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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 by the Secretariat

Summary

The present paper was prepared in response to paragraph 23 of General Assembly resolution 73/292, which requested the Secretary-General of the Conference to prepare concept papers on each of the themes of the interactive dialogues, taking into account the relevant ocean-related processes of the General Assembly and other possible contributions. This is the concept paper for interactive dialogue 5, entitled "Promoting and strengthening sustainable ocean-based economies, in particular for Small Island Developing States and Least Developed Countries". The paper outlines the status and trends, challenges and opportunities for the achievement of relevant SDG 14 targets, 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".

I. INTRODUCTION

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

2. For Small Island Developing States (SIDS) and coastal Least Developed Countries (LDCs), 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 their economic growth, welfare and prosperity.

3. For SIDS and LDCs, the COVID-19 pandemic was unexpected, and, like most countries, they were ill prepared for its multidimensional impact. Although primarily a health challenge, the pandemic has impacted every aspect of life, exacerbating existing vulnerabilities and resulting in a new array of challenges that inhibit the implementation of the 2030 Agenda for Sustainable Development, the SAMOA Pathway and other sustainable development priorities. The public health protocol measures, including lockdowns and physical distancing measures imposed by all countries, 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 these countries. Nevertheless, the pandemic has provided an opportunity for SIDS and LDCs to not only ensure that recovery is resilient, but also for economic diversification through development of their ocean resources.

4. Innovation will be key to the post COVID-19 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/green industries. This will address several SAMOA Pathway priority areas and Sustainable Development Goal (SDG) 14, with the potential to drive progress in other SDGs.

5. Prior to the pandemic, many SIDS and LDCs 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.

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

6. This paper examines key challenges and opportunities for SIDS and LDCs in developing their ocean potential within the context of their post-COVID-19 recovery strategies. New and high-value 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 SIDS and LDCs, the paper examines some new approaches for mobilizing private investment and development assistance, including through partnerships.

II. STATUS AND TRENDS

Overview

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

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

9. Addressing this would however require a collective and concerted effort of a magnitude not previously seen in SIDS and LDCs, as the scope and scale of appropriate interventions to develop their ocean potential remains suboptimal. While many SIDS and LDCs 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, legal and institutional ocean governance structures at the national and regional levels, ensuring the required human resource capacity, cohesive, synergistic approaches to operationalizing these agendas and mobilizing adequate financing.

[2] The Caribbean Outlook: forging a people-centred approach to sustainable development post-COVID-19, ECLAC 2020

10. Such cohesive and synergistic implementation requires balancing multiple economic sectors with diverse stakeholder interests and coordinated governance approaches. In this regard, the United Nations Convention on the Law of the Sea (UNCLOS) provides the legal framework for all activities in the oceans and seas. It gives 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. UNCLOS stipulates a comprehensive framework for ocean governance, including a dispute settlement mechanism, which supports economic and social development, while also protecting ecosystem health. Full and effective implementation of UNCLOS, 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 SIDS and LDCs, however, national legal and institutional frameworks are generally fragmented and adequate capacity is often not in place for effective implementation.

11. Creating sustainable ocean-based economies also requires 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. SIDS and LDCs will also need to ensure that education and related capacity-building programmes consider present and future needs in marine sciences, research, governance, innovation and technology development. Relevant capacity building initiatives and the transfer of appropriate marine technology to SIDS and LDCs will be key to developing local knowledge and technical capacities. In this regard, it will be important to acquire and strengthen technical and vocational skills training, to create 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 from oceans cannot be realized without also 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, regenerative and build resilience.

13. Within the current context of low growth and high debt in most SIDS and LDCs, 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

[3] Agreement relating to the implementation of Part XI of the United Nations Convention on the Law of the Sea of 10 December 1982, and the United Nations 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 Convention and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks ("1995 United Nations Fish Stocks Agreement"). See https://www.un.org/depts/los/convention_agreements/convention_overview_convention.htm

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

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 implemented, to reduce risk and make investment more attractive.

National Policies and Plans for Policies

14. Prior to the pandemic, many SIDS and LDCs had already begun to re-think their development trajectory focusing on policies that build resilience. Emerging development frameworks focus more on skills 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 of economic diversification.

