress towards achieving target 14.1 of the Sustainable Development Goals. Under the aegis of the United Nations Environment Assembly, a new process for negotiation of a treaty on global plastic pollution was launched in March 2022.

41. While the United Nations Convention on the Law of the Sea provides for the general legal framework for protection and preservation of the marine environment, marine spatial planning, integrated coastal zone management and the source-to-sea approach can also help limit the impacts of land-based activities on ocean health by highlighting the relationship between upstream sources of pollution and downstream ocean sinks. The GloLitter Partnerships programme assists developing countries in preventing and reducing marine plastic litter from the maritime transport and fisheries sectors by focusing on a number of areas identified in the International Maritime Organization Action Plan to Address Marine Plastic Litter from Ships and through complementary actions as identified by the Food and Agriculture Organization of the United Nations (FAO).

3. Capacity-building and institutions

42. Scientific, regulatory and institutional capacity to formulate and implement the ocean governance frameworks that underpin sustainable ocean-based economies must be built and/or strengthened. Strong legal and institutional frameworks provide the

predictability necessary to foster innovation and public and private sector investment. Institutional reform to ensure efficient and effective vertical and horizontal coordination may also be needed to enable effective integration of all sectors within those governance frameworks.

43. In many cases, capacity-building activities must be coupled with the financial incentives needed to motivate the private sector to make the changes required for the transition to a more sustainable economy. Incentives are also needed, especially in small island developing States and least developed countries, to support the poor and marginalized in building their capacity to participate in the alternative livelihoods provided through the transition to a blue economy. Knowledge management and communication are critical for building support across all stakeholders, and this often requires an understanding of relevant ocean governance frameworks and what is involved and needed to access and build local value in value chains and where to obtain the assistance to do so. The range of capacity needs in this regard may encompass language skills, understanding of international customer service standards, vocational and entrepreneurship skills, financial literacy and understanding of market information systems.

4. Knowledge development and sharing

44. Small island developing States and least developed countries often have limited capacity for science, technology, innovation and the creation of knowledge, all of which are necessary for the development of a sustainable blue economy. Building knowledge and technical capacities centred on the marine environment facilitates effective participation in research and knowledge creation and development and allows for optimized use and management of ocean resources. Small island developing States and least developed countries must align education and training with future requirements by addressing gaps in governance frameworks, marine sciences, oceanic research, innovation and technology development. Strengthening academic institutions, universities, technical and vocational skills training focused on the blue economy and its associated activities and building peer networks to facilitate information exchange and collaboration across countries are crucial. Creating gainful long-term employment will also support retention of professional and other skilled human resources and provide career options for youth, women and local communities. The private sector needs to play a key role in both establishing upstream needs and remaining a stakeholder in processes, including through, inter alia, public-private partnerships for education and innovation.

5. Integration of local and indigenous knowledge

45. Traditional, local and indigenous knowledge have long been at the core of relationships between societies and their environment. This knowledge can contribute insights on the sustainable use of natural resources. States should investigate and document traditional, local and indigenous fisheries knowledge and technologies in order to assess their application to sustainable fisheries conservation, management and development. Traditional, local and indigenous knowledge can be utilized together with science to address the challenges confronting oceans, with each bringing perspectives which could lead to novel solutions reinforcing the ability of least developed countries and small island developing States to respond to change and build resilience. This also supports the empowerment of local and indigenous communities with respect to improved resource management.

6. Accurately valuing blue natural capital

46. Current approaches to valuing the ocean economy could underestimate its contribution, particularly regarding the value of non-market goods and services such

as ecosystem goods and services (e.g. the protection offered by coral reefs and carbon sequestration). While improvements have been made in accounting methods and techniques, there remain gaps in the data and information required to price ecosystem benefits accurately and at the level where this information can be used to better inform policy and investment decisions.

7. Finance

47. Investments in the ocean economy are constrained by several challenges in most small island developing States and least developed countries, particularly as related to financing. These include limited scope for debt finance, restricted fiscal space and declining aid flows. Increasing debt levels have put a drag on economic growth and development in many small island developing States, while constraining the allocation of resources for productive and new investments.

