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The Oceans Economy:
Opportunities and Challenges for Small Island Developing States

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Acronyms

ABS	access and benefit-sharing
ACP	Africa, Caribbean and Pacific Group
APEC	Asia-Pacific Economic Cooperation
BRICS	Brazil, Russia, India, China and South Africa
CARIFORUM	Forum of the Caribbean Group of APC States
DDA	Doha Development Agenda
EEZ	exclusive economic zone
EU	European Union
FAO	Food and Agriculture Organization of the United Nations
GATS	General Agreement on Trade in Services
GDP	gross domestic product
GHG	greenhouse gas
IUU	illegal, unreported and unregulated
ICTs	information and communications technologies
LDCs	least developed countries
MTS	multilateral trading system
NAMA	non-agricultural market access
OECS	Organisation of Eastern Caribbean States
R&D	research and development
RTA	regional trade agreement
SIDS	Small Island Developing States
SVEs	small, vulnerable economies
TPP	Trans-Pacific Partnership Agreement
UN	United Nations
UNCLOS	United Nations Convention on the Law of the Seas
UNCTAD	United Nations Conference on Trade and Development
UNEP	United Nations Environment Programme
UNWTO	United Nations World Tourism Organization
WTO	World Trade Organization

Summary of key issues and the way forward

Issues of relevance to Small Island Developing States (SIDS)

- The concept of the oceans economy, also referred to as the blue economy, is one that simultaneously promotes economic growth, environmental sustainability, social inclusion and the strengthening of oceans ecosystems.
- The oceans economy is subject to a multilayer regulatory framework under the United Nations Convention on the Law of the Sea (UNCLOS) and other national, regional and multilateral as well as sectoral governance regimes.
- The oceans economy can contribute to addressing some of the concerns associated with economic and environmental vulnerability, including those associated with remoteness, by fostering international and regional cooperation under an 'ocean space approach', which is also expressed in the literature as marine spatial planning.
- An ocean space approach requires the development of a more coherent, integrated and structured framework that takes account of the economic potential of all marine natural resources, which include seaways and energy sources from the oceans.
- The oceans economy offers significant development opportunities and also raises challenges for SIDS in sectors such as sustainable fisheries and aquaculture, renewable marine energy, marine bio-prospecting, maritime transport and marine and coastal tourism.
- Fisheries represent a significant part of the economic output of many SIDS. As the demand for fish products continues to grow, SIDS need to explore options directed at securing economic benefits while ensuring sustainable management of these resources.
- SIDS could explore ways to mainstream the generation of renewable energy into their national and regional planning and energy mix. The potential exists to increase offshore wind-generated electricity and the use of algae biomass in the production of fuel.
- Bio-prospecting of marine genetic resources offers interesting opportunities for benefit-sharing and creation of scientific capacities in SIDS, especially in relation to pharmaceuticals, cosmetics and food products development.
- Current incentives for ship registration could be better leveraged by linking them to financial and ship classification services. Moreover, developing sustainable and resilient regional maritime or multimodal hubs and enabling the provision of incidental services (such as port-related storage, insurance and financial services), as well as sustainable and reliable transport services, can assist in addressing the challenges faced by SIDS regarding maritime transport and improving trade connectivity.
- Tourism can also be mainstreamed into national and regional planning. Facilitating travel routes and the operation of service providers in transport, information and communications technologies (ICTs) and financial services could strengthen SIDS' appeal to both investors and travellers. Links with maritime and air transport, such as open seas and skies agreements, could be further explored.

Key suggestions and the way forward

- There is a need to mainstream the oceans economy into the future United Nations Sustainable Development Goals. Consideration should be given to a comprehensive goal focusing on use of marine ecosystems and resources within ecological limits.
- SIDS need to find opportunities to engage in the process of global reporting and assessment of the state of the marine environment, including socio-economic aspects, under the United Nations General Assembly. This process should lead to key findings and conclusions that can shape the future of oceans governance.

- An ocean space approach or marine spatial planning can be particularly useful for SIDS in sectors that are dependent on the sustainable management and use of common resources, and where there are multiple national/regional competent authorities.
- There is an urgent need for an international framework to discipline harmful fisheries subsidies. The World Trade Organization (WTO) negotiations which aim to clarify and improve disciplines for fisheries subsidies as part of its post-Bali work programme should be reinvigorated as part of that process.
- There is a need for parallelism in the disciplining of harmful fisheries subsidies and in line with sectoral market access negotiations on fish products under the WTO. Advancements in market access negotiations without commensurate movement on subsidies may lead to incoherent and potentially damaging results.
- Well-managed sectoral reforms, parallel regulation and institution building in key environmental services sectors, such as wastewater treatment and remediation services, can support further investment in sectors that promote sustainable oceans in SIDS.
- SIDS can also consider approaches to advance the design and implementation of regional regulatory and institutional frameworks for access and benefit-sharing for marine bio-prospecting in order to harness any potential benefits that result from research and development activities.

1. INTRODUCTION

The fact that oceans and seas (as well as rivers, waterways and estuaries) matter for sustainable development is undeniable. Two thirds of the earth's surface is covered by water. The oceans[1] are widely accepted as the incubator of all life forms. They are a fundamental yet delicate part of the Earth's biosphere and essential to sustaining life on the planet. Oceans serve a variety of purposes, all critical to the sustenance and preservation of human life. Among other things, they provide food and minerals, generate oxygen, absorb greenhouse gases (GHG), mitigate climate change, influence weather patterns and temperatures and serve as highways for human transport and sea-borne trade.

The link between humans and the oceans has been fundamental to the development of human civilisation. Today, more than 3 billion people live in close proximity to the coast. This number is bound to rise with population growth, urban drift and increasing demand for accommodation close to oceans and seas. The high level of dependence of humans on marine assets is putting unprecedented pressure on marine ecosystems to service the ever-increasing demands of the growing global population. There is therefore an increasing need for regulation on the basis of an appropriate balance between the demand for oceans' natural resources and their sustainability.

Healthy oceans and seas are essential to a more sustainable future for all. This is particularly true in the case of Small Island Developing States (SIDS). However, oceans are facing significant existential ecological risks that can negatively affect the social and economic prospects of all countries, particularly SIDS and coastal States that are acutely dependent on oceans. Some of these risks are a rise in sea levels due to climate change; acidification of oceans resulting from increased emissions of carbon dioxide; overexploitation and poor management of marine resources, including fisheries; wastewater runoff; deposit of pollutants into waterways; and the compromise of the seabed as a consequence of mineral resource prospecting and extraction.

In the Rio+20 outcome document, 'The future we want',[2] UN Member States, committed to: 'protect, and restore, the health, productivity and resilience of oceans and marine ecosystems, to maintain their biodiversity, enabling their conservation and sustainable use for present and future generations'. Sustainable use of oceans is critical to poverty reduction, food security, livelihood sustainability and mitigating climate change.

In developing a sustainable balance between often competing ecological and economic imperatives, the concept of the oceans economy (also referred to as the blue economy) was established and has been further elaborated in the 'Blue Economy, Abu Dhabi Declaration'.[3]

The Rio+20 outcome document points to several avenues for the implementation of its programme of action, including components that relate to the oceans economy. Elements of the programme of action include trade, finance, technology and capacity building. Establishing an effective governance regime for the oceans economy is essential to creating and regulating a sustainable balance between the utilisation of marine resources and the protection of marine ecosystems. In the areas of trade governance, the rules-based multilateral trading system (MTS) – embodied in the World Trade Organization (WTO) – is mandated to create and enforce trade rules in a manner that supports the optimal use of the world's resources (including marine ones). Specifically, the mandate highlights the objective of sustainable development and seeks to both protect and preserve the environment in a manner consistent with the needs and concerns of countries at different levels of economic development. In this context, SIDS through relevant alliances such as the Small Economies proponents engaged in WTO negotiations can seek to advance the economic and environmental imperatives bound within the context of the oceans economy.

The present study seeks to contribute to a better understanding of the nascent and developing concept of the oceans economy. This will be achieved through: (1) the identification of the main trade and development opportunities and challenges in the ocean space and (2) an assessment of the role of the MTS and relevant United Nations (UN) rule-making bodies in the development of an enabling regulatory environment supportive of the sustainable development of SIDS. In this regard, the paper will provide an overview of the current multilateral trade negotiations that touch on the oceans economy and provide suggestions on how the MTS can advance economic development while simultaneously promoting sustainable development objectives.

The United Nations Conference on Trade and Development (UNCTAD) and the Commonwealth Secretariat have provided support, within their own mandates, to advance the agenda of SIDS from the inception of the international dialogue on their special treatment. In this context, both organisations have made a measurable contribution to the Barbados Plan of Action and the Mauritius Strategy. These efforts will continue toward and beyond the Third International Conference on SIDS to be held in Samoa in 2014. Both at the UN level and the level of the Commonwealth Heads of Government Meeting (CHOGM), SIDS-related issues have been highlighted and mandates have been produced to address their key concerns.

1.1 The oceans economy and its particularities

1.1.1 Concept

The oceans economy (also referred to as the blue economy) is a relatively new concept that has its origins in the green economy concept endorsed at the United Nations Conference on Sustainable Development, held in Rio de Janeiro in 2012. It shares the same desired outcome: the improvement of human well-being and social equity, while significantly reducing environmental risks and ecological scarcities. At its core the oceans economy refers to the de-coupling of socio-economic development from environmental degradation. In this regard, efficiency and optimisation of natural marine resources within ecological limits becomes paramount. This includes, the sourcing and usage of local raw materials and where feasible, the utilisation of 'blue', low energy options to realise environmental benefits.

The concept of an oceans economy also embodies economic and trade activities that integrate the conservation and sustainable use and management of biodiversity, including maritime ecosystems, and genetic resources. In addition, it includes activities that are not natural resource intensive, support sustainable patterns of consumption and generate lower or no GHG emissions. It also seeks to contribute to mitigation and adaptation efforts to address climate change risks manifested in the rise of the sea level and the acidification of seawater.

Additionally, an oceans economy approach supports sustainable livelihoods and food security for SIDS and coastal populations. Globally, approximately 350 million jobs are linked to the oceans through fishing, aquaculture, coastal and marine tourism and research activities.[4] Moreover, in excess 1 billion people depend on fish as their primary source of protein.[5] The over-exploitation and poor management of marine resources have resulted in lost opportunities, heightened food insecurity and diminished economic opportunities for some of the world's poorest people.

1.1.2 Jurisdiction and regulatory frameworks

The international ocean governance framework comprises a multilayer and complex network of international and regional agreements involving intergovernmental and civil society organisations.

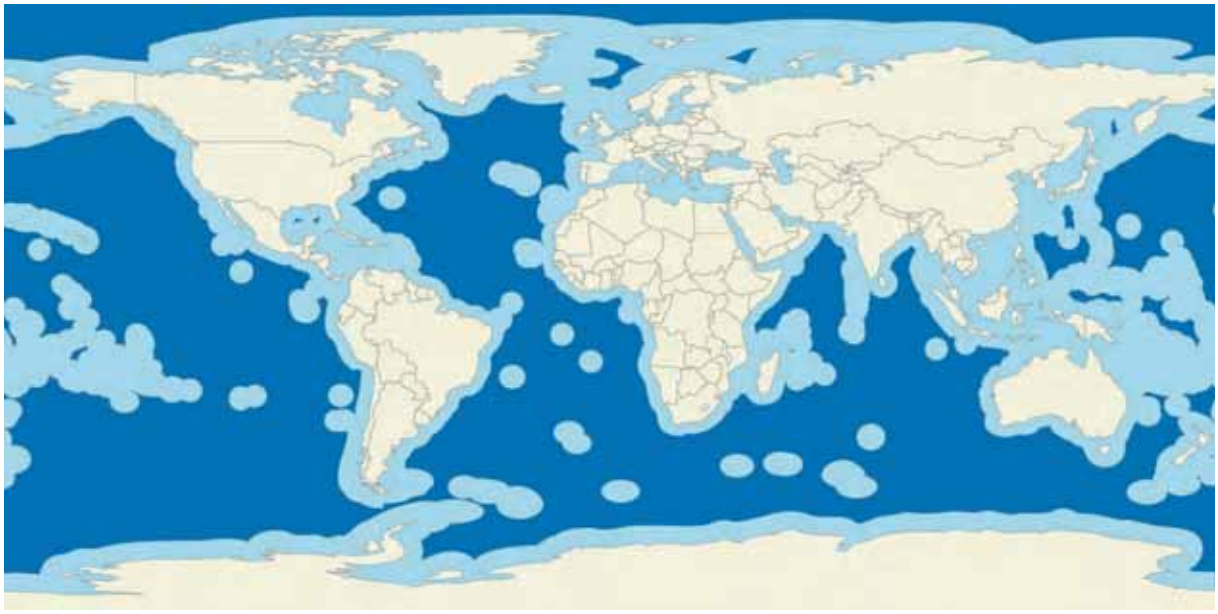
The overarching framework agreement governing the management of the oceans is provided by the 1982 United Nations Convention on the Law of the Sea (UNCLOS), which establishes a comprehensive framework for the use and development of the oceans. The Convention defines the extent of various jurisdictional zones, delineated according to distance from coastlines on the basis of set baselines, and sets out the rights and obligations of countries regarding those zones. Countries have sovereignty over their internal waters, territorial seas and archipelagic waters and sovereign rights over the resources in their exclusive economic zone (EEZ) and the seafloor of their continental shelf. These zones represent about 30 per cent of all ocean areas (see Figure 1.1).

Major features of UNCLOS include the conservation and management of living marine resources, rights to seabed non-living resources, the obligation to protect and preserve the marine environment, navigational rights, legal status of resources on the seabed beyond the limits of national jurisdiction, the conduct and promotion of marine scientific research and a procedure for settlement of disputes between States. These basic parameters guide the application of other conventions insofar as they relate to the oceans.

Another vital aspect of UNCLOS is that it governs activities both on land and at sea. That is, to the extent that activities on land impact the marine environment or the habitat of marine species, they are addressed by various provisions of the Convention.

In addition to UNCLOS, there are a number of other global and regional agreements and declarations that supplement the Convention regarding specific activities or regions, including the 1995 UN Fish Stocks Agreement, the Convention on Biological Diversity (CBD) and Chapter 17 of Agenda 21. Of these, the

Figure 1.1: Economic Exclusive Zones (EEZ)



Note: Light blue areas represent EEZs
Source: Ministry of Primary Industries of New Zealand (2008). See http://www.fish.govt.nz/en-nz/Starfish/Kids+Zone/Factsheets/high+seas.htm

CBD is especially relevant as an international treaty that calls for the conservation of all biodiversity and is implemented in the marine environment in a manner consistent with the rights and obligations of States under UNCLOS.

At the regional level, the United Nations Environment Programme (UNEP) Regional Seas Programme and other regional marine environmental programmes include multilateral agreements that address the use and protection of the marine environment. In certain regions of the world's oceans, these regional environmental agreements are complemented by Regional Fisheries Management Organisations (RFMOs), established for the development of conservation and management measures for fisheries.