15. While many of these blue economy plans range in implementation status, 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: Saint Lucia's 2020 National Ocean Policy which serves as the overarching vision, policy statement, and strategic outcome for developing the country's Blue Economy; Cape Verde's Blue Economy Plan, with its priority areas of action that include blue economy infrastructure, sustainable tourism and environmental protection; Barbados's plans to focus *inter alia* on the development of legislation and technology for more effective fisheries and tourism sectors; and Seychelles' Blue Economy Strategy Roadmap and Implementation Plan, and the launch of the first Blue Bond (USD$15 million) to finance sustainable marine projects, extend its marine protected areas and develop its fishing sector. In this respect, SIDS are clearly leading the way.

Climate Resilience and Disaster Risk Reduction

17. SIDS and LDCs are among the most vulnerable countries 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 implementing resilience building, adaptation and risk reduction policies and programs that range from the development of early warning systems to the creation of nature-based solutions to mitigate against the impact of climate change. Specific emphasis has also been placed on local and traditional knowledge systems, such as Ridge to Reef programs. For example, Dominica, after experiencing significant economic losses from intense hurricanes in recent years, has expressed its vision to become the world's first "climate-resilient nation," with an emphasis on raising capital for the reconstruction and modernization, through Dominica's Citizenship by Investment (CBI) program. Singapore has

focused on climate resilience through mitigation efforts and has developed the first Carbon Tax in Southeast Asia to finance the transition to a carbon neutral economy.

Renewable Energy

18. COVID-19 had a severe impact on the energy sector of most SIDS and LDCs. The disruption in global demand and supply chains and fluctuating oil prices hit these economies hard, further emphasizing the need for accelerated progress in renewable energy (RE) uptake.

19. While most SIDS have set themselves some very ambitious RE targets, which will require diversifying their energy mix by 2030, SIDS and coastal LDCs ocean spaces, still remain largely untapped sources of RE. Options for productively developing marine energy resources are 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 can play an important role in further decarbonizing the world's electricity supply[5], while also providing an ecosystem solution that addresses the food-water-health-energy nexus and boosts investor confidence in SIDS.

20. Given the high cost of energy infrastructure, the ability of SIDS and LDCs 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 SIDS have been tapping into global capital sources such as the Green Climate Fund. The United Nations Development Programme (UNDP) has developed a framework to assist governments with the right policy, incentive and financing mix to cost-effectively promote RE investments. The framework provides a platform for countries to create a risk-return profile that catalyzes private sector investment at scale, while funding reliable and affordable RE solutions, particularly marine RE in developing countries.

Tourism

21. Tourism is a major growth engine and foreign exchange earner in most SIDS and coastal LDCs. For tourism dependent countries, the industry is also one of the largest employers, supporting a 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 SIDS and LDCs. 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 however made it critical for SIDS 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.

[5] IRENA's World Transition Energy Outlook.

[6] The Caribbean Outlook: forging a people-centred approach to sustainable development post-COVID-19, ECLAC 2020

Opportunities exist to transform the tourist sector 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 that also has the ability to address broad issues affecting sustainable development in SIDS. The move towards a sustainable tourism sector must however be cross-cutting by design. While some countries have made significant efforts at reform in specific sustainable tourism industry sectors, broader policies and programs 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 that support preservation of natural capital and help build human capital.

24. In the Pacific region, 90% of the tourism industry consists of small and medium enterprises, whilst in other SIDS regions 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 (including auxiliary and/or support goods and services) and populations varies. This diversity in the tourism industry also adds complexity to efforts to ensure that environmental best practices are adopted, particularly in the absence of effective national legal and institutional frameworks.

Maritime Transportation

25. Global transportation has been one of the industries most severely affected by COVID-19 to date. Potential disruption first became apparent in the international cruise segment, which 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 from COVID-19 were felt in the form of reduced revenues from the disruption of cruises, coupled with a surge in global container freight rates in 2020. As SIDS imports depend heavily on maritime transport, their import prices are simulated to increase by 26.7%, more than double the impact at the global level. Increases in SIDS consumer prices are also simulated to be five times the increase in global consumer prices, at 8.1%.[7] Even before the pandemic, SIDS and LDCs had relatively higher costs for their imports and exports, when compared with other developing countries. UNCTAD estimates that in 2016, the average freight cost as a share of imports value was greater than 20% for SIDS, compared with a world average of about 15%. For example, shipping costs per container is 312% higher between major ports in the Pacific than in Southeast Asia[8], while several SIDS in the Pacific suffer from the lowest shipping connectivity.