48. The ability of the small island developing States to access concessional development finance has been hindered by weak technical capacity for project identification and development of high-quality proposals, and complex application processes, as well as chronic implementation deficits. Small island developing States and least developed countries will require technical and capacity-building support from the international community in order to fully develop and benefit from competitive blue economy industries. Some of these capacity-building needs include training in project pipeline preparation, developing high-quality project proposals, research and application of alternative financing models and an enhanced capacity to implement, monitor and evaluate projects that will be critical to delivering on blue economy objectives. Developing a coherent and credible blue economy strategy may potentially enable these countries to leverage more financing for blue economy development. Capacity-building and collaboration in these areas may also enable enhanced targeting of traditional infrastructure investments and climate funding to better integrate and support the blue economy.

49. Advancing the blue economy will require investments in infrastructure, conservation, research and development, and institutional and human capacity development, as well as information sharing and knowledge building. Considering the level of investment that will be needed to achieve these objectives, vis-à-vis the current fiscal constraints and debt dynamics of most small island developing States and least developed countries, these countries must find new and innovative ways to finance investments in the blue economy. A paradigm shift is needed in the use of available financing as well as optimal use of available resources from all sources. In 2022, the President of the General Assembly established a High-level Panel on the Development of a Multidimensional Vulnerability Index for Small island Developing States. This index could serve as the basis for updating criteria for access by small island developing States to concessional finance, including to address systemic vulnerabilities in their economic development and to external threats like climate change and the ongoing COVID-19 pandemic. The opportunities to leverage domestic resources by blending official concessional finance with other international resources for the blue economy are promising. Opportunities also exist for increasing available public resources as well as private sector finance and investment for blue economy initiatives. Increasing the resource envelope to finance blue economy initiatives also requires new approaches for drawing upon the existing pools of development finance. It may also require the development and piloting of new instruments.

50. Blended finance can offer substantial opportunities, including for improving investor confidence by providing upfront low-interest or grant-based investments to strengthen the enabling environment (e.g. through strengthening the governance and regulatory environment and restoring the resource base), aimed towards reducing risk profiles and improving investor confidence. This might include investing in

(a) education and capacity-building; (b) improved fisheries policies as well as monitoring, control and surveillance at sea to reduce illegal, unreported and unregulated fishing and strengthen sustainable management of fisheries; (c) effective protection of habitats and ecosystems (e.g. coral reefs and mangroves) that provide essential ecosystem services such as coastal protection and carbon sequestration; (d) implementation of marine spatial planning to inventory maritime spaces, resources and activities, reduce user conflicts and ensure that cumulative impacts of activities do not exceed the carrying capacity of an ecosystem; and (e) the setting up of investible entities which can substantially lower transaction costs and aggregate sustainable projects so that they become more investible.

B. Opportunities

1. Fisheries and aquaculture

51. The fisheries and aquaculture sectors provide significant opportunities for growth and expansion in small island developing States and least developed countries. Developing the aquaculture subsector and other upstream and downstream activities along the fisheries value chain can create employment and economic benefits (Food and Agriculture Organization of the United Nations, 2019). For fisheries and aquaculture to be globally competitive and to improve market access for small-scale artisanal fisheries, investments in sanitary, phytosanitary and traceability controls, among other international trade requirements, will be needed. For aquaculture to become a viable option, it must expand sustainably, minimize environmental impacts and distribute benefits (both financial and dietary) equitably.

52. Small island developing States and least developed countries will require innovative financing mechanisms, technical support and technology transfer to develop viable aquaculture value chains. Key support areas include good hatchery practices for quality seed, strategies for regional support, biosecurity and animal health, integrated fish and plant farming, and business planning.

53. Many fisheries are data-deficient and have limited statistical information, which hampers both national policymaking and fishery management and regional management of shared resources. While these fisheries can still be successfully managed through holistic approaches which include, inter alia, incorporation of local and traditional knowledge, the private sector and civil society organizations, data and information collection and analysis must be enhanced to improve management of regional, subregional and national fisheries governance arrangements.