Numerous sector-specific instruments have also been adopted under the auspices of relevant governing bodies, such as the International Maritime Organization (IMO) for shipping and the International Whaling Commission (IWC).

Many economic activities that take place in the oceans such as fisheries and sea transport have been regulated through conventions and customary international law for some time. Other economic activities are relatively recent and have emerged as a consequence of new technological and infrastructure developments that have made it possible to reach, extract, and use natural resources that were not previously accessible. This has resulted in, for example, resource exploration and harvesting in various sectors such as bio-prospecting and marine renewable energy or sea oil and gas exploration. It is expected that advances in technology will significantly enhance access and capacity to extract additional marine resources in the coming decades.

This is not, however, the end of the governance story. More recently, multilateral trade negotiations and agreements have increasingly been playing a role in the regulation of goods and services that affect and concern oceans and marine resources. This is evidenced in the high profile disputes settlement cases such as Tuna-Dolphins[6], Shrimp-Turtle[7] , and Seals[8] at the WTO as well as in the WTO Doha Round mandate, which proposes negotiations on fish subsidies, non-agricultural market access (NAMA) and environmental goods and services (EGS). WTO SIDS are actively participating in the Doha Round negotiations through several groupings – including the Africa, Caribbean and Pacific Group (ACP), least developed countries (LDC) and small, vulnerable economies (SVEs) – with a view to advancing their trade and development in-

terests and ensuring a balance between environmental sustainability and economic growth. Many of the issues that concern SIDS are also under discussion in specific plurilateral and regional trade negotiations (e.g., environmental goods liberalisation and fisheries subsidies).

2. THE OCEANS ECONOMY AND SIDS

Small Island Developing States (SIDS) are a distinct group of developing countries that face common social, economic and environmental challenges. These include small populations, high dependency on development assistance and international trade (especially commodities through preferential trade regimes), susceptibility to external shocks, high transportation costs and low connectivity, susceptibility to natural disasters and high vulnerability to the impacts of climate change. Of particular concern to SIDS in this regard are the risks associated with rising ambient temperatures and sea levels.

The United Nations Conference on Trade and Development (UNCTAD) classifies 29 countries as SIDS (Table 2.1). There are 10 in the Caribbean and the Americas, 12 in the Pacific, 5 in Africa and 2 in Asia. This represents a significant geographical dispersion and highlights the difficulties they face in forging common solutions to many of their inherent challenges. For example, while a similar template for marine management systems could be used by different small States, remoteness and geographic dispersion prevents the pooling of resources for their implementation.

While SIDS share common characteristics, they are not homogenous and have diverse social and economic structures. These structures may well define the policy approaches they pursue and the extent to which additional opportunities from the oceans can be harvested. The level of dependence on oceans by SIDS differs from country to country. For example, some are reliant on natural resources to drive economic development due to factor endowments. Resource-dependent SIDS include Nauru, Papua New Guinea and Trinidad and Tobago, which rely heavily on either oil, gas, phosphates, timber or fish exports. Other SIDS – including Barbados, Mauritius, Saint Lucia and the Seychelles – are more services-oriented, with an emphasis on tourism and some financial services.

For SIDS, oceans and seas constitute a much larger geographic area than their inland territory, especially when the EEZ is taken into account. The Cook Islands, for example, have a land space of 240 square kilometres and an EEZ of 1.8 million square kilometres. Therefore, the sustainable harvesting of marine resources presents a significant opportunity for environmentally sound, socially inclusive economic growth and development.

Several countries and regions are starting to assess the need for and are striving to implement common governance frameworks under an ocean space approach (marine spatial planning). Examples of their use can be found in the design of a draft national marine policy in the Bahamas, the oceans economy road map of Mauritius and the regional oceans policy adopted by the Organisation of Eastern Caribbean States (OECS).

Table 2.1: UNCTAD list of SIDS (used for analytical purposes in this study)

Antigua and Barbuda	Maldives	Solomon Islands
Bahamas	Marshall Islands	Saint Kitts and Nevis
Barbados	Micronesia (Federated States of)	Saint Lucia
Cape Verde	Mauritius	Saint Vincent and the Grenadines
Comoros	Nauru	Timor-Leste
Dominica	Palau	Tonga
Fiji	Papua New Guinea	Trinidad and Tobago
Grenada	Samoa	Tuvalu
Jamaica	Sao Tome and Principe	Vanuatu
Kiribati	Seychelles	

Also Commonwealth member States.

In the case of the Bahamas, an integrated marine policy framework is being implemented to manage the ocean space and marine resources with the objective to give greater clarity to roles, functions and actions of approximately 34 governmental bodies. It will also hold competence over marine affairs and consolidate 36 pieces of subsidiary legislation regulating marine activities.[9]

Mauritius launched its first oceans economy roadmap in 2013, which seeks to take advantage of the immense economic potential of oceans.[10] The roadmap places emphasis on the need to make use of the untapped value locked up in the EEZ by ensuring sustainable and coordinated utilisation of living and non-living resources. Sectors of interest include tourism, seaports and seafood-related activities. In order to advance the roadmap's priorities, a national public-private task force as well as an oceans business park and an oceans research centre will be created. This new institutional set up will be complemented and supported by a comprehensive regulatory review of the oceans economy. Likewise, the member States of the OECS in 2013 approved, the Eastern Caribbean Regional Oceans Policy. This regional policy architecture provides a framework that guides planning and development of marine activities in a rational and sustainable manner within the region.[11]

It is too early to point toward concrete results of these policy frameworks, but a shift in mind-set towards a 'common oceans space' at a regional level is starting to emerge. Other SIDS could also consider the development of a broader regional ocean governance architecture, based on the framework of UNCLOS, that ensures the sustainable management of living and non-living resources as an effective avenue to bolster economic growth and development. Such an approach could support common regulations and institutions aimed at governing enterprise and infrastructure development and investment. This approach would allow for the necessary consolidation of resources that might otherwise be out of reach for SIDS acting individually.

3. TRADE AND THE OCEANS ECONOMY: CHALLENGES AND OPPORTUNITIES FOR SIDS

Many marine resources are not targeted for local markets but exported as raw materials, intermediates or final products, and the demand for goods and services originating in the oceans is likely to increase as populations continue to grow.

Trade in marine products can create opportunities for economic growth, export diversification and new investments. Moreover, as technology evolves and marine resources become more accessible and their use more feasible, new economic and trade sectors are also likely to emerge, potentially generating new job opportunities. Major trade sectors where opportunities already exist or could be found in the near future include sustainable fishing and aquaculture, certain marine transport services and port management, marine renewable energy, marine bio-prospecting and biotech, regulated sea-bed mineral resource extraction and maritime and coastal tourism.

Trade in these marine sectors can be boosted by introducing sound regulatory and institutional frameworks to develop ancillary services needed to undertake these activities, including financial, insurance, communications, testing and certification and research and development (R&D) activities. In addition, the way in which resources are harvested and processed matters more and more to consumers globally. In this regard, trade can be an enabling factor in the promotion of sustainable activities, moving production in ecologically friendly goods from niche market segments to mainstream international trade, thus responding to evolving consumer demand.

Optimisation of the use of natural oceanic resources that are directly traded or serve as inputs to industrial and services activities must extend beyond economic considerations by incorporating environmental and social factors and risks into the equation to ensure long-term sustainability. As noted earlier, over-exploitation and poor management of marine resources have resulted in lost opportunities to sustain growth and increased risks to global food security and livelihoods. These risks are of particular importance to SIDS.

3.1 Sustainable fishing and aquaculture

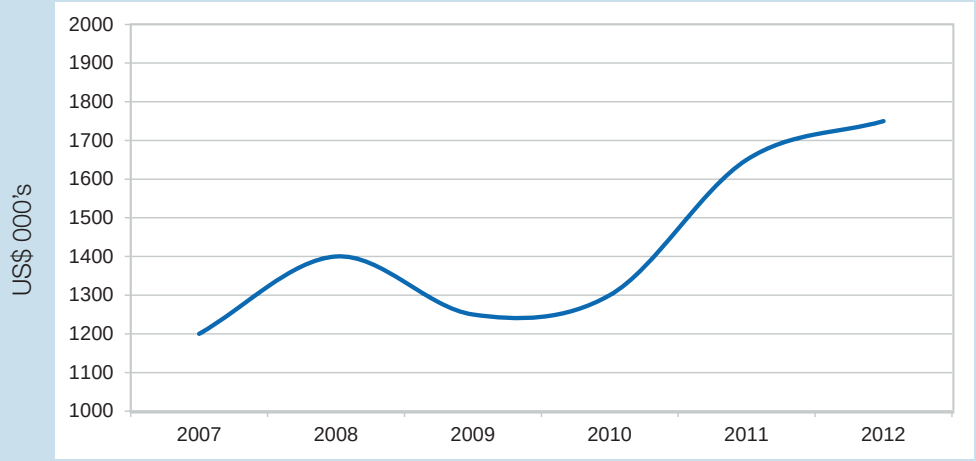
Fish and fish products are an important sector of global trade. In 2013, total world exports of fish and fishery products were estimated to reach US$136 billion, showing an average of 12 per cent annual increase over the prior 10 years.[12] Most of these exports are driven by the demand in developed countries, which account for more than 75 per cent of global fish imports.[13] It is anticipated that demand from Asia will grow at a rate comparable to that of demand from developed country markets. This is partly the consequence of dwindling fisheries stocks available in neighbouring seas of industrialised countries due to excessive exploitation over the last 200 years.

Marine fisheries are particularly important in SIDS for income generation and for the livelihoods of many coastal communities. Fish exports of SIDS represented about 1.7 per cent of their total GDP in 2012.[14] In some SIDS, fisheries can contribute 10 per cent or more of gross domestic product (GDP) and may account for up to 90 per cent of animal protein in their populations' diet, with national fish consumption as much as four times higher than the global average per capita.[15]

In terms of trade, UNCTAD statistics reveal that in 2012 SIDS exports of fish products reached US$1.75 billion and represented approximately 7 per cent of their total exports.[16] Figure 3.1 demonstrates an upward trend in exports from SIDS over the last five years (although this is modulated by a fall in demand during the financial crisis). This trend notwithstanding, based on assessed capacity there remains space for expanding growth opportunities in many SIDS, especially if they can set appropriate policies to ensure that domestic firms can effectively participate in sustainable harvesting of local or regional fish stocks.

Export growth trends at the global level are not likely to be maintained indefinitely if fish stocks are not sustainably managed. Alarming reports from the Food and Agriculture Organization (FAO) indicate that approximately 32 per cent of global fish stocks are overexploited, depleted or recovering from depletion and a further 50 per cent are fully exploited.[17] Currently, only 12.7 per cent of all fish – generally less commercially desired species – are not fully exploited. Important efforts are required to ensure that fishing is fully regulated, reported and monitored and that fishing subsides that promote overfishing are phased out. Overfishing and illegal trade are also said to affect endangered species covered by Appendix 1 and 2 of the

Figure 3.1: SIDS fish and fish products exports in US$ thousand (2007-2012)



Source: Based on data from UNCTADStats 2014.

Convention on the International Trade in Endangered Species of Wild Fauna and Flora (CITES), such as sea turtles, certain sharks and corals, adding to the challenges of controlling overfishing. There are more than 500 dead zones across 245,000 square kilometres[18] where low levels of oxygen and high levels of pollution create hostile environments for marine life. Globally, human activities have destroyed more than 20 per cent of mangroves, 30 per cent of sea grass beds and 20 per cent of coral reefs,[19] hindering biodiversity and ecosystems services needed for reproduction.

Important efforts are needed to ensure that fishing is fully regulated, reported and monitored, and that fishing subsides that contribute to overfishing and overcapacity are phased out. According to UNEP, the value of subsidies provided is estimated to be worth US$15–35 billion annually.[20] Additionally, data from the European Union (EU) clearly demonstrate that excessive levels of fishing subsidies contribute to overcapacity (i.e., too many fishing boats for the volume of fish that can be caught, directly resulting in overfishing). Of the €12.9 billion in fishing subsidies that have been granted by the EU and its members for the fishing sector since 2000, only 1 per cent were beneficial subsidies for the marine environment.[21] The European Commission has determined that the capacity of the EU fleet is two to three times above the sustainable level in a number of fisheries. This overcapacity promotes overfishing, causing environmental damage and progressively making the EU fleet economically non-viable. Managing capacity is therefore crucial.

Sustainable fishing and aquaculture represent the main approaches to reduce overfishing and restore marine ecosystems. Adopting sustainable fishing requires addressing the underlying causes of resource depletion, including subsidies that contribute to overfishing and overcapacity, illegal, unreported and unregulated (IUU) fishing activities and marine pollution, among others. Several international conventions,[22] codes of conduct[23] and guidelines[24] have been adopted under the auspices of the UNCLOS, FAO and UNEP to address some of these problems, but the capacity to implement, monitor and enforce them still needs to be improved.

There are about 50 regional fisheries agreements that deal with conservation, management and development of fisheries. Some are limited in scope, such as those that apply to migratory species (e.g., tuna). However, these agreements have been criticised for: (1) not playing an effective role in addressing IUU fishing activities and (2) not supporting the full recovery of stocks under covered areas, with some specific exceptions such as the case of North-east Arctic cod.[25] This situation is exacerbated by low levels of transparency, by the strong lobbying capacity of the fisheries sector seeking larger quotas and by institutional weaknesses, including the incapacity of members to fully implement conservation and management principles under these agreements.

The Regional Fishery Body Secretariats Network (RSN) was created in 2007 to promote coherence and exchange of information between regional fisheries arrangements in response to some of the concerns mentioned above.[26] Notwithstanding the progress made,

some observers suggest that these efforts are insufficient and are calling for the creation of a UN 'oceans' organisation' to monitor and promote greater levels of coherence in oceans' governance.[27] Such an approach may pose challenges given the budgetary and administrative resources required to establish such an entity.

Another approach is to strengthen and complement the process for 'global reporting and assessment of the state of the marine environment, including socio-economic aspects' under the United Nations Ad Hoc Working Group of the Whole of the UN General Assembly.[28] The first global integrated marine assessment will be a significant outcome in this process and could evaluate the extent to which multilateral and regional fishing agreements/bodies are effective and offer suggestions on how they could be improved.

As the demand for fish continues to grow and the availability of wild-capture fish decreases, there will be a greater role for aquaculture to augment the wild capture supply and ensure that wild stocks within EEZs of SIDS are conserved and well managed. There are no available trade statistics on sustainable fishing or aquaculture, since Harmonized System (HS) Codes and other classifications do not differentiate between aquaculture and marine wild capture. However, as in the case of organic agriculture, there are data on production and consumption.