27. A key concern for SIDS is their marginalization from global shipping and trading networks due to geography, size and market structure, among other factors. UNCTAD's Liner Shipping

[7] UNCTAD (2021). Review of Maritime Transport 2021. Geneva and New York, as updated in March 2022

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

Connectivity Index (LSCI) indicates a widening gap between the best- and least-connected countries, with many SIDS seeing their LSCIs stagnate between 2006 and 2021. Among the 50 least-connected economies, 37 were SIDS. The exceptions were Bahamas, Jamaica and Mauritius which have high and growing LSCIs as they have developed into regional hubs, attracting transshipment of containerized trade[9]. Bridging the shipping connectivity divide of SIDS is a pre-condition to sustainable ocean-based economies. This may require more sustainable domestic and interregional shipping solutions that capitalize on small-scale interisland regional trade opportunities. The pandemic has shown that ensuring linkages between domestic, regional and international networks is crucial.

Sustainable Fisheries and Aquaculture

28. Aquatic food systems are a critical element of a transformation to a sustainable ocean-based economy. Sustainable aquatic foods can make a substantial contribution to GDP, particularly for SIDS and LDCs, where small-scale and artisanal fisheries are an essential component of national economies, employing around 90% of all people working in capture fisheries value chains. Sustainable fisheries of 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 SIDS and LDCs are complex and include a lack of institutional and human capacity in both the public and private sectors, lack of reliable data, complexities in 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 prevents sustainable growth.

30. Another critical barrier to growth in this sector, is the fact that fish value chains in SIDS and LDCs 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 analyzing the opportunities and constraints for 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, processing, value addition, efficient marketing and distribution. The COVID-19 pandemic demonstrates that the seafood sector, amongst others, are also subject to economic volatility related to external economic shocks.

31. Notwithstanding, aquaculture is well reflected in the national development strategies and legislative frameworks of SIDS and LDCs, given the opportunities it provides for diversifying livelihoods, increasing the supply of nutritious foods, and the potential for foreign exchange from

[9] UNCTAD (2021). Review of Maritime Transport 2021, Geneva and New York

the export of high fish values. However, the activity's growth must follow sustainable aquaculture practices and ensure equitable distribution of benefits.

Finance

32. COVID-19 and its economic fallout have had a negative effect on public balance sheets of SIDS and LDCs and further exacerbated already high debt risks. Many SIDS and LDCs have had to seek the support of international financial institutions, including the IMF. While support for greater access to multilateral development bank resources is welcome, access to these resources for most SIDS is not on concessional terms. Furthermore, access to international capital markets is limited and costly for many SIDS 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 to transfer risk 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. Catalyzing private sector investment for infrastructure (natural and human induced only) is also critical, though such efforts remain relatively nascent. Private sector investment is at the heart of mobilizing the blue economy. Unless national strategies are crafted to build a favorable 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. OPPORTUNITITES AND CHALLENGES

34. The disruptive effects of the COVID-19 pandemic in SIDS and LDCs have demonstrated the need for integrated recovery strategies that can allow these countries to not only build a more sustainable, inclusive, and resilient future but also to respond effectively to future shocks. This section discusses some potential opportunities and key challenges to the pursuit of sustainable ocean-based economies, in particular for SIDS and LDCs.

OPPORTUNITIES

Fisheries and Aquaculture

35. The fisheries and aquaculture sectors provide significant opportunities for growth and expansion in SIDS and LDCs. Developing the aquaculture subsector and other upstream and downstream activities along the fisheries value chain, can create employment and economic benefits (FAO 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 also expand sustainably, minimize environmental impacts and distribute benefits (both financial and dietary) equitably.