54. Some opportunities also exist to diversify fisheries livelihoods through holistic approaches and planning which integrate fishing, tourism and conservation. For example, area-based management approaches, such as the creation of marine protected areas, can link fisheries with tourism through visitor attractions and other land-based and community events associated with fisheries. The industry also presents a range of opportunities for technical and economic diversification in various fisheries-related activities such as land-based production of ornamental fish for export; growing fish, seaweed and other marine organisms in the sea; recreational fishing linked to tourism; food processing and manufacturing; and conservation of the marine environment.

55. Assessments on how to maximize current fish value through improved gear, post-harvest fish smoking or salting, use of underutilized and/or invasive species and use of fish waste have proved to be successful means of ensuring additional economic value and improved livelihoods. Such activities can yield multiple benefits. For example, using fish silage (low-tech processing of fish waste) as an ingredient in animal feed can reduce organic pollution of fish landing sites while increasing the value of fisheries waste products. Closing the animal feed cycle can reduce both

dependence on imported ingredients and excess pollution going back into marine habitats.

2. Tourism

56. Coastal and ocean-based destinations are major employment providers, generating millions of jobs in small island developing States and least developed countries and billions in annual revenues. In keeping with the trends in global tourism, nature-based and cultural tourism relating to the conservation, protection, restoration and the historical and cultural heritage of coastal and ocean-based resources offers growing opportunities. Innovative value chain models targeting local and international markets are led mainly by small localized coastal communities and women's groups.[10] These alternative nature-based tourism attractions will also contribute to post-pandemic recovery and to the building of a sustainable ocean-based economy.

3. Marine biodiversity

57. Living marine resources have great potential for the development of new food, biochemicals, biomaterials, pharmaceuticals and cosmetics, fertilizers and pest control products. In addition, new tools in the field of "omics" (e.g. genomics, proteomics, metabolomics) based on marine genetic resources show promise across the areas of fisheries management, aquaculture development, food and water safety, species and habitat conservation, seafood consumer protection and natural products discovery. For example, two chemicals that have been isolated from the Caribbean Sea sponge, *Tectitethya crypta*, are used in the development of drugs to treat, inter alia, cancer, human immunodeficiency virus (HIV) infection, hepatitis, herpes and, more recently, Ebola virus and coronavirus diseases.[11] This is significant for small island developing States, whose exclusive economic zones are extensive.

58. It is important for small island developing States to regulate access to and downstream use of marine genetic resources extracted from their exclusive economic zones with a view to ensuring mutually agreed access and benefit sharing in accordance with the Convention on Biological Diversity and the Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from Their Utilization to the Convention on Biological Diversity. Marine genetic resources and the issue of the sharing of the benefits they provide are among the topics being considered by the intergovernmental conference on an international legally binding instrument under the United Nations Convention on the Law of the Sea on the conservation and sustainable use of marine biological diversity of areas beyond national jurisdiction.

59. It is to be noted, however, that small island developing States and least developed countries are faced with scientific capacity challenges, including a lack of expertise in taxonomy and biotechnology, difficulties in attracting and retaining qualified marine scientists and limited research facilities and financial resources. Information sharing, capacity-building and the transfer of technology, including through the participation of developing States in research activities, are considered essential to addressing the general lack of scientific and other knowledge on marine genetic resources in developing countries. While research collaboration among institutions from industrial and developing countries as well as capacity development

[10] Pawan G. Patil and others, *Toward a Blue Economy: A Promise for Sustainable Growth in the Caribbean* (Washington, D.C., The World Bank, 2017).

[11] Gilberto Schwartsmann, Adriana Brondani da Rocha, Roberto G.S. Berlinck and José Jimeno, "Marine organisms as a source of new anticancer agents", *The Lancet,* vol. 2, Issue No. 4 (April 2001).

initiatives undertaken by intergovernmental organizations has provided both training opportunities and technology transfer, such collaborations have thus far been ad hoc and limited in scope.