Currently, farmed fish account for 49 per cent of global seafood consumption and the global demand is expected to increase to 62 per cent by 2030.[29] Fish farming has greatly diversified over the past decade to now include salmon, crustaceans and molluscs, among other varieties. While most of the production is meant for human consumption, there are also other uses such as: aquariums, fashion inputs and the production of pharmaceuticals and perfumes. While disaggregated statistics specific to aquaculture for SIDS are not readily available, total aquaculture production in the Caribbean and Oceania together represents less than 1 per cent of global aquaculture production.[30] SIDS in Oceania,[31] led by Fiji, Papua New Guinea and Vanuatu, account for about 10 per cent of the region's total aquaculture production. Rather than being discouraging, however, these figures highlight the potential for increased supply, higher levels of specialisation and space for participation, especially with the increasing demand driven by Asia.

Several certification schemes for fisheries and aquaculture have emerged over the past two decades in response to international agreements, codes of conduct and other sustainable standards. Prominent examples are the Marine Stewardship Council and the Aquaculture Stewardship Council schemes, which cover verification of the level of stocks, impacts on ecosystems and management systems. These programmes, while relatively new, have been quite successful and are increasingly recognised by distribution chains. However, no SIDS enterprises were found among those listed under these two schemes.[32]

Issues for SIDS:

Fishing activities will continue to represent a large part of economic and food output for many SIDS. As demand for fish continues to grow, SIDS need to explore options to keep benefiting from this activity while ensuring sustainable management of stocks. While several regional fishing agreements are already in place, more transparent and effective management systems under an ocean space approach need to be considered in order to ensure that policies effectively match national and regional realities. In this regard, technical cooperation, regional partnerships and joint monitoring can play a role. Furthermore, the current reporting and assessment process of the state of the marine environment under the UN Ad Hoc Working Group of the Whole[1] could shed light on the level of implementation and effectiveness of these regional agreements. SIDS need also to reassert their interests in WTO discussions on fisheries subsidies to be able to better react to any potential breakthrough in negotiations.[2] They can also seek the option to implement the Rio+20 commitments to address fisheries subsidies[3] outside the WTO should negotiations fail. SIDS do not seem to be actively participating in aquaculture activities, but experiences from South East Asia and Latin America show the opportunities within this sector. Consideration could be given to leveraging negotiating resources and capacity building to strengthen fisheries management and monitoring across all country groupings to ensure the sustainability of the fisheries sector in SIDS.

Notes

1 *For more information of this process see: http://www.un.org/depts/los/global_reporting/global_reporting.htm.*

2 *See section 4 on trade policy and negotiations of this paper.*

3 *See paragraph 173 of the Rio+20 outcome document (United Nations General Assembly 2012, op. cit.).*

3.2 Renewable marine energy

Demand for renewable energy is expected to increase two and a half times by 2035.[33] The generation of renewable energy from tides and waves, wind turbines located in offshore areas, submarine geothermal resources and marine biomass could be viable alternatives for contributing to energy needs and climate change mitigation objectives. For SIDS, such renewable energy sources could help diversify their energy portfolios and secure higher levels of energy security.

Of all the marine sources, the highest potential for electricity generation is in the offshore wind turbines sector. Global offshore wind capacity is growing at the incredible rate of 40 per cent per year, producing 7,100 megawatts of electricity in 2013.[34] In the EU, offshore wind already represents about 10 per cent of the total renewable energy produced and is expected to reach about 20 per cent by 2030.[35] This has been possible due to significant green industrial policies and public support. Energy generation from tides, waves and submarine geothermal sources are in the early development stages and may become commercially viable within the next 10 years.

SIDS typically have low levels of marine infrastructure and high energy costs and thus could explore investment incentives and consumption subsidies such as feed-in-tariffs as a means of attracting investment in offshore wind projects. Partnerships and technical assistance with key agencies can also play an important role in undertaking the necessary analytical work to support the adaptation of local regulations and attract financing for pilot projects. However, it must be acknowledged that the economic, technical and public policy capacity of SIDS is not at the same level as their developed counterparts. Therefore, while SIDS should pursue the renewable energy options, expectations should be calibrated to accord with their actual capacities in this area.

The use of algae as biomass for energy production also offers promising opportunities for future development of the second and third generations of non-food-based biofuels. Production of algae biomass could be done through sustainable aquaculture, generating jobs and new value chains that could later evolve to also cover algae for food consumption. While currently there is insignificant commercial production and trade of algae biofuels, commercial activity in the sector is expected to accelerate in the coming decade, moving from about 3 million gallons per year in 2013 to 61 million gallons per year with a market value of US$1.3 billion by 2020.[36] Marine biofuel production could also be complemented with the use of bagasse or coconut wood, abundant non-edible by-products of sugar cane and copra, for the production of electricity in many SIDS (e.g. in Mauritius and Vanuatu). The local production of algae biofuels could be particularly useful to reduce import dependency on hydrocarbon-based fuels for local transportation and electricity generation. This can have positive effects on the trade balance of SIDS that are dependent on fuels for the generation of electricity (e.g., thermoelectric facilities). In this area, South-South cooperation among SIDS but also with other developing countries such as Brazil or Mexico is particularly promising.

There are, however, only a handful of initiatives already being designed and implemented in the area of renewable energy from the oceans. One example is Mauritius, which is implementing activities in the area of Deep Ocean Water Applications (DOWA) within its oceans economy's national strategy. In this regard, the private sector-driven initiative has two different categories of activities: upstream and downstream. Upstream activities are of interest in the area of renewables, since they focus on the extraction of deep sea water for commercial applications and green cooling of buildings.[37] Downstream activities would include other related services such as eco-tourism where certain hotels are already incorporating photovoltaic panels for energy generation.

Issues for SIDS:

Due to the negative impact that fuel imports have on the balance of payment of many SIDS and the need to develop higher levels of energy security, SIDS could explore ways to mainstream renewable energy into their national and regional energy planning and mix. There is also potential for SIDS in offshore wind for electricity and in the use of algae biomass for local fuel generation. Although there are already several cooperation frameworks and partnerships focusing on promoting sustainable energy generation and cleaner fuels in SIDS[1], many of these programmes are incipient, and renewable energy generation remains at a nascent state of development. A joint investment framework, targeted consumption subsidies and the creation of regional renewable energy authorities and companies could prepare the ground for attracting investment and

the deployment of pilot facilities. Additionally, it could promote environmental goods and services related to energy generation and efficiency, as well as ensure their availability, making the acquisition of inputs more affordable.

Notes

1 *See the list of sustainable energy partnerships for SIDS at: www.sids2014.org/index.php?page=view&type=232&nr=4&menu=1507.*

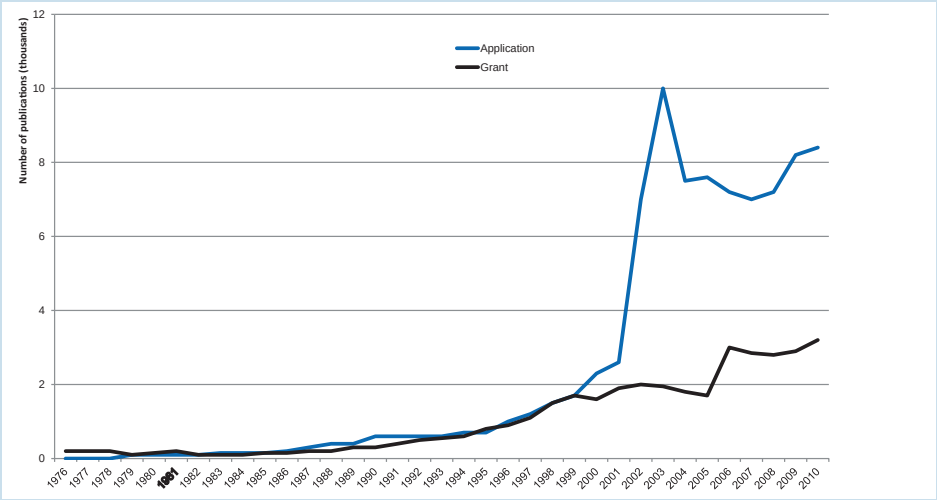
3.3 Marine bio-prospecting

Oceans and seas are the source of a huge variety of life forms including macro- and microorganisms. Living marine resources have huge potential for developing new food, biochemical, pharmaceutical, cosmetics and bioenergy applications. About 18,000 natural products have been developed to date from about 4,800 marine organisms, and the number of natural products from marine species is growing at a rate of 4 per cent per year.[38] Moreover, the global market for marine biotechnology is projected to reach US$4.9 billion by 2018,[39] driven by increased investments in marine biotechnology research and growing demand for natural marine ingredients. For example, in 2011 there were over 36 marine delivered drugs in clinical development, including 15 in the field cancer of treatment[40].

Marine genetic resources are found throughout the oceans, although species richness and diversity tends to be higher closer to land. Genetic resources, as well as other natural resources found within the EEZ (the water, soil or subsoil), are subject to national jurisdiction,[41] including access and benefit-sharing (ABS) laws and regulations. Their conservation and sustainable use are also governed by the Convention on Biological Diversity (CBD) and the Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization. In other words, users of genetic resources within national jurisdiction have to obtain prior informed consent from national competent authorities and there must be mutually agreed terms on access and the share of benefits arising from their use. Almost all SIDS are part of the CBD and five have already ratified or acceded to the Nagoya Protocol.[42] The implementation of the CBD and Nagoya principles in the marine environment can prove to be challenging; this notwithstanding, SIDS should continue to engage in establishing a public policy framework that would support potential economic development of marine bio-prospecting with mutual benefits.

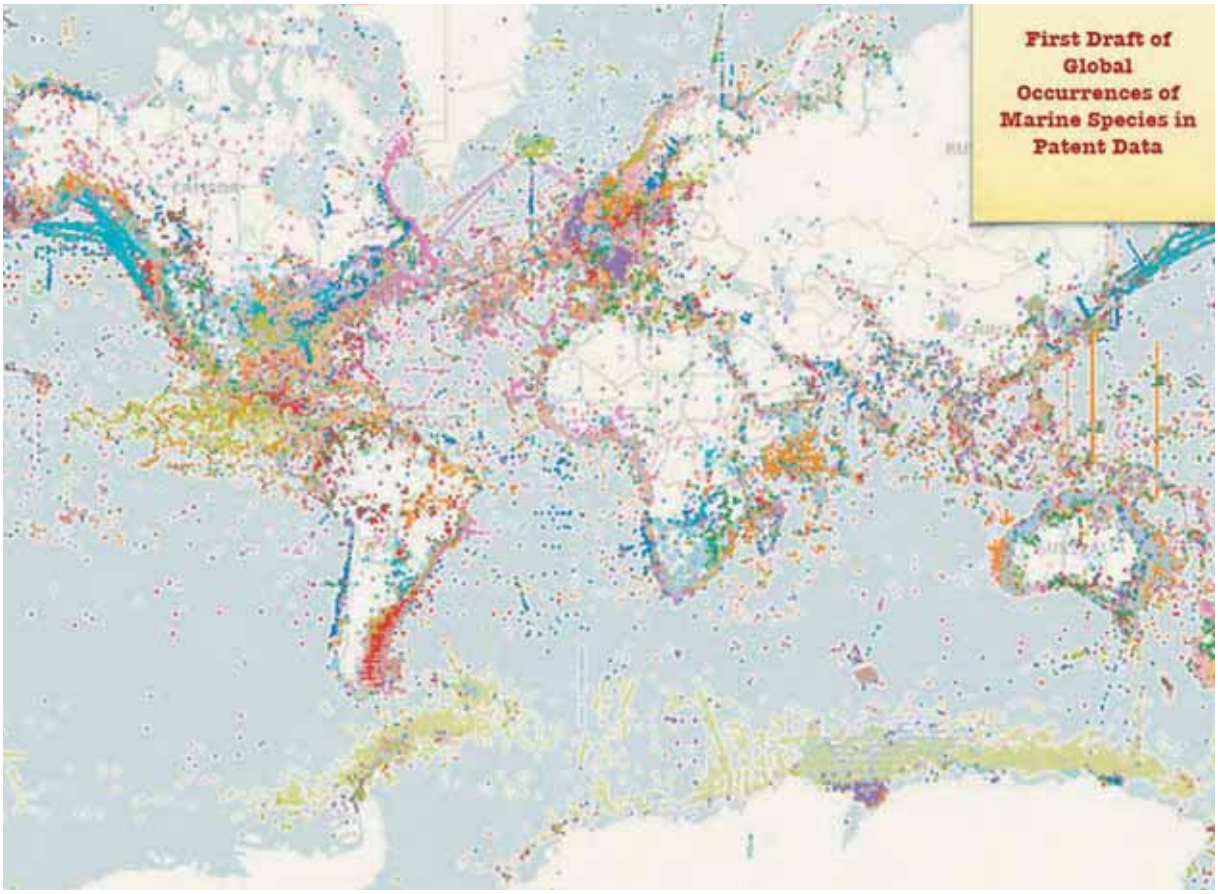
Most SIDS do not have specific laws dealing with ABS on genetic resources, making it difficult for them to obtain any benefits and to regulate bio-prospecting activities, whether inland or within the EEZ. Perhaps one salient example of a law specifically regulating marine

Figure 3.2: Patents published based on marine genetic resources



Source: Oldham, P, Hall, S, & Barnes, C 2013, 'Marine genetic resources in patent data', United Nations University & One World Analytics, www.un.org/depts/los/biodiversityworkinggroup/workshop1_oldham.pdf.

Figure 3.3: First draft of global occurrences of marine species in patent data



Source: Oldham et al. 2013, op. cit.

bio-prospecting is the Norwegian Marine Resource Act of 2009,[43] which could serve as an initial model for legal ABS development for marine bio-prospecting in SIDS.

Natural resources in the high seas are considered the 'common heritage of mankind' and subject to special rules under UNCLOS. However, specialised ABS rules for these resources have not yet been developed.[44] The UN Ad Hoc Open-ended Informal Working Group relating to the Conservation and Sustainable Use of Marine Biological Diversity is currently considering the issue in order to agree on an approach with respect to a new international instrument under the UNCLOS framework in light of the Rio+20 outcome document.[45]

Meanwhile, patents making direct use of marine genetic resources have grown significantly over the past 10 years, with about 10,000 published in peak years (see Figure 3.2). It is highly probable that most cases of access and use to these resources may have not been granted by national authorities when falling within the EEZ, thus probably leaving the patent applicant as the sole collector of benefits. This is confirmed by the fact that there are very few cases of ABS contracts on marine resources and even fewer ABS laws specifically dealing with marine genetic resources.

Figure 3.3 maps the geographical origin of marine species used in patent applications over the last 10 years. It gives an idea of the number of samples that have been used in bio-prospecting and R&D from all over the world. This raises the question of how often countries have benefited from ABS rules and partaken in sharing benefits with the patent holders. There is undoubtedly a huge untapped source of benefits and potentially value addition for SIDS.