36. SIDS and LDCs 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 support.

37. Many fisheries are also 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 that 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 the regional, sub-regional and national fisheries governance arrangements.

38. Some opportunities also exist to diversify fisheries livelihoods through holistic approaches and planning that integrate fishing, tourism and conservation. For example, area-based management approaches, e.g. Marine Protected Areas, can link fisheries with tourism via 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 the 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.

39. 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 proven to be successful ways to yield additional economic value and improved livelihoods. Such activities can also yield multiple benefits, such as using fish silage (low-tech processing of fish waste) as an ingredient in animal feed that thereby reduces organic pollution of fish landing sites while increasing the value of fisheries waste products. Closing the animal feed cycle, for example, can reduce dependence on imported ingredients and reduce excess pollution back into marine habitats.

Tourism

40. Coastal and ocean-based destinations are major employment providers, generating millions of jobs in SIDS and LDCs 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 are growing opportunities. Innovative value chain models targeting local and international markets are mainly led by small localized coastal communities and women's groups.[10] These alternative nature-based tourism attractions will also contribute to post-COVID-19 recovery and to building a sustainable ocean-based economy.

[10] Patil, P. and others (2016), Toward a Blue Economy: A Promise for Sustainable Growth in the Caribbean, Washington D.C., World Bank.

Marine Biodiversity

41. Living marine resources have great potential for the development of new food, biochemical, biomaterials, pharmaceuticals and cosmetics, fertilizers and pest control products. In addition, new 'Omics (e.g., genomics, proteomics, metabolomics) tools based on marine genetic resources show promise across fisheries management, aquaculture development, food and water safety, species and habitat conservation, seafood consumer protection, and natural products discovery. For example, two chemicals have been isolated from the Caribbean Sea sponge, Tectitethya crypta, and are used in the development of drugs to treat *inter alia* cancer, the human immunodeficiency virus (HIV), hepatitis, herpes, and more recently, Ebola and coronaviruses (Schwartsmann and others, 2001) This is significant for SIDS, whose exclusive economic zones (EEZs) are extensive[11].

42. It is important for SIDS to regulate access to, and downstream use of marine genetic resources extracted from their EEZs— 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 and Benefit Sharing. Marine genetic resources (MGRs), 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 (UNCLOS) on the conservation and sustainable use of marine biological diversity of areas beyond national jurisdiction (BBNJ).

43. SIDS and LDCs are however 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 address the general lack of scientific and other knowledge on MGRs in developing countries. Research collaboration among institutions from industrial and developing countries as well as capacity development initiatives by intergovernmental organizations have provided both training opportunities and technology transfer, though such collaborations have thus far been ad hoc and limited in scope.

Maritime Transportation

44. For Caribbean SIDS in particular, the Panama Canal and the Caribbean Sea occupy strategical locations along major international shipping and trading routes. The geographic location and expanded capacity of the Panama Canal provide opportunities for Caribbean countries to be optimally positioned in the global freight, logistics and maritime transportation sectors[12].

[11] Schwartsmann, G. and others (2001), "Marine organisms as a source of new anticancer agents", The Lancet Oncology, vol. 2, No. 4, April.

[12] Pinnock, F. and I. Ajagunna (2012), "Expansion of Panama Canal and challenges for Caribbean ports", Caribbean Maritime, No. 16, May-September.

45. To benefit from the new traffic expected, the Bahamas, Cuba, the Dominican Republic and Jamaica have launched projects to deepen harbors and expand capacity handling (ACS 2014). In addition, the Government of Jamaica has embarked on its Global Logistics Hub Initiative (GLHI), to be developed through global partners, 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 (JSEZA 2019).

Emerging Ocean-Based Sectors

46. Other emerging ocean-based industrial sectors are those of marine renewable energies (MRE) discussed in section II, and marine minerals. 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 to decarbonize economies. The mineral demand for clean energy transition is expected to quadruple by 2040 to reach the goals of the Paris[13].

47. 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.

48. The deep seabed mining sector is at various stages of development in some SIDS and LDCs. Notable examples include Cook Islands, Jamaica, Kiribati, Nauru, Tonga and Singapore which have sponsored exploration activities in the international seabed area.