4. Maritime transportation

60. For Caribbean small island developing States in particular, the Panama Canal and the Caribbean Sea occupy strategical locations along major international shipping and trading routes. Through its geographical location and expanded capacity, the Panama Canal provides opportunities for Caribbean countries to be optimally positioned in the global freight, logistics and maritime transportation sectors.[12]

61. To benefit from the new traffic expected, the Bahamas, Cuba, the Dominican Republic and Jamaica have launched projects to deepen harbours and expand capacity handling (Association of Caribbean States, 2014). In addition, the Government of Jamaica has embarked on its global logistics hub initiative, to be developed through global partnerships, private sector investment and financing from private-public partnerships, to capitalize on the trade and business opportunities emanating from the expansion of the Panama Canal (Jamaica Special Economic Zone Authority, 2019).

5. Emerging ocean-based sectors

62. Marine renewable energies, discussed in section II above, and marine minerals constitute other emerging ocean-based industrial sectors. Polymetallic nodules, polymetallic sulphides and cobalt-rich ferromanganese crusts found in the deep seafloor are rich sources of some major critical minerals such as copper, cobalt, nickel and manganese and rare earth elements essential for clean energy technologies needed to decarbonize economies. The mineral demand from the transition to clean energy technologies is expected to quadruple by 2040[13] to reach the goals of the Paris Agreement adopted under the United Nations Framework Convention on Climate Change.

63. A core component of the International Seabed Authority is to ensure effective protection of the marine environment from harmful effects that may arise from mining activities in the deep ocean. Its work is informed by the precautionary approach and the best available science and environmental practices.

64. The deep seabed mining sector is at various stages of development in some small island developing States and least developed countries. Notable examples in this regard include the Cook Islands, Jamaica, Kiribati, Nauru, Singapore and Tonga which have sponsored exploration activities in the international seabed area.

6. Marine ecosystem conservation

65. While small island developing States are home to some of the world's most biologically diverse marine ecosystems, in many instances the health of those ecosystems is declining, owing to the combined impacts of stressors of anthropogenic origin such as pollution, climate change, biodiversity loss and habitat destruction and overfishing resulting in degraded coral reefs, seagrass beds and mangroves as well as depleted and unsustainable fisheries. The cumulative impacts of these stressors are just beginning to be understood.

66. Conservation measures, including creation of marine protected areas and other effective area-based conservation measures, have been implemented in many

[12] Fritz Pinnock and Ibrahim Ajagunna, "Expansion of Panama Canal and challenges for Caribbean ports", *Caribbean Maritime*, No. 16 (May–September 2012).

[13] International Energy Agency, *The Role of Critical Minerals in Clean Energy Transitions* (2021).

countries to help marine environments recover from unsustainable development practices along coasts and from marine pollution generated by land-based sources and are all essential tools for the development of a sustainable blue economy. While the primary objectives of these area-based management tools are centred on the sustainable use of resources and protection of ecosystems and biodiversity, in several instances they also support local livelihoods and have produced important tourist attractions, supporting key activities such as scuba diving and snorkelling. These measures, if properly managed, can drive sustainable tourism and provide local employment while at the same time building the resilience of key habitats to the impacts of climate change and can thus contribute to achieving a blue economy.

7. Mainstreaming gender considerations

67. Globally, the adoption of a gender-equitable approach to the development of a sustainable ocean-based economy has significant potential to enable the building of more stable, resilient and sustainable communities and to help address immediate food security issues and foster long-term economic growth. Initiatives such as the Women in Deep-Sea Research project help bridge the gender gap in deep sea-related research disciplines and careers, in particular for women from small island developing States and least developed countries.[14]

8. Marine spatial planning tools

68. Increasingly, marine spatial planning tools are being applied to allow different oceanic sectors and stakeholders to jointly discuss the use and conservation of a specific ocean area, thereby averting conflicts and creating synergies in ocean use. Consequently, marine spatial planning may support efforts to build ocean resilience and restore critical ecosystems. Properly used, marine spatial planning can serve as an important tool for strengthening enabling conditions and reducing risk, thereby opening the door to finance and private sector actors and giving them the opportunity to play an important role in effectively implementing such plans.