Issues for SIDS:

Marine bio-prospecting offers opportunities for benefit-sharing and the creation of scientific capacities in SIDS. There are very few specific laws dealing with bio-prospecting and ABS in SIDS. This is one of the areas where an ocean space approach or common marine spatial planning could be particularly useful, as marine resources are usually shared and cooperation prevents unnecessary competition among SIDS. While there has been significant support to raise awareness on these issues, especially in the Caribbean and the Pacific, a partnership to support the creation of regional regulatory and institutional ABS frameworks seems to be missing. Technical assistance is needed to develop these. SIDS can deepen their participation and ensure that discussions in UNCLOS toward a multilateral ABS regime on marine resources in the high seas provide benefits and enhance scientific cooperation among all parties.

3.4 Maritime transport and open ship registration

About half of the world's population, most of its largest cities and industries along with critical value chains tend to be concentrated in coastal areas[46] to ensure access to transport routes and continuous flows of resources and products. Between 80 and 90 per cent of the volume of global trade is transported by sea.[47] In 2012, about 9.2 billion tons of goods were loaded in ports worldwide.[48] Without oceanic and sea routes, globalisation as we know it would not have been possible.

Maritime transport is very important for SIDS as their socio-economic prospects largely depend on their ability to connect to the rest of the world and access international markets. SIDS maritime transportation systems are, however, particularly vulnerable due to common intrinsic features that undermine their sustainable development and growth. These include remoteness, a narrow resource base, lack of capacity and infrastructure to support the growth of international shipping (e.g., maintaining national hydrographic charting capacity), lack of on-shore facilities and resources to deal with the broad range of ship-sourced waste, dependency on tourism, a narrow range of commodities export, high reliance on imported fossil fuels, low transport connectivity and relatively high transport costs. Together, these factors increase socio-economic vulnerability, which is further amplified by fragile ecosystems, high exposure to natural disasters and climate change risks, combined with little resilience and low adaptive capacity. The strong interdependence between key economic sectors (such as fisheries and tourism) and transport magnifies the challenge, as negative impacts of climate change on any one of these sectors could ultimately lead to the collapse of another. Therefore, achieving greater sustainability and resilience in the maritime transport sector and building adaptive capacity and climate resilience of coastal transport infrastructure, including ports, is of paramount importance.

On the commercial side, several SIDS have provided incentives for ship registration to owners from third countries (also called 'open registers'), allowing many of them to have a huge number of ships registered under their flag. This practice can reduce operating costs, assist in avoiding potentially burdensome regulations and allow the engagement of international crews. It has provided flexibility to ship owners and generated income for countries facilitating such a registry. For example, more than 98,000 merchant ships have been registered in the developing economies of Oceania by 2014.[49] This registration is led by the Marshal islands, Tuvalu and Vanuatu,[50] with about 99 per cent of total registrations from the region. While open registers is not a practice that could be put in place by all countries, as it requires certain hard and soft infrastructure, it could be better leveraged by linking it to financial and ship classification services.

Another issue is that the pollution generated by maritime transport, and especially ship-source oil pollution (including from dumping of bunker fuels), can be particularly damaging for two other ocean-related sectors in SIDS: fishing and tourism. The International Convention for the Prevention of Pollution from Ships (MARPOL Convention) and its annexes regarding oil, hazardous substances, sewage, garbage and exhaust pollution from ships and offshore platforms has significantly reduced marine and atmospheric pollution and the protection of marine ecosystems. For example, it has reduced oil spills accidents from 25 cases in the 1970s to less than 5 over the last 12 years. It has also led to the reduction of sulphur content in fuels from 1.5 per cent to less than 0.5 per cent since 2005.[51] These efforts need to be sustained, to the maximum extent possible, over the long term in order to mitigate negative externalities of maritime transport. At the same

time, heavy reliance on fuel imports exposes SIDS to a high degree of price volatility, increases transport and logistics costs and takes away resources from important development priorities. Improving maritime transport energy efficiency and promoting sustainable and low carbon transport solutions will help address these concerns.

In this context, creating sustainable and resilient regional maritime or multimodal hubs and enabling the provision of adequate infrastructure and incidental services (such as port-related, storage, insurance and financial services), as well as reliable transport services, can help address the challenges faced by SIDS in the area of maritime transport and in so doing improve connectivity.

Issues for SIDS:

Incentives for ship registration could be better leveraged by potentially linking this to financial and ship classification services. Moreover, developing sustainable and resilient regional maritime or multimodal hubs and related services (e.g. port-related, storage, insurance and financial services) can help address the challenges faced by SIDS in maritime transport. Enhanced private participation and investment incentives accompanied by adequate regulatory and institutional frameworks could channel resources and interest to many of these services. Options to create regional managed hubs with multiple facilities among member countries need to be explored and assessed. Regional sectoral maritime agreements and joint ventures for cargo and cruises could facilitate regional connectivity.

3.5 Marine and coastal tourism

In 2012, for the first time, the number of international tourist arrivals reached over 1 billion.[52] According to the United Nations World Tourism Organization (UNWTO), approximately one of every two tourists visited the seaside.[53] For more than half of SIDS, tourism generates their largest source of foreign exchange, accounting for between 20 and 50 per cent of GDP and over 30 per cent of employment.

In terms of trade, travel services[54] exports by SIDS reached US$24 billion in 2012, representing more than 50 per cent of their total services exports (see Figure 3.4). Additionally, travel services in SIDS have had an annual growth rate of 7 per cent over the last five years, with the exception of 2009 where a small reduction in exports was felt as a consequence of the financial crises. This growth has been possible due a diversification in the origin of tourists, especially with new visitors from Asia.[55] These numbers give a good indication of how important the tourism sector is, not only in the overall trade balance of SIDS but also as a vector for investment and employment creation.

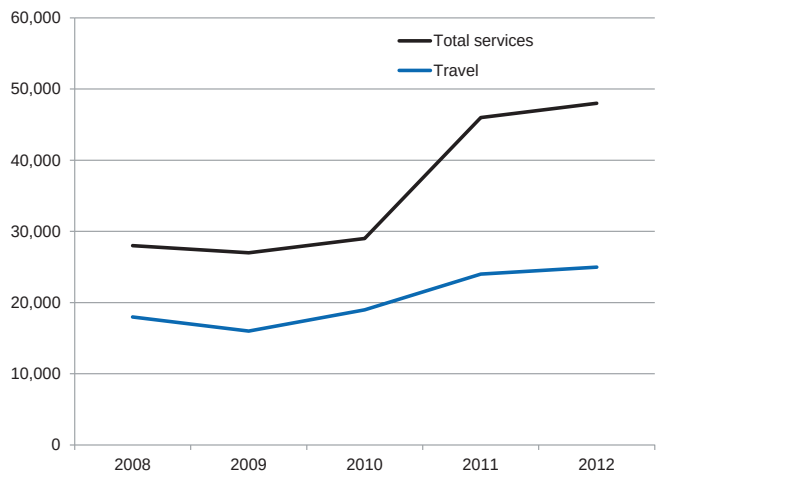
In terms of investment, flows targeting the tourism sector in SIDS are quickly recovering after the financial crises. For example, 'greenfield' foreign direct investment in SIDS targeting hotels and restaurants reached US$475 million in 2012.[56] This is 44 per cent more than in 2011 and gives an indication of the growth potential of this sector regardless of remoteness considerations. Additionally, many SIDS – especially those in the Caribbean Sea and Indian Ocean – have understood the importance of linkages with other related sectors such as information and communications technologies (ICTs) and offshore financial services by seeking to also attract investors in these sectors. By exploring options to increase travel routes and ICT connectivity with major tourism origin countries, including through public-private partnerships with key airlines, tourism operators could reduce travel costs and improve the overall competitiveness of the sector.

However, marine and coastal tourism is particularly vulnerable to climate change, natural disasters and pollution. The sea level rise anticipated from climate change is the biggest long-term threat facing the tourism industry in many SIDS, where most tourism infrastructure lies just above sea level. In the short term, unmanaged mass tourism can negatively impact coastal ecosystems. Sustainable tourism, including ecotourism, can have a significant impact on the recovery and conservation of these ecosystems. Tourists are starting to pay attention to ecological standards and certifications applying not only to destinations and the tourism infrastructure but also to hotels and the behaviour of tourism and transport operators. Sustainable tourism could be introduced as part of sustainable investment and infrastructure policies, marine and coastal zone management plans and, depending on its impact, could also be linked to the sustainable use of marine protected areas. Renewable energy, water treatment, marine wildlife watch and ecosystem conservation also have close synergistic relations with sustainable tourism.

Issues for SIDS:

Sustainable tourism is an essential economic sector for many SIDS, given its contribution to national income, foreign exchange earnings and investment. Sustainable tourism needs to be mainstreamed into national and regional planning as well as into technical cooperation, public financial support and public-private partnerships. Facilitating travel routes and the operation of services providers in transport, ICTs and financial services could strengthen the appeal of SIDS to both investors and travellers and enable the emergence of regional hubs. Links between maritime transport services such as cruise routes can also create larger tourism markets for SIDS and promote island hopping. Additionally, travellers' expenditure can be leveraged to promote the supply of locally produced foods and crafts. Adequate regulation and incentives to enter the ecotourism sector are a good way to ensure sustainable development, job creation and the acquisition and consumption of local produce. Open skies and seas policies can reduce regional travel costs.

Figure 3.4: SIDS total services exports vs. travel services exports in US$ millions (2008–2012)



Source: Based on data from UNCTADStats 2014.

Figure 3.5: Ecotourism in the Pacific Ocean

Photo: J. Vidal and K. Cusi, 1982

4. THE OCEANS ECONOMY AND MULTILATERAL TRADE POLICY AND NEGOTIATIONS

SIDS stand to be more heavily impacted by the depletion of marine resources than other country groupings. This reality brings into sharp focus the need to align the – sometimes competing – interests of (possible) welfare gains that can be derived from the marine sector and environmental sustainability. These conflicting priorities highlight the need for countries to agree on binding multilateral rules that aim at governing the sustainable harvesting of marine resources as part of a broader strategic approach to safeguarding the ecological diversity of the world's oceans. Establishing multilateral rules that also support a governance framework for the world's oceans would mark a major step forward in securing the long-term development prospects of SIDS. This framework should be consistent with UNCLOS and other relevant UN agreements.

Many of the sectors identified in the preceding sections of this paper are being addressed, directly or indirectly, in WTO trade negotiations that aim to create new or enhanced market access and rules disciplines that will provide a governance framework. WTO negotiations that touch on and concern the oceans economy and are of specific relevance to SIDS include: fisheries subsidies, non-agricultural market access (NAMA) and trade in environment goods and services.

4.1 WTO and other negotiations to discipline fisheries subsidies

The fisheries sector is an important subset of the oceans economy and represents a significant source of nutrition, employment and export earnings for many SIDS. Overfishing and unsustainable fishing methods, leading to the exhaustion of marine resources, are a consequence of actions taken by enterprises and governments from developed and developing countries alike. Excess capacity has been pointed to as one of the main contributors to overfishing and is mainly a consequence of the provision of ill-conceived subsidies to domestic fishing industries.[57]

These subsidies take a variety of forms, from direct support for vessels construction, fuel and equipment to indirect support in the form of insurance, tax breaks or loan guarantees. While the FAO has developed best practices with respect to the registration of vessels as well as national and regional fisheries managements systems, these codes of conduct are not mandatory, thus limiting their potential impact on sustainable practices.

Recognising the need to regulate subsides that contribute to the unsustainable harvesting of the world's fisheries, the Doha Ministerial Declaration (2001) launched negotiations to clarify and improve WTO disciplines on fisheries subsidies.[58] The mandate to advance negotiations on fisheries was further elaborated at the Hong Kong Ministerial Conference in 2005,[59] where members agreed to strengthen disciplines leading to the prohibition of certain forms of fisheries subsidies that contribute to overcapacity of fishing fleets and overfishing. The main challenge that confronts WTO negotiators is finding the appropriate balance between, on the one hand, disciplining the use of subsidies that result in overcapacity and resource depletion, and on the other, protecting the developmental interests of developing countries and LDCs to access fishing resources for food and income generation.

4.1.1 General prohibitions and flexibilities

In 2007, the Chairman of the WTO Negotiating Group on Rules presented a draft text on Anti-Dumping, Subsidies and Countervailing Measures that included proposed disciplines on fisheries subsidies. The text proposed the prohibition of subsidies that contribute to overfishing and overcapacity, the so-called 'red box' subsidies. Red box measures also include subsidies that benefit vessels involved in IUU fishing or those that aim at the acquisition or construction of new vessels resulting in enhanced capacity. Notwithstanding this broad prohibition, the text offers some relief through general exceptions applicable to all WTO members and specific exceptions targeted at identified categories of members. Subsidies subject to the general exceptions include those targeted at the enhancement of crew safety; the adoption of gear for selective fishing techniques; the adoption of other techniques aimed at reducing the environmental impact of marine wild capture; re-education, retraining or redeployment of fishworkers; and vessel decommissioning or capacity reduction.[60] Subsidies allowed for under the general exception provisions are decoupled from performance criteria and do not give rise to enhanced marine wild-capture fishing capacity.

With respect to specific exceptions, the draft text provides for a full and carte blanche exception from red box measures for LDCs. This proposed flexibility aims at providing LDCs with the policy space to achieve

the twin objectives of developing domestic fishing capacity (which largely remains inadequate) and ensuring that the economic and social importance of the sector is not unduly undermined. This proposed broad exception for LDCs is generally supported in recognition of the persistent underutilisation of their marine resources. Special and differential treatment and flexibilities proposed for developing countries other than LDCs aim to provide exemptions from the general prohibition for marine wild-capture fishing performed within the territorial waters of a member by means of non-mechanised net retrieval. This proposed developing country exemption is subject to production limiting conditions and is targeted at small-scale and artisanal fishers. Developing countries still need policy space to increase capacity to enable the development of small-scale and artisanal fisheries in order to guarantee nutritional, food and livelihood security. The most significant conditionality proposed is the requirement that developing members benefiting from this exemption take steps to implement fisheries management systems. For SIDS, this conditionality should be accompanied by parallel obligations (by developed countries) to provide technical cooperation and financial assistance to assist in establishing and strengthening local and regional fisheries management systems. Additionally, some developing countries are requesting that transfer of payments in their bilateral or regional fish agreements are also excluded from fish subsidies disciplines. All proposed exemptions remain under negotiation and subject to the agreement of all parties.

Issues for SIDS:

It is in the interest of SIDS to consolidate special and differential treatment for LDCs and developing countries in order to preserve policy space and build domestic fishing sectors within any potential WTO fisheries subsidies outcome that ultimately promotes the creation of a global regime for sustainable fishing practices. This will be particularly important for small scale and artisanal fisheries.

The general exceptions and rules linked to special treatment for developing countries are conditional on the maintenance of fisheries management systems regulating marine wild capture within a member's jurisdiction. While such systems imply financial costs and technical capacity, they will have positive effects on the sustainability of local fish stocks in the medium and longer terms. This situation calls for drawing clear linkages between any potential obligation to establish fish stock management systems with the effective provision of technical and financial assistance needed to implement them, including monitoring and enforcement.