Marine Ecosystem Conservation

49. SIDS are home to some the world's most biologically diverse marine ecosystems, but in many instances the health of these ecosystems is declining, due to the combined impacts of stressors of anthropogenic origin such as pollution, climate change, biodiversity loss and habitat destruction, 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.

50. Conservation measures, including marine protected areas (MPA) and other effective area-based conservation measures, have been implemented in many countries to help marine environments recover from unsustainable development practices along coasts and from land-based sources of marine pollution, and are all essential tools for the development of a sustainable blue economy. While the primary objectives of these area-based management tools are the sustainable use of resources, and protection of ecosystems and biodiversity, in several instances they also support local livelihoods and also become important tourist attractions, supporting key activities

[13] IEA 2021, The role of critical minerals in clean energy transitions

such as scuba diving and snorkeling. 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 thus contribute to achieving a blue economy.

Mainstreaming Gender Considerations

51. Globally, the adoption of a gender equitable approach to the development of a sustainable ocean-based economy represents significant potential to build more stable, resilient and sustainable communities and to help address immediate food security issues and foster long-term economic growth. Projects such as the Women in Deep-Sea research initiative help bridge the gender gap in in deep-sea related research disciplines and careers, in particular for women from SIDS and LDCs.[14]

Marine Spatial Planning tools

52. Marine Spatial Planning (MSP) tools are increasingly being applied to allow different oceanic sectors and stakeholders to jointly discuss the use and conservation of a specific ocean area, thus avoiding conflicts and creating synergies in ocean use. As such, MSP may support efforts to build ocean resilience and restore critical ecosystems. Properly used, MSP can serve as an important tool for strengthening enabling conditions and reducing risk, opening the door to finance and private sector actors to play an important role in effectively implementing these plans.

53. For a sustainable ocean-based economy, SIDS and LDCs will need to commit to an integrated and interdisciplinary management structure and also effectively implements UNCLOS 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 to harness 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 to reinforce their capacity in ocean governance and the law of the sea for sustainable ocean economies.

CHALLENGES

Climate Change Adaptation

54. While the effects of climate change on the economies of SIDS and LDCs are relatively well known, their impacts on oceans are slowly becoming better understood. The 2019 IPCC Special Report on the Ocean and the 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

[14] Women in Deep-Sea Research project, see: https://www.isa.org.jm/vc/enhancing-role-women-msr/WIDSR-project

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.

55. 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 SIDS (Jamaica, St. Lucia) highlights the importance of climate change adaptation for critical international transportation assets. Mainstreaming climate change considerations into coastal zone planning/operations, marine conservation and fisheries and aquaculture management, as well as pursuing policy coherence in overall sustainable development decision-making are 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 SDGs.

56. Collaboration and participation of a broad range of actors is 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 that can help reduce exposure and/or vulnerability of coastal infrastructure to climate risks.

57. Appropriate policies and standards also have an important role to play, particularly in the context of infrastructure planning and coastal zone management. There are still knowledge gaps about specific vulnerabilities, and on 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.

58. 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 SIDS and LDCs may prevent the correct allocation of resources. Therefore, assessment tools for socioeconomic and environmental impacts, such as damage and loss assessments (DALA) and post-disaster needs assessments (PDNA) should be deployed more consistently and supported with funding alternatives that allow the necessary recovery and resilience enhancement measures to be adopted in SIDS and LDCs. In this sense, countries should aim to improve the design and implementation of policies for financial protection to the risk of disasters and harmful effects of climate change and have specific budgetary

allocations to this end, while at the same time improving the statistics and technical capacities to incorporate resilience and risk mitigation measures in public and public-private investments.

Preventing and Managing Marine Pollution

59. Land-based activities continue to represent approximately 80% of the sources of marine pollution, highlighting the need for integrated source-to-sea approaches to protect ocean health. Plastics continue to be the most prevalent debris item recorded, contributing approximately 60 to 80 % of all marine litter, increasing tenfold since 1980. Whilst the plastic agenda is covered by a range of international and regional processes, more remains to be done, including the need to develop indicators to measure progress towards SDG 14.1. Under the aegis of UNEA, a new process to negotiate a treaty on global plastic pollution was launched in March 2022.