69. To benefit from a sustainable ocean-based economy, small island developing States and least developed countries will need to commit to an integrated and interdisciplinary management structure and also effectively implement the United Nations Convention on the Law of the Sea and other, related agreements. At the same time, the economic valuation of marine and coastal resources, legislation, investments in human capital, technological readiness and institutional structures are necessary tools for harnessing the employment and sustainable development benefits of investing in innovative ocean and coastal economy sectors. In this regard, several developing countries are receiving technical support in the area of ocean governance and the law of the sea to reinforce their capacity for achieving sustainable ocean economies.

IV. Existing partnerships

70. A constantly changing and volatile global environment demands the development and maintenance of genuine and durable partnerships. While flows of official development assistance (ODA) to least developed countries continue, for small island developing States these have been relatively low and more volatile and have been declining in both multilateral and bilateral components since the global economic crisis of 2008–2010.[15] While concessional flows have increased globally, many small island developing States have become increasingly less successful in

[14] See www.isa.org.jm/vc/enhancing-role-women-msr/WIDSR-project.

[15] See *World Economic Situation and Prospects*.

accessing international development assistance, their classification as middle-income countries excluding them from concessionary funding. Small island developing States must intensify efforts to mobilize external resources and these countries must continue to press the case that their vulnerability is a defining characteristic which must be reduced through resilience-building strategies.

71. Intensified efforts at resource mobilization by small island developing States and least developed countries should involve exploring new sources such as South-South cooperation and private and philanthropic funding, which are increasingly important in development cooperation, as well as new modalities such as triangular delivery and the utilization of blended finance to lower costs.[16] Meeting the costs of implementing global, regional and national development frameworks demands that small island developing States embark on a process of strengthening traditional partnerships and developing new ones.

72. Over the last decade, there has been a steady rise in the number of partnerships for small island developing States and least developed countries related to the blue economy. The 2017 high-level United Nations Conference to Support the Implementation of Sustainable Development Goal 14 resulted in over 1,400 voluntary commitments for implementation of Sustainable Development Goal 14 (Conserve and sustainably use the oceans, seas and marine resources for sustainable development), which included many small island developing State- or least developed country-specific partnerships. Collectively, these partnerships make considerable contributions to the sustainable development of those countries, as they typically place themselves in the nexus of economic development, social inclusion and environmental protection and often seek to advance innovation, new technologies and capacities and provide employment opportunities in sectors including sustainable tourism, fisheries, aquaculture, renewable energy, transportation and blue carbon.[17]

73. The challenge has been to assess the impact of those partnerships. Many of them do not always report on their impacts at the global level and thus there is no consistent and comparable source of information about impacts on beneficiaries. Some information in this respect is available from individual partnerships and from donor-conducted evaluations.[18] Information, where available, on some of the impacts can be summarized as follows:

(a) Direct impacts on beneficiaries (e.g. increased resilience of communities);

(b) Direct impacts on the environment (e.g. protection of marine and terrestrial environments);

(c) Knowledge, information, data and indicators (e.g. platforms; knowledge sharing);

(d) Improved coordination between agencies and organizations, leading to a more effective and comprehensive delivery of programmes and outcomes;

(e) Improved capacity (e.g. training programmes; delivery of university programmes and virtual education);

(f) Positive policy environment (e.g. developing agreed-upon comprehensive ocean policies and accompanying strategic actions plans).

[16] ECLAC, *The Caribbean Outlook* 2018.

[17] United Nations, Department of Economic and Social Affairs, *Partnerships for Small Island Developing States*, 2019.

[18] Ibid.