4.1.2 Relevant regional initiatives

Beyond multilateral negotiations in the WTO, some countries are simultaneously pursuing alternative approaches to curtail the use of fisheries subsidies, including through regional trade agreements (RTAs).

Recognising the importance of fisheries to the sustainable development of member countries of CARICOM along with the Dominican Republic (CARIFORUM), the 2008 CARIFORUM–EU Economic Partnership Agreement (EPA) acknowledged 'the economic and social importance of activities relating to fisheries and the utilisation of the living marine resources of CARIFORUM, and the need to maximise those benefits in relation to such factors as food security, employment, poverty alleviation, foreign exchange earnings and social stability of fishing communities'.[61] The parties further recognised that 'fisheries and marine ecosystems of the CARIFORUM States are complex, biologically diverse and fragile and that exploitation should take into account these factors through effective conservation and management of fisheries resources and related ecosystems based on sound scientific advice on the precautionary principle as defined by the FAO Code of Conduct on Responsible Fisheries'.[62] The text also makes provision to support food security, regulatory frameworks, management systems and information exchange within and between the CARIFORUM member States, which are all SIDS. While the agreement encourages regulation, management and transparency, it does not expressly mandate the establishment of a balance between the exploitation of marine resources and sustainability.

The 2009 Interim Partnership Agreement between the European Community and the 'Pacific States', is limited in scope and restricted, in the main to trade in goods. It also includes a special derogation on the Rules of Origin for fishery products. This provides greater latitude to the contracting parties of the Pacific to utilise fisheries resources.[63] However, the management component of the agreement is weak and does not take a cross-cutting or cross-sectoral approach to this issue.

More recently and under the Trans-Pacific Partnership Agreement (TPP) negotiations, parties are discussing options to address the problem of overfishing and unsustainable utilisation of fisheries assets. It is probable that the environmental chapter of the final agreement includes an acknowledgement of the importance of the marine fisheries sector to the development and livelihoods of fishing communities, including to artisanal or small-scale fisheries. The proposed TPP may also include prohibitions on fisheries subsidies that contribute to overcapacity and over fishing. The incorporation of exceptions and special and differential treatment for small scale and artisanal fishing activities should not be ruled out. Additionally, parties to the negotiations seem to be considering a package of notification and monitoring measures to secure oversight and enforcement of potential prohibitions.

Issues for SIDS:

While the CARIFORUM–EU EPA addresses some elements of the oceans economy, it is limited in scope and restricted largely to utilisation of 'living marine resources' for CARIFORUM member States. An ocean space approach could assist in the implementation of technical cooperation linked to this RTA. Although SIDS are not party to the TPP and other relevant regional trade negotiations, the rules being considered could potentially represent a step forward with respect to a framework for the sustainable harvesting of marine resources. Given that the proposed disciplines of the TPP have generated widespread attention, SIDS could seek to build on what appears to be an emerging consensus on the need to establish a sustainable equilibrium between the preservation of marine resources and economic utilisation of fisheries resources

4.1.3 Breaking the fish subsidies deadlock

Notwithstanding an acknowledgement of the common problem they face due to overfishing and overcapacity, developed and developing countries have not been able to find convergence on how best to address the disciplining of subsidies in the WTO. Some developed countries have promoted the view that subsidies are necessary to protect traditional ways of life, vulnerable coastal communities and jobs in the fisheries sector. For some developing countries, a reason often cited for preserving the status quo is the need for policy space to subsidise in order to effectively harness marine resources as a fillip for economic growth, employment creation and sustaining livelihoods.

A step forward on developing future disciplines on fisheries subsidies is the recent pledge made during the Ninth WTO Ministerial Conference by Ministers from Argentina, Australia, Chile, Colombia, Costa Rica, Ecuador, Iceland, New Zealand, Norway, Pakistan, Peru, the Philippines and the United States to 'refrain from introducing new fishing subsidies that contribute to overfishing or overcapacity or extend or enhance existing subsidies, and work within the WTO and other fora to improve fisheries subsidies reform and transparency'.[64]

Issues for SIDS:

In the absence of a break in the deadlock on negotiations on fisheries subsidies, SIDS, through SVE proponents, could request an expansion of the pledge from the Ninth WTO Ministerial Conference in order to transform it into a permanent standstill on fisheries subsidies by all developed countries and developing countries in a position to do so. This could be achieved by utilising negotiated parameters, including a subsidies ceiling, based on an agreed base period and volume of support. SIDS could build on this approach, using it as a stopgap measure until a comprehensive outcome on fisheries subsidies based on the WTO draft text can be achieved.

4.2 NAMA negotiations and fish trade

Another area of multilateral trade negotiations that concerns the oceans economy is the liberalisation of trade in industrial goods.[65] NAMA negotiations aim, inter alia, at the development of modalities to reduce or eliminate tariffs, as appropriate, including the reduction or elimination of tariff peaks, high-tariffs and tariff escalation, as well as non-tariff barriers, in particular on products of export interest to developing countries.[66] The range of goods under negotiation is broad and includes fish and fish products along with other inputs that are vectors for investment in the oceans economy. Interestingly, fish and fish products are categorised as industrial goods in the HS codes. It should be noted that in the context of NAMA negotiations, a distinction is not drawn between marine wild-capture fisheries and inland fisheries or aquaculture, since HS

Table 4.1. Tariff lines covered by the fish and fish products sectoral initiative

HS 2002	Description
03	Fish and crustaceans, molluscs and other aquatic invertebrates
0509	Natural sponges of animal origin
0511.91	Animal products; of fish or crustaceans, molluscs or other aquatic invertebrates and dead animals of chapter 3, unfit for human consumption
1504.10	Fish-liver oils and their fractions
1504.20	Fats and oils and their fractions, of fish, other than liver oils
1603 ex	Extracts and juices of fish or crustaceans, molluscs or other aquatic invertebrates
1604	Prepared or preserved fish; caviar and caviar substitutes prepared from fish eggs
1605	Crustaceans, molluscs and other aquatic invertebrates, prepared and preserved
2301.20	Flours, meals and pellets, of fish or crustaceans, molluscs or other aquatic invertebrates

Source: WTO (2008) Draft text for non-agricultural market access modalities. Document TN/MA/W/103/Rev.3, annex I

codes do not differentiate between different types of fisheries.

While WTO members have come to a tacit understanding on the general formula (the so-called Swiss Formula) to be applied with respect to the liberalisation envisaged above, some members have agreed to voluntarily participate in parallel negotiations to significantly reduce or eliminate tariffs on identified industrial goods. Fish and fish products is one of the 14 sectors identified for sectoral negotiations or 'initiatives'[67] and, according to the draft modalities, members participating in the sectoral initiative will eliminate tariffs on qualifying products (see Table 4.1). This envisaged liberalisation is targeted for implementation on 1 January of the year following the entry into force of the Doha Development Agenda (DAA) results.[68] Although no small island developing state is party to the sectoral initiative on fish and fish products (sectoral initiatives can be joined on a voluntary basis), the environmental implications of further multilateral liberalisation of fisheries is a matter of concern to them. The lowering of tariffs under sectoral initiatives for fish and fish products could place downward pressure on fish prices, stoking higher demand and thereby placing additional strain on fisheries resources.

Since the submission of the chair's revised text in December 2008, negotiations on all market access disciplines have been deadlocked due to the inability of members to determine an appropriate balance between the level of ambition contained in the NAMA text vis-a-vis other market access negotiations. Negotiations on industrial goods that concern the oceans economy within the negotiating group on NAMA thus remain log-jammed. At the same time, following the outcome of the Ninth WTO Ministerial Conference in Bali, some delegations have signalled a desire to reengage in negotiations on a wide range of issues, including industrial goods.

The Marrakesh Agreement establishing the WTO calls on members to pursue the objective of sustainable development, seeking both to protect and preserve the environment and to enhance the means for doing so in a manner consistent with the respective needs of economic development. The liberalisation of marine resources, particularly fish and fish products, should be seen in light of the potential harmful impacts that such liberalisation can have on ecological sustainability. Any potential outcome of the WTO NAMA negotiations should be accompanied with parallel disciplines of fisheries subsidies in order avoid the creation of further incentives to overexploitation.

SIDS should give special attention to potential impacts of further liberalisation in NAMA, particularly as it concerns fish and fish products and other disciplines allied to the oceans economy. Specifically, consideration should be given to the potential trade creation effects that the further liberalisation of fish and fish products (in particular, marine wild capture) can have on international demand and, by extension, fisheries stocks. Potential tariff reductions for fish and fish products without parallel efforts to discipline subsidies could increase demand for an increasingly scarce resource. Special attention should therefore be given to the strengthening of disciplines related to the sustainable harvesting of fisheries in parallel with negotiations on the further liberalisation of fisheries.

SIDS may also give consideration to opportunities that may arise for export growth in goods that also support climate change mitigation and adaptation goals, as it concerns marine ecosystems.

Issues for SIDS:

SIDS should give special attention to the potential impacts of further liberalisation in NAMA, particularly as it concerns fish and fish products and other disciplines allied to the oceans economy. Specifically, consideration should be given to the potential trade creation effects that the further liberalisation of fish and fish products (in particular, marine wild capture) can have on international demand and, by extension, fisheries stocks. SIDS may also give consideration to opportunities that may arise for export growth in goods that support climate change mitigation and adaptation goals, as they concern marine ecosystems. To the fullest extent possible, SIDS could consider pursuing a strategy within WTO negotiations that explicitly aligns trade liberalisation with transparency and monitoring of the potential impacts on marine ecosystems.

4.3 Multilateral, plurilateral and regional environmental goods negotiations

As noted above, sustainable development and the protection and preservation of the environment are fundamental goals of the MTS and are objectives enshrined in the agreement establishing the WTO.[69] While there is no specific WTO agreements dealing with the environment, and specifically marine ecosystems, members are permitted to adopt trade-related measures aimed at protecting the environment provided that conditions to avoid the misuse of such measures for protectionist ends are fulfilled.[70] According to the mandate agreed by WTO members at the Fourth Ministerial Conference, negotiations on the environment should focus on 'enhancing the mutual supportiveness of trade and [the] environment'. Moreover, members agreed in paragraph 31 (iii) of the Ministerial Declaration on the 'reduction or, as appropriate, elimination of tariff and non-tariff barriers to environmental goods and services'.[71]

Today, the market for environmental goods has been estimated at US$1 trillion.[72] Environmental goods negotiations are of particular importance to SIDS as they can provide enhanced economic opportunities and simultaneously mitigate the impact of human activities on the environment, particularly ocean eco-systems. Within the Doha Round, negotiations on environmental services are taking place under the auspices of the Special Session of the Committee for Trade in Services (CTS), while negotiations related to environmental goods are primarily taking place in the Committee on Trade and Environment (CTE) and the Negotiating Group on Market Access.[73] However, they have not arrived yet at specific outcomes.

In identifying specific goods and services that would fulfil the paragraph 31 (iii) mandate, the delegation of Singapore in 2010 issued a communication that called for the WTO to play a greater role in mitigating the potential impacts of climate change through the liberalisation of environmental goods and services (EGS).[74] This communication refers to a list of 35 environmental goods that would complement the United Nations Framework Convention on Climate Change (UNFCCC) efforts to combat climate change. The products proposed are divided into the following categories: (i) waste management; (ii) air pollution control; (iii) noise pollution control; (iv) wastewater treatment; (v) environmental monitoring, analysis and analysis equipment; (vi) renewable products and energy sources; and (vii) energy-efficient products.[75]

While not all the proposed categories have a bearing on marine ecosystems, a number have implications for the oceans economy. It is well established that marine ecosystems are compromised not only by wastewater run-off and the emission of effluent into waterways and oceans but also by the release of carbon dioxide into the atmosphere. Atmospheric carbon dioxide levels are rising as a result of human activities, such as the burning of fossil fuels, which is increasing the acidity of seawater.[76]

Liberalisation of air pollution controls machinery, as well as monitoring and analysis equipment, through the WTO process can assist in mitigating ocean acidification, for example. Similarly, monitoring and analysis equipment can help countries develop empirical support for policy measures aimed at protecting and preserving marine ecosystems.

Beyond the WTO negotiations, a number of countries are engaged in an efforts to increase the trade in environmentally friendly goods that can also have a

positive impact on marine ecosystems. To this end, on the margins of the 2014 World Economic Forum meeting in Davos, 14 WTO members agreed to negotiate a deal directed at the elimination of tariffs in environmental goods. Those engaged in negotiations on the Environmental Goods Agreement (EGA) are: Australia, Canada, China, Costa Rica, the European Union, Hong Kong, Japan, Korea, New Zealand, Norway, Singapore, Switzerland, Taiwan and the United States. Costa Rica is the only developing (non-BRICS) country involved. The initiative follows on an opportunity opened by the Asia-Pacific Economic Cooperation (APEC) in 2012 and sets out a concrete list of 54 goods on which members have committed to reduce tariffs by a fixed date in 2015. The proponents represent 90 per cent of the global trade in environmental goods under the APEC list, hence a successful conclusion of these negotiations is sure to have a measureable impact on the global market for such goods.

The proposed agreement aims to include a broad range of 'green trade' products including the 54 items agreed to in the APEC list of environmental products. These include: (i) machinery used in the generation and conversion of renewable energy and their component parts; (ii) industrial machinery and components that promote energy efficiency; (iii) equipment used to process, filter and purify wastewater, seawater and groundwater; (iv) industrial equipment that reduces or eliminates by-products embedded with hazardous pollutants; (v) air pollution control equipment and solid and hazardous waste management and processing equipment; (vi) laboratory and industrial instruments used to measure, record, analyse and assess environmental samples; and (vii) quality control equipment used to assess food processing, agriculture, air emissions and water treatment.[77]

In light of the extensive coverage of and the inclusion of many of the key trading nations in proposed plurilateral agreement on environmental goods, SIDS should seek to assess and explore the market access opportunities and risks that would flow from such a potential agreement, especially if agreed on a most favoured nation (MFN) basis. SIDS can seek to assess to what extent this proposed agreement would support trade in ecologically friendly goods that also benefits marine-derived economic activity. An assessment can then be made on the extent to which small States can benefit from this proposed trade pact.

Issues for SIDS:

SIDS, through SVE proponents, could explore proposals that seek to further link trade-measures to actions that specifically support the sustainable development of the oceans economy and that enable trade in sustainably harvested products. Focus should be placed on addressing barriers affecting the trade of goods relevant to water treatment and to environmental products of interest to SIDS (e.g. organic aquaculture or products sustainable fishing). Such an approach could feature as an element of the post-Bali work programme. Some environmental goods are particularly relevant to SIDS, given the fragility of their marine ecosystems and their high dependence of commercial activities derived from or supported by the oceans, such as tourism.