60. While UNCLOS provides for the general legal framework for the 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 (GLP) Programme assists developing countries to prevent and reduce marine plastic litter from the maritime transport and fisheries sectors by focusing on a number of areas identified in the IMO Action Plan to Address Marine Plastic Litter from Ships, and in complementary actions as identified by FAO.

Capacity Building and Institutions

61. Scientific, regulatory and institutional capacity must be built and/or strengthened to formulate and implement the ocean governance frameworks that underpin sustainable ocean-based economies. 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 in order to enable effective integration of all sectors within the governance frameworks.

62. In many cases, capacity-building activities must be coupled with the financial incentives needed to incentivize the private sector to make the necessary changes to transition to a more sustainable economy. Incentives are also needed - especially in SIDS and LDCs - to support the poor and marginalized to build their capacity to participate in the alternative livelihoods provided by the transition to a blue economy. Knowledge management and communication are critical for building support across all stakeholders, as this often requires an understanding of relevant ocean governance frameworks, and what is involved/needed to access, and build local value in, value chains, and where to obtain assistance to do so. Capacity needs may also range from language skills, understanding of international customer service standards, vocational and entrepreneurship skills, financial literacy, and market information systems.

Knowledge Development and Sharing

63. SIDS and LDCs often have limited capacity for science, technology, innovation and the creation of knowledge, all necessary for the development of a sustainable blue economy. Building knowledge and technical capacities around the marine environment, facilitates effective participation in research, knowledge-creation and development, and allows for optimized use and management of ocean resources. SIDS and LDCs 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 around the blue economy and its associated activities, and building peer networks to facilitate information exchange and collaboration across countries is crucial. Creating gainful long-term employment will also support retaining 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.

Integration of Local and Indigenous Knowledge

64. Traditional, local and indigenous knowledge have long been at the root 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 work together with science to address the challenges confronting oceans, each bringing perspectives that can lead to novel solutions that may reinforce the ability of LDCs and SIDS to respond to change and build resilience. This also supports the empowerment of local and indigenous communities for improved resource management.

Accurately Valuing Blue Natural Capital

65. Current approaches to valuing the ocean economy could underestimate its contribution, particularly in the value of non-market goods and services, such as ecosystem goods and services, e.g. the protection offered by coral reefs or carbon sequestration. Improvements have been made in accounting methods and techniques, but there remain gaps in data and information required to price ecosystem benefits accurately, and at the level where the information can be used to better inform policy and investment decisions.

Finance

66. Investments in the ocean economy are constrained by several challenges in most SIDS and LDCs, particularly related to financing. These include limited scope for debt finance, restricted fiscal space, and declining aid flows. Increasing debt levels have placed a drag on economic growth and development in many SIDS, while constraining the allocation of resources for productive and new investments.

67. The ability of the SIDS to access concessional development finance has been hindered by weak technical capacity for project identification, the development of high-quality proposals, and complex application processes, as well as chronic implementation deficits. SIDS and LDCs 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 which will be critical to delivering on blue economy objectives. Developing a coherent and credible blue economy strategy may also 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.

68. Advancing the blue economy will require investments in infrastructure, conservation, research and development, 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 current fiscal constraints and debt dynamics of most SIDS and LDCs, 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 the High-Level Panel on the Multidimensional Vulnerability Index (MVI). This index could serve as the basis for updating criteria for SIDS access 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 to draw upon the existing pools of development finance. It may also require the development and piloting of new instruments.

69. Blended finance can offer substantial opportunities, including to improve investor confidence by providing up-front low-interest or grant-based investments to strengthen the enabling environment – such as strengthening the governance and regulatory environment and restoring the resource base – towards reducing the risk profile and improving investor confidence. This might include *inter alia* investing in (i) education and capacity building (ii) improved fisheries policies as well as monitoring control and surveillance at sea to reduce IUU and strengthen sustainable management of fisheries, (iii) the effective protection of habitats and ecosystems such as coral reefs and mangroves that provide essential ecosystem services such as coastal protection and carbon sequestration, (iv) the implementation of MSP to inventory maritime spaces, resources and activities, reduce user conflicts and ensure that cumulative impacts of activities do not exceed the carrying capacity of the ecosystem; to (v) setup investible entities that can substantially lower transaction costs and aggregate sustainable projects in a way that they become more investible.