V. Possible areas for new partnerships

74. At the same time, partnerships could be further strengthened to assist States in the development of a national blue economy strategy, in particular in the following underdeveloped areas:

(a) Multiple dimensions of hunger, malnutrition and poverty, particularly in countries and areas with a high number of poor and vulnerable households. These partnerships may require sustained investments in human capital and may include agriculture, small-scale fisheries, rural development, market development, trade and other activities;

(b) Analysis of the scope for diversification of the production base of small island developing States and least developed countries for selected blue and green value added exports, and for connecting them to relevant markets;[19]

(c) Sustainable transportation, particularly in terms of low-carbon, low-cost options;

(d) Integrated ecosystem management focusing on whole islands, particularly on terrestrial and watershed areas, and their connection to the sea, as well as human livelihoods;

(e) Capacity support to address data gaps;

(f) Capacity support for the development and implementation of marine spatial plans with private sector involvement;

(g) More effective use of public capital towards the de-risking of ocean investments: this will foster increased private sector investments;

(h) Capacity development for the valuation of coastal and marine resources;

(i) Improvement and effective implementation of national legal and institutional frameworks for ocean governance, including by implementing reinforcement of their capacity to implement the United Nations Convention on the Law of the Sea and related agreements.

VI. Conclusions and recommendations

75. A sustainable blue economy approach presents a pathway for policymakers in small island developing States and least developed countries to build on their comparative advantages and create an environment that attracts private sector investment and growth. Achieving economic transformation that is grounded in the principles of the blue economy requires:

(a) Advocacy and commitment at the highest levels and empowered participation;

(b) Effective ocean governance frameworks which integrate the blue economy;

(c) Key institutional capacity and policy necessary to facilitate the transition;

(d) Appropriate mechanisms supporting research, innovation and technology transfer;

(e) Global dialogue and advocacy, centred, for example, on ocean governance;

[19] See https://unctad.org/en/Pages/DITC/Trade-and-Environment/Oceans-Economy-Trade-Strategies.aspx.

(f) Supportive business environments and infrastructure;

(g) National and regional knowledge hubs.

76. In order to capitalize on the opportunities provided by the blue economy, small island developing States and least developed countries in particular require appropriate national evidence-based strategies or plans in which risks are quantified, systemic impacts are assessed and decision-making processes and activities reflect new knowledge of potential risks, cumulative impacts and opportunities. These strategies and plans must also encourage and support partnerships at all levels to accelerate progress and innovative solutions (both land- and ocean-based) which have a positive impact on marine ecosystems and ocean-dependent food systems and livelihoods.

77. Such country-level planning must be underpinned by an appropriate enabling environment, in which environmental, social and economic risks are reduced, in which strong legal and institutional frameworks are in place and in which there is access to adequate and sustained financing including for small and medium-sized enterprises and microenterprises. In addition, countries should support capacity-building and resources for developing and managing new sustainable project pipelines and take advantage of innovative finance opportunities. This might include building mechanisms for facilitating effective stakeholder engagement, identifying and mitigating the impact of any issues and sharing knowledge and best practices, as well as business planning and management.

78. At the global level, countries should actively seek to develop knowledge, data and capacity on the potential risks and impacts associated with new development pathways, ensuring that scientific information and data on the marine environment are proactively shared to support decision-making and innovation. This will improve development outcomes for all.

VII. Guiding questions

79. The following guiding questions may be used to inform the dialogue:

(a) What kind of support is necessary to help build or further strengthen capacity in small island developing States and least developed countries to effectively pursue sustainable ocean-based economy approaches in a post-pandemic landscape?

(b) What are the sectors where targeted investments can have the greatest impact on building the blue economy in small island developing States and least developed countries? What innovative financial tools and options can be developed and deployed to support this investment in small island developing States and least developed countries?

(c) How can partnerships help the international community support the scientific understanding of ocean systems and their interactions with human systems? How can the United Nations Decade of Ocean Science for Sustainable Development and the Regular Process for Global Reporting and Assessment of the State of the Marine Environment, including Socioeconomic Aspects, help enhance this cooperation?

(d) Access to concessional development finance is key for investment by small island developing States and least developed countries in their ocean potential. How can the international community best support small island developing States and least developed countries in this regard?

(e) What are the key challenges and opportunities with respect to incorporating blue economy initiatives into ocean governance legal and institutional frameworks?