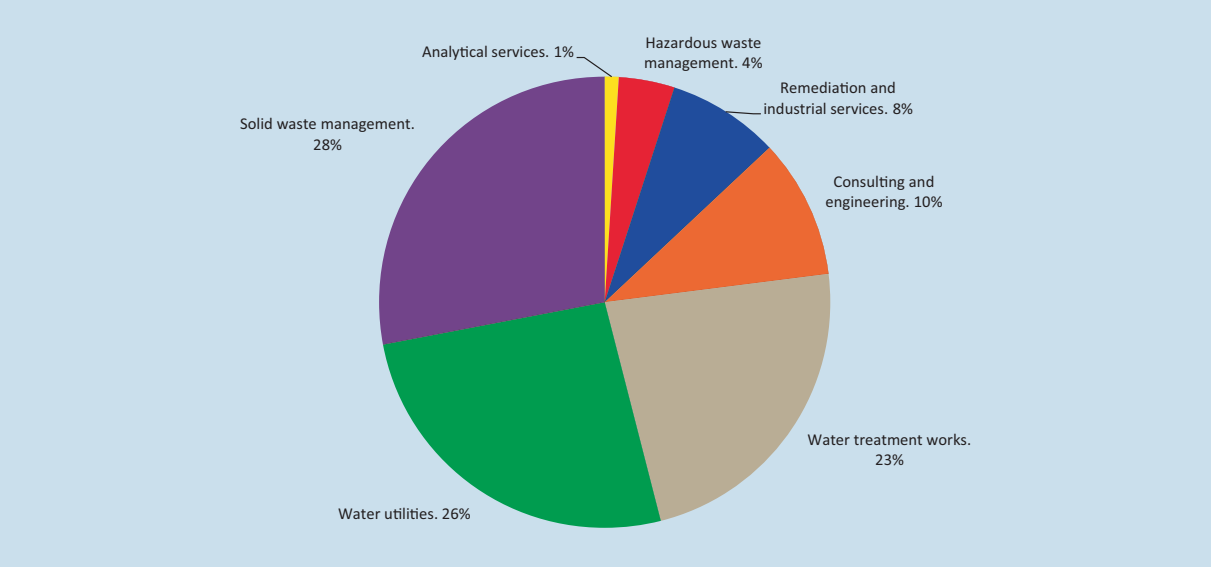
4.4 WTO environmental services negotiations

Current negotiations on environmental services under the General Agreement on Trade in Services (GATS) will be relevant for investment and trade in sub-sectors related to the oceans economy. These negotiations have increasing importance since the global demand for environmental services continues to grow. In 2010, global sectoral revenues of environmental services were estimated at US$505 billion[78] (see Figure 4.1), showing 13 per cent growth since 2005.

During the last 13 years, several WTO members have called for the development of a list that provides an inventory of environmental services and the identification of core services in this area. To this end, WTO members have submitted various communications aimed at improving W/120 classification by including the following environmental services: (1) liquid waste services, (2) reuse disposal services, (3) sanitation, water and wastewater and (4) other environmental services.[79] This type of proposal may enrich the definitional debate and allow more precise commitments in the near future.

As many services can have an environmental end-use, it is difficult to draw the line between 'environmental services' per se and other services coming into play for the protection of the environment in a broad sense.[80] Most environmental services can be divided

Figure 4.1: Sectoral revenues of environmental services in US$ (2010)



Source: 'The global environment market: regions and segments matrix in 2010', Environmental Business Journal, Vol. 25 No. 6–7 (June/July), 26.

into two broad categories:[81] infrastructural and non-infrastructural services.

Private participation and effective regulation in the first category can enable investment in a range of integrated services that concern marine ecosystems. These services are often expanded to cover activities related to wastewater, water energy and transport. All these are relevant to the sustainable harvesting of marine resources and energy generation from the world's oceans.[82] Many of these sectors are linked to natural monopolies, the provision of an essential good (i.e., water) or the public services function. Therefore, defining the correct level of private or public-private participation, pricing schemes and quality standards needs to be carefully crafted in order to ensure universal access, adequate levels of investment and competition and consumer protection.

The second broad category – non-infrastructural environmental services – includes air pollution management and related support services such as environmental consulting and engineering services. The distinction between the two categories is important within the context of the WTO negotiations given (1) the critical nature of infrastructural environmental services in addressing basic needs and (2) the increasingly important role of non-infrastructural services due to their representing new ways of utilising resources that can contribute to addressing more stringent environmental standards.[83] In this later type of services, opportunities to participate and compete are higher.

Notwithstanding definitional imperfections, more than 40 WTO members, at all levels of development, have undertaken specific commitments on environmental services since the Uruguay Round and through the WTO accession process. Most have commitments in selected sub-sectors while some have commitments in all sub-sectors.[84] As part of their multilateral obligations, several SIDS – including Cape Verde, Samoa, Tonga and Vanuatu – have undertaken environmental services commitments under the GATS. Given the significant role played by public entities in the provision of environmental services, the number of WTO members that have undertaken commitments in this area is modest compared with other services sectors and sub-sectors with larger commercial interest. While these commitments are not explicitly targeted at balancing the economic and environmental imperatives of marine ecosystems, many of them indirectly impact the oceans economy. This is particularly relevant in relation to water, wastewater and remediation services.

The world market for water and wastewater services has been estimated at US$247.6 billion in 2010. Market participation is similar to the one of environmental services in general, showing limited participation by Asia (10 per cent), Latin America (8 per cent) and Africa (2 per cent). Yet, the impact of water and

wastewater services can be significant for marine resources of developing countries, since more than 90 per cent of all their wastewater flows directly into rivers, lakes and oceans without treatment.[85] The current and potential impacts of untreated wastewater can significantly undermine marine and coastal ecosystems.

Well-managed liberalisation and sound regulatory and institutional frameworks in wastewater services can support increased private sector involvement in pollution control efforts, particularly in fiscally constrained small States. Public-private partnerships and joint ventures can play a significant role as well in aligning private investment objectives with public interest, quality and universal services consideration. Regulation can also play a key role in market creation (e.g., by requiring mandatory treatment of wastewater by key industries and tourism facilities before it is expelled into ocean or rivers). All these can create commercial opportunities domestically and internationally that support the mitigation of ecological impacts of effluent emitted into oceans and waterways and of fossil fuels that contribute to the acidification of the world's oceans.

Issues for SIDS:

Within the ambit of RTAs, SIDS could consider pursuing sectoral reforms in areas relevant to the oceans economy, including wastewater and sewage services, remediation services and renewable energy. This could support some of the commitments already undertaken by SIDS – including those agreed in RTAs including various Economic Partnership Agreements. Further, SIDS could assess the opportunities presented through negotiations on environmental services and consider the role that private participation, regulations and institution building can play in creating economic and employment opportunities while simultaneously mitigating the impacts of human activities, particularly in relation to marine ecosystems. For SIDS that are highly dependent on tourism and tourism-related services, preserving the ecological integrity of waterways and oceans is critical to the sustainability of this sector.

5. MOVING FORWARD AN OCEANS ECONOMY TRADE AND DEVELOPMENT AGENDA

There are opportunities in the oceans economy to harness markets and trade while promoting sustainable use and good management of oceans and marine resources. As illustrated above, these exist in sectors related to marine resources such as sustainable fisheries and aquaculture, bio-prospecting, renewable energy, sustainable coastal tourism and water, sanitation and wastewater services. Deeper analyses could be undertaken, including by the UN and regional organisations, on key sectors and aspects of the oceans economy with a particular focus on specific SIDS, in order to identify the potential for harnessing marine ecosystems sustainably in support of growth and development. Trade in many of these sectors could be affected by multilateral and regional trade negotiations that are still on the table and advancing at different speeds. A number of suggestions are presented below which aim at maximise potential trade and development opportunities for SIDS in the oceans economy.

5.1 Including oceans as a key component in future Sustainable Development Goals

There is a need to mainstream the oceans economy into future Sustainable Development Goals. This effort should go beyond the current Millennium Development Goal 7B related to fish stocks and protected marine areas. At the time of the writing, several aspects of the oceans economy had already been incorporated into outcome document of the Open Working Group on Sustainable Development Goals[86], reflected in the text of 19 of July 2014. This is particularly evident in proposed goal 14: Conserve and sustainably use the oceans, seas and marine resources for sustainable development, but also in other proposed goals such as 12 (sustainable production and consumption patterns), 13 (urgent action on climate change) and 15 (protection, restoration and promotion of sustainable use of ecosystems and biodiversity).

Targets and indicators proposed under goal 14 that are more relevant to the oceans economy include:

- reduction of marine pollution, including from land-based activities;
- sustainable management and protection of marine and costal ecosystems;
- mitigation of the impacts of ocean acidification;
- regulation of fish harvesting with the aim of controlling overfishing;
- restoration of fish stocks to ecologically safe levels;
- ensuring the full implementation of existing regional and international regimes on oceans and seas;
- elimination of IUU fishing and destructive fishing practices;
- elimination of subsidies which contribute to overcapacity and overfishing;
- providing access of small-scale and artisanal fishers to marine resources and markets; and
- increasing the economic benefits to SIDS and LDCs from the sustainable use of marine resources, including through sustainable management of fisheries, aquaculture and tourism.

Other additional elements that could be considered for incorporation in light of the ocean economy concept could include the following:

- the development of access and benefit sharing rules for marine bio-prospecting (also related to conservation and innovation);
- investment in R&D, infrastructural capacity and use of marine and other renewable energy sources (especially from offshore wind, tidal and waves, marine geothermal and biomass);
- availability of facilities and level of investment in sustainable coastal and maritime tourism and relevant infrastructure (also linked to conservation, employment and livelihoods).

5.2 Ensuring more sound and transparent multilateral and regional governance in the post-2015 development agenda

Governance of the oceans and seas is a key global challenge. The number of international conventions and regional agreements makes it very difficult to ensure effective participation by SIDS and does not facilitate movement beyond a 'silo view' of issues. There is a need for more integrated responses that align economic, environmental and livelihood objectives. As discussed above, the post-2015 development agenda may be able to provide guidance for the next 10 years. However, this will not by itself facilitate a more coherent approach. Some have proposed, as occurred in the case of multilateral environmental agreements, a single UN organisation dealing with oceans. While this

might improve coherence at all levels, it would also involve a massive effort to bring together mandates and agreements under different organisations and of different legal natures.

An alternative is to strengthen and complement the process for 'global reporting and assessment of the state of the marine environment, including socio-economic aspects' under the UN General Assembly.[87] The first global integrated marine assessment will be a significant outcome. This assessment currently focuses on ecosystem services, food security and the impacts of human activity. However, while the reporting process does include economic aspects, the role of trade is not deeply considered. UNCTAD and other relevant international organisations could support the next phases of the assessment in order to provide a clearer view of the potential of the oceans economy and the contribution of trade to the Rio+20 mandates and future sustainable development goals. UNCTAD could also inform on how the outcomes of multilateral and regional trade negotiations might impact the state of marine resources in order to improve coherence and understanding of these issues.

Moreover, regional agreements should be supportive of the objectives and means covered by multilateral conventions and build on them. Regional bodies should also be invited to report on their achievements and contribute to multilateral efforts, especially when their actions may affect conservation and livelihoods objectives.

5.3 Taking a regional ocean space/ maritime spatial planning approach

The ocean space or maritime spatial planning approach could be an important geographical and economic way to develop cooperation frameworks and partnership agreements. This approach could involve the Caribbean Sea, Indian Ocean and Pacific Ocean as distinct oceans spaces. It could be further viewed as the combined EEZs of SIDS in those different oceans and seas and could enhance the scope for sustainable management of oceans resources. It could be particularly useful in cases where:

1. the sector's development depends on the management and use of common resources;
2. there are multiple national/regional competent authorities with low levels of coordination; and
3. joint investment and infrastructure is needed. Fisheries management, marine genetic resources and ABS, joint services hubs, as well as open transport agreements are examples of areas where such an approach could provide positive results.

In order to maximise the opportunities that the oceans economy presents, SIDS should explore options to harmonise multilateral trade and sustainable development aspects of relevant governance and regulatory regimes within their own oceans space. Such harmonisation could take place within existing multilateral or regional trade and/or cooperation frameworks in order to avoid duplication. Additional vehicles for advancing harmonisation could include regional integration initiatives, sectoral agreements (e.g. infrastructure, transport, energy and tourism etc.), regulatory frameworks, joint managing authorities and/or enterprises. UNCTAD and the Commonwealth Secretariat could play a strategic role in enabling the creation of multilateral or regional platforms for discussions of such governance regimes as they relate to trade. Experience can be drawn from oceans management/governance in the cases of Barbados, Mauritius and the OECS.

5.4 Overcoming the impasse in fish subsidies in the WTO post-Bali work programme

There is an urgent need for an international framework to discipline harmful subsidies. A reinvigoration of the WTO negotiations to clarify and improve disciplines for fisheries subsidies is urgently needed in the post-Bali work. It would also serve as a concrete contribution to the Rio+20 outcome and the future sustainable development goals. An immediate option could include expanding the membership base and level of ambition of the Ministerial Statement, signed by 13 WTO members, pledging to refrain from introducing new fish subsidies. SIDS could encourage such a pledge and invite more WTO members to join. This pledge could also be the basis for a more solid commitment by all WTO members in the form of a WTO Decision that would at least require that subsidies contributing to overfishing and overcapacity were not increased and that they were notified. For that purpose, a working definition of subsidies that contribute to overfishing and overcapacity should be agreed on. This Decision should be enforceable until a more solid agreement is reached.

Policy space is necessary for SIDS and other coastal developing states to ensuring that there is special and differential treatment for small scale and artisanal

fisheries, a shift in the economic/commercial activity (e.g., sustainable aquaculture), development of fisheries processing facilities and transfer of payments in fish agreements needs to be secured in WTO negotiations. Also, the linking of the implementation of effective fisheries management systems to the delivery of effective technical cooperation, as has already occurred in the context of the new (proposed) WTO Trade Facilitation Agreement, could enable SIDS and developing countries to better manage their resources sustainably.

A more proactive stand by SIDS and other coastal states in crafting multilateral disciplines on fisheries subsides would be a welcome addition to developing sustainable solutions.

5.5 Dealing with WTO NAMA and fisheries subsidies negotiations in parallel

In light of the mandate given by WTO Ministers at the Ninth Ministerial to establishing a post-Bali agenda with no a priori exclusions, developing countries and in particular SIDS should consider their position on WTO NAMA negotiations (and more specifically fish sectorals). A NAMA sectoral agreement on fish could reduce the need for bilateral fisheries agreements and enable the expansion of local fleets. It is important to bear in mind that lowering tariff and non-tariff barriers on fish products without parallel solutions to fisheries subsidies will create incentives for higher demand, putting even more pressure on current stocks. Such a parallelism would ensure policy coherence and back-to-back commitments that allow the export of fish products by SIDS at the same time as ensuring a level playing field.