IV. EXISTING AND POSSIBLE NEW AREAS FOR PARTNERSHIPS

70. A constantly changing and volatile global environment demands the development and maintenance of genuine and durable partnerships. While flows of ODA to LDCs continue, for SIDS this has been relatively low, more volatile and declining in both multilateral and bilateral components since the global economic crisis of 2008–2010[15]. While concessional flows have increased globally, many SIDS have become increasingly less successful in accessing international development assistance, due to their classification as middle-income countries, excluding them from concessionary funding. SIDS must intensify efforts to mobilize external resources, and to continue to press the case that vulnerability is a defining characteristic of these countries which must be reduced through resilience-building strategies.

71. Intensified efforts at resource mobilization by SIDS and LDCs 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 SIDS 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 SIDS and LDCs related to the blue economy. The 2017 UN Ocean Conference resulted in over 1,400 voluntary commitments for implementation of Sustainable Development Goal 14 (Oceans), which included many SIDS or LDC specific partnerships. Collectively, these partnerships make considerable contributions to the sustainable development of the 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, blue carbon, etc.[17]

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

- Direct impacts on beneficiaries (e.g., increased resilience of communities)
- Direct impacts on the environment (e.g., protection of marine and terrestrial environments)
- Knowledge, information, data and indicators
- Improved coordination between agencies and organizations, leading to a more effective and comprehensive delivery of programs and outcomes

[15] WESP
[16] Caribbean Environment Outlook 2018, ECLAC
[17] Partnerships for Small Island developing States, UNDESA 2010
[18] Ibid

- Improved capacity (e.g., training programs; delivery of university programs and virtual education)
- Positive policy environment (e.g., developing an agreed-upon comprehensive ocean policies and accompanying strategic actions plans)

73. 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:

- 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.
- Analysis of the scope for diversification of SIDS and LDC production base for selected blue and green value-added exports, and to connect them to relevant markets[19]
- Sustainable transportation, particularly in terms of low-carbon, low-cost options
- Integrated ecosystem management focusing on whole islands, particularly on terrestrial and watershed areas, and their connection to the sea, as well as human livelihoods.
- Capacity support to address data gaps.
- Capacity support for the development and implementation of Marine Spatial Plans (MSPs); with private sector involvement
- More effective use of public capital towards the de-risking of ocean investments, this will foster increase private sector investments.
- Capacity development for the valuation of coastal and marine resources
- Improvement and effective implementation of national legal and institutional frameworks for ocean governance, including by implementing reinforce their capacity to implement UNCLOS and related agreements.

V. RECOMMENDATIONS AND CONCLUSIONS

74. A sustainable blue economy approach presents a pathway for SIDS and LDC policymakers 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:

- advocacy and commitment at the highest levels, and empowered participation
- effective ocean governance frameworks which integrate the blue economy
- key institutional capacity and policy necessary to facilitate the transition
- appropriate mechanisms supporting research, innovation, technology transfer
- global dialogue and advocacy, including around ocean governance
- supportive business environments and infrastructure
- national and regional knowledge hubs.

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

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

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

76. 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 is proactively shared to support decision-making and innovation. This will improve development outcomes for all.

Guiding questions

1. What kind of support is necessary to help build or further strengthen capacity in SIDS and LDCs to effectively pursue sustainable ocean-based economy approaches in a post-COVID landscape?
2. What are the sectors where targeted investments can have the greatest impact on building the blue economy in SIDS and LDCs? What innovative financial tools and options can be developed and deployed to support this investment in SIDS and LDCs?
3. How can partnerships help the international community support the scientific understanding of ocean systems and their interactions with human systems? How can the UN Decade of Ocean Science for Sustainable Development and the Regular Process help enhance this cooperation?
4. Access to concessional development finance is key for SIDS and LDCs to invest in their ocean potential. How can the international community best support SIDS and LDCs in this regard?
5. What are the key challenges and opportunities to incorporate blue economy initiatives into ocean governance legal and institutional frameworks?