Additionally, SIDS should give consideration to sectoral reform and support the emergence of relevant industrial sectors that can facilitate their transition to a more sustainable interface with the world's oceans. Such a reform can allow private participation in ocean-derived sustainable energy, regulate bio-prospecting activities and support investment in a host of other economic goods that can serve as a platform for economic growth and enhanced competitiveness. Moreover, SIDS should consider what sectors they could liberalise to support inward investment and what market access they could demand to support industrial growth and export ambitions.

5.6 Incorporating a water management approach and expanding the scope of environmental goods and services negotiations

For SIDS, the sustainable supply of goods and services from the oceans is central to their future well-being and prosperity.[88] This makes it all the more important for them to be equal partners in the development of an integrated governance and regulatory regime for tradable goods and services derived from the world's oceans. SIDS could explore the preparation of a hybrid environmental goods list that focuses on products relevant to wastewater treatment but also to parts and components for marine renewable energy devices that fit their interests.

Most product lists proposed so far in the environmental goods debate have focused on energy-efficient products or those with a direct environmental benefit, but they do not tend to include preferable environmental products that could be harvested or produced by SIDS. Including products such as sustainably harvested certified fish or organic aquaculture in a future negotiating list, whether at the multilateral or regional level, could allow the liberalisation of products where SIDS might have a clearer comparative advantage.

Well-managed sectoral reform and parallel regulation and institution building in key environmental services sectors can support further investment in sustainable oceans sectors and create economic opportunities for SIDS. The way in which SIDS prepare the offers and requests lists on relevant environmental sectors, such as wastewater treatment and tourism, can be important to keep some policy space in order to introduce services competiveness and industrial policies. While some environmental sectors may fall outside the financial or technical reach of SIDS, there is potential for partnerships with larger firms from emerging markets and developed countries. Subcontracts, concessions and joint ventures may also provide avenues for service providers from SIDS to take advantage of opportunities presented.

It should be borne in mind that there are a number of initiatives on services taking place through RTAs – such as the Trade in Services Agreement (TiSA), the Trans-Atlantic Trade and Investment Partnership (TTIP) and the Trans Pacific Partnership (TPP) – that will impact on trade in services and investment flows. With SIDS not party to these negotiations, it will prove

difficult for them to inform the outcome or substantially benefit from the results. Hence, it is critical for SIDS to consider new and more flexible approaches within the already established WTO architecture to advance their interests with respect to services trade and investment, particularly in environmental services.

Finally, it must be noted that there are several considerations that need to be taken into account. For example, SIDS can seek to benefit from the private sector participation and public-private partnerships in relevant environmental sectors that demand high levels of capital investment, such as wastewater, sewage and energy services. This can support much needed capital inflows in key sectors. Beyond infrastructure, SIDS may also seek to support services suppliers engaged in the export of environmental services, particularly through modes one (cross border provision) and four (temporary movement of service providers). In this regard, SIDS-based suppliers can provide services in, for example, environmental engineering and a range of other environmental consultancy and advisory-related services.

5.7 Harnessing access and benefit-sharing regimes on marine genetic resources for sustainable development and improved technological capacities

In order to harness potential marine genetic resources for equitable benefit sharing from bio-prospecting activities and to promote value addition and local research capacities, SIDS need to introduce national and regional ABS regulations for inland and, more importantly, for marine biodiversity in the EEZ. Marine bio-prospecting is perhaps one of the areas where the 'oceans space' approach would be strongly needed to develop regional rules and even common authorities that ensure legal access, fair and equitable benefit-sharing and stronger negotiating capacity vis-a-vis potential prospectors. Additionally, efforts to regulate bio-prospecting and ABS rules for genetic resources originating in the high seas need to be addressed in the UNCLOS context in order to ensure those potential benefits actually go to humanity as a whole. When developing these rules, links could be made to the implementation and legal development of transfer of technology clauses in UNCLOS.

References

Arico, S, & Salpin, C 2005, 'Bioprospecting of genetic resources in the deep seabed: scientific, legal and policy aspects', United Nations University – Institute of Advanced Studies, Yokohama.

Bridges Africa 2014, 'Subsidies and the sustainability of fisheries:What's the catch?', *Bridges Africa*, Vol. 3 Issue 4, May.

Creel, L 2003, 'Ripple effects: population and coastal regions', *Making the Link*, Population Reference Bureau, Washington, DC.

Commonwealth Secretariat 2013, 'Oceans governance', *Small States Digest*, Issue 4: 2013.

Dahl, G F 2009, 'The Norwegian Marine Resources Act', presentation by the Senior Adviser at the Norwegian Ministry of Fisheries and Coastal Affairs, Montreal, 9 November, available at: www.cbd.int/abs/side-events/id1678-norway2.pdf (accessed 4 August 2014).

Economist, The 2014, 'Governing the high seas: in deep water', *The Economist*, 22 February.

European Commission 2012, 'Report from the Commission to the European Parliament and the Council on Member States' efforts during 2010 to achieve a sustainable balance between fishing capacity and fishing opportunities', European Commission, Brussels.

Food and Agriculture Organization (FAO) 2013, *State of world fisheries and aquaculture* 2012, FAO, Rome.

Food and Agriculture Organization (FAO) 2014a, 'Fact sheet: international fish trade and world fisheries', available at: www.globefish.org/upl/various/COFI_FT_Factsheet.pdf (accessed 3 August 2014).

Food and Agriculture Organization (FAO) 2014b, 'Regional Fishery Body Secretariats Network (RSN)', www.fao.org/fishery/rsn/en (accessed 4 August 2014).

Geloso Grosso, M 2007, 'Regulatory principles for environmental services and the General Agreement on Trade in Services', *Issue Paper No. 6*, International Centre for Trade and Sustainable Development, Geneva.

Gleason, C B, Eizenstat, J L, & Walther, P D 2014, 'United States to participate in new World Trade Organization trade negotiation to lower tariffs on green goods', *The National Law Review*, 3 April.

Global Industry Analysis 2013, 'Marine biotechnology: a global strategic business report', www.strategyr.com/Marine_Biotechnology_Market_Report.asp (accessed 4 August 2014).

Global Ocean Commission 2013, 'Bioprospecting and marine genetic resources in the high seas', *Policy Options Paper* #4, prepared for the third meeting of the Global Ocean Commission, November.

International Centre for Trade and Sustainable Development 2010, 'WTO environmental goods talks focus on climate', *Bridges Weekly Trade News Digest*, Vol. 14 No. 25, 7 July, available at: www.ictsd.org/downloads/bridgesweekly/bridgesweekly14-25.pdf (accessed 4 August 2014).

International Centre for Trade and Sustainable Development 2013, 'Submission to the Open Working Group on Sustainable Development Goals; Fisheries, Trade and Sustainable Development', available at: www.ictsd.org/sites/default/files/event/2014/04/ictsd-background-paper-international-trade-and-sustainable-development.pdf (accessed 5 August 2014).

International Chamber of Shipping (ICS) 2013, 'Shipping, world trade and the reduction of CO2 emissions', ICS, London.

International Energy Agency (IEA) 2013, 'World energy outlook 2013', IEA, Paris.

International Geosphere-Biosphere Programme (IGBP), Intergovernmental Oceanographic Commission (IOC), & Scientific Committee on Oceanic Research (SCOR) 2013, *Ocean acidification summary for policymakers – Third Symposium on the Ocean in a High-CO2 World*, IGBP, Stockholm.

Keeling, T J, Smith, T L, & Rule, K M 2014, 'US trade representative requests comments on WTO Environmental Goods Agreement', Mayer Brown, 27 March, www.mayerbrown.com/US-Trade-Representative-Requests-Comments-on-WTO-Environmental-Goods-Agreement-03-27-2014/ (accessed 4 August 2014).

Mauritius Prime Minister's Office 2013, 'The oceans economy: a road map for Mauritius', available at: www.oceaneconomy.mu/ (accessed 3 August 2014).

Oceana 2013, 'European fisheries subsidies: state aid – the hidden subsidies', http://oceana.org/sites/default/files/euo/OCEANA_State_aid_factsheet_072013.pdf (accessed 3 August 2014).

OECD 2011. 'The future of the Oceans economy: Exploring the prospects for emerging ocean industries to 2030'. http://www.oecd.org/futures/Future%20of%20the%20Ocean%20Economy%20Project%20Proposal.pdf

Office of the United States Trade Representative (USTR) 2014, 'USTR announces intent to launch WTO negotiations on environmental goods', press release, March, available at: www.ustr.gov/about-us/press-office/press-releases/2014/March/USTR-announces-intent-to-launch-WTO-negotiations-on-environmental-goods (accessed 4 August 2014).

Oldham, P, Hall, S, & Barnes, C 2013, 'Marine genetic resources in patent data', United Nations University & One World Analytics, www.un.org/depts/los/biodiversityworkinggroup/workshop1_oldham.pdf (accessed 4 August 2014).

McKinnon, L, & Wheelock, C 2010, 'Algae-based biofuels: demand drivers, policy issues, emerging technologies, key industry players, and global market forecasts', Pike Research.

Roney, J M 2013, '2013 to be record year for offshore wind', Earth Policy Institute, Washington, DC, 30 October, available at: www.earth-policy.org/plan_b_updates/2013/update117 (accessed 4 August 2014).

Simas, T 2012, 'Roadmap on marine renewable energy', presentation at Fame Project International Workshop, 20 September, available at: www.fameproject.eu/fotos/editor2/3.teresasimas_fame_presentation_wavec.pdf (accessed 4 August 2014).

Steiner, A 2014, 'Bringing the green economy to the blue: healthy oceans are a lifeline for sustainable living and robust economies', *The Economist Insights*, www.economistinsights.com/sustainability-resources/opinion/bringing-green-economy-blue-world, 24 February 2014.

United Nations Conference on Trade and Development (UNCTAD) 2013a, 'Review of maritime transport 2013', United Nations, New York and Geneva.

United Nations Conference on Trade and Development (UNCTAD) 2013b, *World investment report: global value chains – investment and trade for development*, United Nations, New York and Geneva.

United Nations Conference on Trade and Development (UNCTAD) forthcoming, 'Review of maritime transport 2014', UNCTAD, Geneva.

United Nations Environment Programme (UNEP) 2008, 'Fisheries subsidies: a critical issue for trade and sustainable development in the WTO – an introductory guide', available at: www.unep.ch/etb/areas/pdf/UNEP-ETB%20Brochure%20on%20Fisheries%20Subsidies_May2008.pdf (accessed 4 August 2014).

United Nations Environment Programme (UNEP), UN Department of Economic and Social Affairs, & Food and Agriculture Organization 2012, *SIDS-focused green economy: an analysis of challenges and opportunities*, UNEP, Nairobi, available at: www.unep.org/pdf/Green_Economy_in_SIDS.pdf (accessed 3 August 2014).

United Nations Environment Programme (UNEP), UN Department of Economic and Social Affairs, Food and Agriculture Organization, International Maritime Organization, United Nations Development Programme, IUCN Global Marine Programme, WorldFish Center, & GRID-Arendal 2012, *Green economy in a blue world: synthesis report*, UNEP, Nairobi, available at: www.unep.org/pdf/green_economy_blue.pdf (accessed 3 August 2014).

United Nations World Tourism Organization 2012, 'Robust demand for international tourism despite uncertain economy', *World Tourism Barometer*, Vol. 10, November.

United Nations World Tourism Organization 2013, 'Sustainable Marine Tourism', Presentation to Expert Group Meeting on Oceans, Seas and Sustainable Development: implementation and follow up to Rio+20, New York, April.

United States International Trade Commission (USITC) 2013, 'Environmental and related services', USITC Publication 4389, March.

World Bank 2012, 'Living oceans', http://go.worldbank.org/A2MYFIUQM0 (accessed 3 August 2014).

World Bank 2013, 'Fish to 2030: prospects for fisheries and aquaculture', World Bank, Washington, DC.

World Trade Organization 2007, 'Draft consolidated chair texts of the AD and SCM Agreements', TN/RL/W/213, 30 November, available at: www.wto.org/english/tratop_e/rulesneg_e/rules_chair_text_nov07_e.htm (accessed 4 August 2014).

World Trade Organization 2014a, 'Trade and environment', www.wto.org/english/tratop_e/envir_e/envir_e.htm (accessed 4 August 2014).

World Trade Organization 2014b, 'Environmental services', www.wto.org/english/tratop_e/serv_e/environment_e/environment_e.htm (accessed 4 August 2014).

World Trade Organization Council for Trade in Services, 'Background Note on Environmental Services', 20 August, S/C/W/320.

World Trade Organization Negotiating Group on Rules 2011, 'Communication from the Chairman', 21 April, TN/RL/W/254.

Notes

1 For the purposes of this paper the term 'ocean' is used to cover the marine environment seaward of the baseline, as defined in the 1982 United Nations Convention on the Law of the Sea, to distinguish the oceans within a nation's jurisdiction from other marine ecosystems, such as salt marsh and intertidal zones, estuaries and lagoons.

2 United Nations General Assembly 2012, 'The future we want', outcome document of the United Nations Conference on Sustainable Development (Rio+20), A/RES/66/288, New York.

3 Declaration adopted by the High Level Event on the Blue Economy held in January 2014 as part of the preparations for the Third International Conference on SIDS, to be held in Samoa in September 2014. See: www.sids2014.org/content/documents/278BEdeclaration.pdf

4 World Bank 2012, 'Living oceans', http://go.worldbank.org/A2MYFIUQM0 (accessed 3 August 2014).

5 Ibid.

6 There have been several cases over the last three decades, including:
- GATT Panel Report, *United States – Restrictions on Imports of Tuna*, DS21/R, 3 September 1991.
- GATT Panel Report, *United States – Restrictions on Imports of Tuna*, DS29/R, 16 June 1994.
- WTO Panel Report, *United States – Measures concerning the Importation, Marketing and Sale of Tuna and Tuna Products*, WT/DS381/R, 15 September 2011.
- WTO Appellative Body Report, United States – *Measures concerning the importation, marketing and sale of tuna and tuna products*, WT/DS381/AB/R, 16 of May 2012.

7 WTO Appellate Body Report, United States – *Import Prohibition of Certain Shrimp and Shrimp Products*, WT/DS58/R, adopted 6 November 1998.

8 WTO Appellate Body Report, *EU- Measures European Communities – Measures Prohibiting the Importation and Marketing of Seal Products*, WT/DS400/AB/R and WT/DS401/AB/R, adopted the 22 of May 2014.

9 Commonwealth Secretariat 2013, 'Oceans governance', Small States Digest, Issue 4: 2013.

10 Mauritius Prime Minister's Office 2013, 'The ocean economy: a road map for Mauritius', available at: www.oceaneconomy.mu/ (accessed 3 August 2014).

11 Commonwealth Secretariat 2013, op. cit.

12 Food and Agriculture Organization 2014a, 'Fact sheet: international fish trade and world fisheries', available at: www.globefish.org/upl/various/COFI_FT_Factsheet.pdf (accessed 3 August 2014)

13 Ibid.

14 Based on UNCTADStats (2013). See http://unctadstat.unctad.org/EN/

15 United Nations Environment Programme (UNEP), UN Department of Economic and Social Affairs, & Food and Agriculture Organization 2012, *SIDS-focused green economy: an analysis of challenges and opportunities*, UNEP, Nairobi, available at: www.unep.org/pdf/Green_Economy_in_SIDS.pdf (accessed 3 August 2014).

16 UNCTADstat, 2013, available at http://unctadstat.unctad.org (accessed 05 of May 2014).

17 United Nations Environment Programme (UNEP), UN Department of Economic and Social Affairs, Food and Agriculture Organization, International Maritime Organization, United Nations Development Programme, IUCN Global Marine Programme, WorldFish Center, & GRID-Arendal 2012, *Green economy in a blue world: synthesis report*, UNEP, Nairobi, available at: www.unep.org/pdf/green_economy_blue.pdf (accessed 3 August 2014).

18 Steiner, A 2014, 'Bringing the green economy to the blue: healthy oceans are a lifeline for sustainable living and robust economies', *The Economist insights*, www.economistinsights.com/sustainability-resources/opinion/bringing-green-economy-blue-world, 24 February.

19 Ibid.

20 Ibid.

21 Oceana 2013, 'European fisheries subsidies: state aid – the hidden subsidies', available at: http://oceana.org/sites/default/files/euo/OCEANA_State_aid_factsheet_072013.pdf (accessed 3 August 2014).

22 UN Fish Stocks Agreement of 1995; FAO Agreement to Promote Compliance with International Conservation and Management Measures by Fishing Vessels on the High Seas of 1993; Convention on Migratory Species of 1983; Convention on Biological Diversity of 1992.

23 FAO Code of Conduct of Responsible Fishing of 1995.

24 Food and Agriculture Organization (FAO) 2009, 'Guidelines for the ecolabelling of fish and fishery products from marine capture fisheries', FAO, Rome.

25 *The Economist* 2014, 'Governing the high seas: in deep water', The Economist, 22 February .

26 See: Food and Agriculture Organization (FAO) 2014b, 'Regional Fishery Body Secretariats Network (RSN)', www.fao.org/fishery/rsn/en (accessed 4 August 2014).

27 Ibid.

28 The first global oceans assessment is expected by the end 2014; so far there is only an outline. See: www.un.org/depts/los/global_reporting/global_reporting.htm (accessed 3 August 2014).

29 World Bank 2013, 'Fish to 2030: prospects for fisheries and aquaculture', World Bank, Washington, DC.

30 Food and Agriculture Organization 2013, 'State of world fisheries and aquaculture' 2012, FAO, Rome.

31 The FAO report on the state of world fisheries and aquaculture uses a regional categorization of countries that includes Africa, Asia, Europe, the Americas (including the Caribbean) and Oceania. Oceania includes Australia and New Zealand.

32 See: www.msc.org/ and www.asc-aqua.org/index.cfm?lng=5

33 International Energy Agency (IEA) 2013, 'World energy outlook 2013', IEA, Paris.

34 Roney, J M 2013, '2013 to be record year for offshore wind', Earth Policy Institute, 30 October, available at: www.earth-policy.org/plan_b_updates/2013/update117 (accessed 4 August 2014).

35 Simas, T 2012, 'Roadmap on marine renewable energy', presentation at Fame Project International Workshop, 20 September, available at: www.fameproject.eu/fotos/editor2/3.teresasimas_fame_presentation_wavec.pdf (accessed 4 August 2014).

36 McKinnon, L & Wheelock, C 2010, 'Algae-based biofuels: demand drivers, policy issues, emerging technologies, key industry players, and global market forecasts', Pike Research.

37 Mauritius Prime Minister's Office 2013, op. cit.

38 Global Ocean Commission 2013, 'Bioprospecting and marine genetic resources in the high seas', Policy Options Paper #4, prepared for the third meeting of the Global Ocean Commission, November.

39 Global Industry Analysts Inc. 2013, 'Marine biotechnology: a global strategic business report', www.strategyr.com/Marine_Biotechnology_Market_Report.asp (accessed 4 August 2014).

40 OECD 2011. 'The future of the Oceans economy: Exploring the prospects for emerging ocean industries to 2030'. Available at: http://www.oecd.org/futures/Future%20of%20the%20Ocean%20Economy%20Project%20Proposal.pdf

41 See Article 56 of UNCLOS.

42 Comoros, Fiji, Mauritius, Micronesia (Federated States of) and Seychelles.

43 Dahl, G F 2009, 'The Norwegian Marine Resources Act', presentation by the Senior Adviser at the Norwegian Ministry of Fisheries and Coastal Affairs, Montreal, 9 November, available at: www.cbd.int/abs/side-events/id1678-norway2.pdf (accessed 4 August 2014).

44 Arico, S, & Salpin, C 2005, 'Bioprospecting of genetic resources in the deep seabed: scientific, legal and policy aspects', United Nations University – Institute of Advanced Studies, Yokohama.

45 See paragraph 162 of the Rio+20 outcome document (United Nations General Assembly 2012, op. cit.).

46 Creel, L 2003, 'Ripple effects: population and coastal regions', Making the Link, Population Reference Bureau, Washington, DC.

47 United Nations Environnement Programme et al. 2012, op. cit.

48 United Nations Conference on Trade and Development (UNCTAD) 2013a, 'Review of maritime transport 2013', United Nations, New York and Geneva.

49 United Nations Conference on Trade and Development (UNCTAD) forthcoming, 'Review of maritime transport 2014', UNCTAD, Geneva.

50 Ibid.

51 International Chamber of Shipping (ICS) 2013, 'Shipping, world trade and the reduction of CO2 emissions', ICS, London.

52 United Nations World Tourism Organization 2012, 'Robust demand for international tourism despite uncertain economy', World Tourism Barometer, Vol. 10, November.

53 United Nations World Tourism Organization 2013, 'Sustainable Marine Tourism', presentation to Expert Group Meeting on Oceans, Seas and Sustainable Development: Implementation and follow up to Rio+20, New York, April.

54 Travel services include all goods and services acquired from SIDS by non-resident travellers during visits shorter than one year.

55 United Nations Conference on Trade and Development (UNCTAD) 2013b, World investment report: global value chains – investment and trade for development, United Nations, New York and Geneva.

56 Ibid.

57 United Nations Environment Programme 2008, 'Fisheries subsidies: a critical issue for trade and sustainable development in the WTO – an introductory guide', available at: www.unep.ch/etb/areas/pdf/UNEP-ETB%20Brochure%20on%20Fisheries%20Subsidies_May2008.pdf (accessed 4 August 2014).

58 See: Doha WTO Ministerial 2001: Ministerial Declaration, paragraphs 31 to 33.

59 See: Hong Kong WTO Ministerial 2005: Ministerial Declaration, Annex D, 9–11.

60 World Trade Organization 2007, 'Draft consolidated chair texts of the AD and SCM Agreements', TN/RL/W/213, 30 November, available at: www.wto.org/english/tratop_e/rulesneg_e/rules_chair_text_nov07_e.htm (accessed 4 August 2014).

61 CARIFORUM–EU Economic Partnership Agreement, 2008, article 37. See: http://trade.ec.europa.eu/doclib/docs/2008/february/tradoc_137971.pdf

62 Ibid.

63 Interim Partnership Agreement between the European Community and the Pacific States, 2009. See: http://ec.europa.eu/trade/policy/countries-and-regions/regions/pacific/

64 International Centre for Trade and Sustainable Development 2013, 'Submission to the Open Working Group on Sustainable Development Goals: fisheries, trade and sustainable development', www.ictsd.org/sites/default/files/event/2014/04/ictsd-background-paper-international-trade-and-sustainable-development.pdf (accessed 5 August 2014).

65 Referred to in WTO nomenclature as non-agricultural market access (NAMA) – or all products not covered by the Agreement on Agriculture. These include manufacturing products, fuels and mining products, fish and fish products and forestry products.

66 Doha WTO Ministerial 2001: Ministerial Declaration, paragraph 16.

67 The sectoral tariff reduction component is another key element to achieving the objectives of paragraph 16 of the DDA, the results of which will form part of the single undertaking as provided for in paragraph 47 of the Doha Ministerial Declaration. Participation in sectoral initiatives is on a non-mandatory basis, without prejudging the outcome.

68 Participants recognize the challenges that may be faced by non-reciprocal preference beneficiaries as a result of most favoured nation (MFN) liberalisation. With respect to the fish and fish product tariff lines identified in Annex 2 of the NAMA modalities, the relevant preference-granting member may commence the implementation of this sectoral modality no later than 1 January of the year following full implementation of paragraph 28 of the general NAMA modality.

69 World Trade Organization 2014a, 'Trade and environment', www.wto.org/english/tratop_e/envir_e/envir_e.htm (accessed 4 August 2014).

70 General Agreement on Tariffs and Trade (GATT), article XX (b) and (g) and the Chapeau.

71 Doha WTO Ministerial 2001: Ministerial Declaration.

72 Office of the United States Trade Representative (USTR) 2014, 'USTR announces intent to launch WTO negotiations on environmental goods', press release, March, available at: www.ustr.gov/about-us/press-office/press-releases/2014/March/USTR-announces-intent-to-launch-WTO-negotiations-on-environmental-goods (accessed 4 August 2014).

73 Geloso Grosso, M 2007, 'Regulatory principles for environmental services and the General Agreement on Trade in Services', Issue Paper No. 6, International Centre for Trade and Sustainable Development, Geneva.

74 International Centre for Trade and Sustainable Development 2010, 'WTO environmental goods talks focus on climate', Bridges Weekly Trade News Digest, Vol. 14 No. 25, 7 July, available at: www.ictsd.org/downloads/bridgesweekly/bridgesweekly14-25.pdf (accessed 4 August 2014).

75 Ibid.

76 International Geosphere-Biosphere Programme (IGBP), Intergovernmental Oceanographic Commission (IOC), & Scientific Committee on Oceanic Research (SCOR) 2013, Ocean acidification summary for policymakers – Third Symposium on the Ocean in a High-CO2 World, IGBP, Stockholm.

77 Keeling, T J, Smith, T L, & Rule, K M 2014, 'US trade representative requests comments on WTO Environmental Goods Agreement', Mayer Brown, 27 March, www.mayerbrown.com/US-Trade-Representative-Requests-Comments-on-WTO-Environmental-Goods-Agreement-03-27-2014/ (accessed 4 August 2014).

78 United States International Trade Commission (USITC) 2013, 'Environmental and related services', USITC Publication 4389, March.

79 Ibid.

80 World Trade Organization Council for Trade in Services 2010, 'Background note on environmental services', 20 August, S/C/W/320.

81 Ibid.

82 Ibid.

83 Geloso Grosso, M 2007, op. cit.

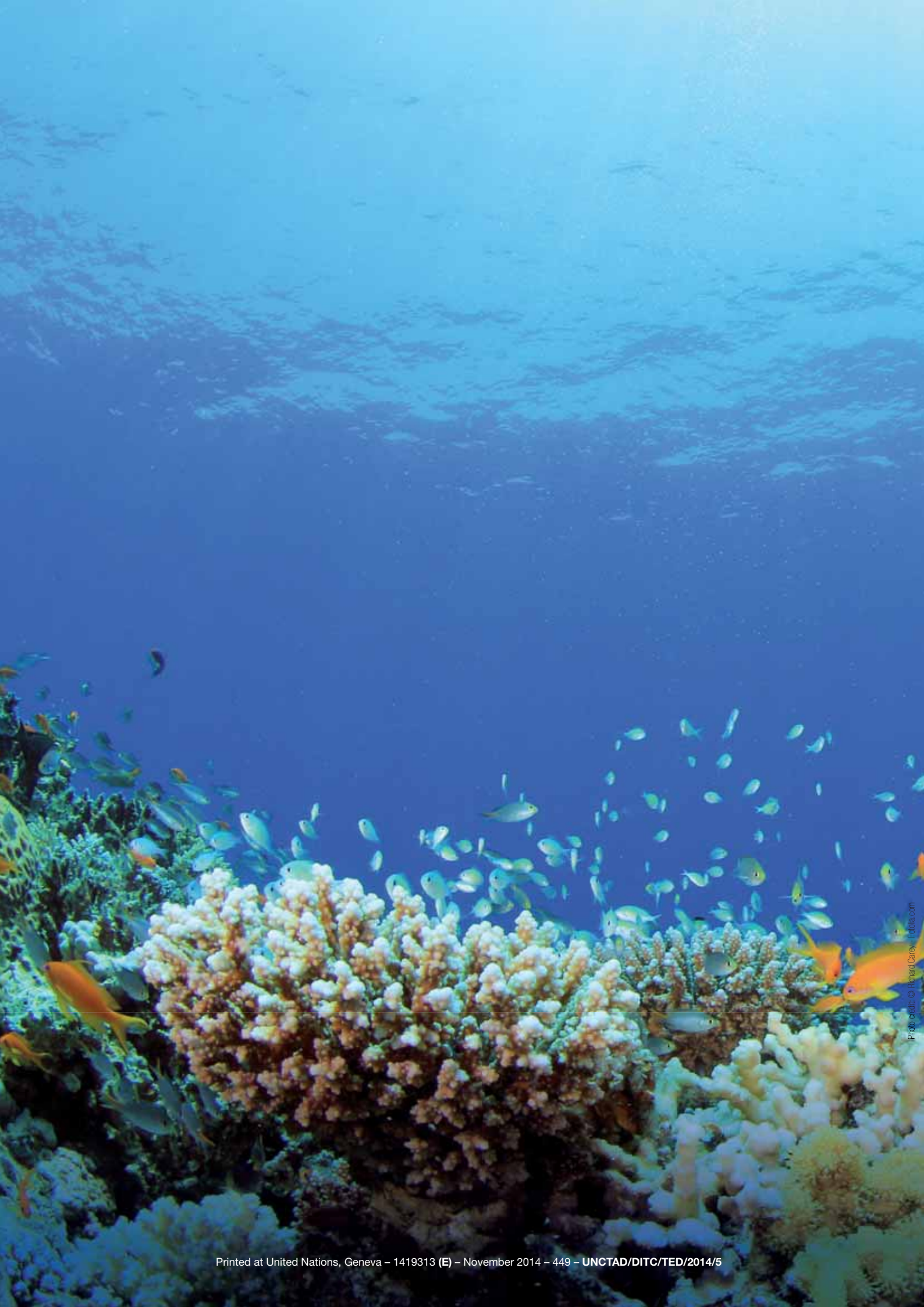
84 World Trade Organization 2014b, 'Environmental services', www.wto.org/english/tratop_e/serv_e/environment_e/environment_e.htm (accessed 4 August 2014).

85 Ibid.

86 http://sustainabledevelopment.un.org/focussdgs.html

87 See: www.worldoceanassessment.org

88 World Trade Organization 2014b, 'Environmental services', www.wto.org/english/tratop_e/serv_e/environment_e/environment_e.htm (accessed 4 August 2014).



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