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### Oceans and the law of the sea

## Oceans and the law of the sea

### Report of the Secretary-General

#### *Summary*

The present report has been prepared pursuant to paragraph 309 of General Assembly resolution 69/245 of 29 December 2014, with a view to facilitating discussions on the topic of focus at the sixteenth meeting of the United Nations Open-ended Informal Consultative Process on Oceans and the Law of the Sea, on the theme entitled “Oceans and sustainable development: integration of the three dimensions of sustainable development, namely, environmental, social and economic”. It constitutes the first part of the report of the Secretary-General on developments and issues relating to ocean affairs and the law of the sea for consideration by the Assembly at its seventieth session. The report is also being submitted to the States Parties to the United Nations Convention on the Law of the Sea, pursuant to article 319 of the Convention. In the light of the multifaceted nature of the topic being covered and the page limitations established by the General Assembly, the report does not purport to provide an exhaustive synthesis of available information.

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\* A/70/50

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## I. Introduction

1. In paragraph 298 of its resolution 69/245 of 29 December 2014, the General Assembly decided that, in its deliberations on the report of the Secretary-General on oceans and the law of the sea, the United Nations Open-ended Informal Consultative Process on Oceans and the Law of the Sea (the Informal Consultative Process) would focus its discussions at its sixteenth meeting on “oceans and sustainable development: integration of the three dimensions of sustainable development, namely, environmental, social and economic”.

2. At the core of sustainable development are the strong inter-linkages between sustained and inclusive economic growth, social development and environmental protection. The effective functioning of each individual dimension depends on the effective functioning of the other two. If one or the other dimensions are pursued separately, and the other dimension is not taken into account, this could lead to an ultimate loss in all three dimensions because of the inextricable linkages between them.<sup>1</sup> Successful sustainable development therefore requires integrated approaches that ensure sustained and inclusive economic growth, social development and environmental protection, or so-called “triple wins”.

3. At the 2012 United Nations Conference on Sustainable Development (Rio+20), States acknowledged that, since 1992, there had been areas of insufficient progress and setbacks in the integration of the three dimensions of sustainable development, aggravated by multiple financial, economic, food and energy crises, which have threatened the ability of all countries, in particular developing countries, to achieve sustainable development.<sup>2</sup> They also acknowledged the need to further mainstream sustainable development at all levels, integrating economic, social and environmental aspects and recognizing their interlinkages, so as to achieve sustainable development in all its dimensions.<sup>3</sup>

4. The importance of oceans for sustainable development has been recognized in the outcome documents of various conferences and summits on sustainable development, including Agenda 21,<sup>4</sup> the Johannesburg Plan of Implementation<sup>5</sup> and “The future we want”.<sup>6</sup> In “The future

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<sup>1</sup> ECOSOC, “Integration Meeting - Achieving sustainable development: Integrating the social, economic and environmental dimensions - Concept Note”, 2013.

<sup>2</sup> Resolution 66/288, annex.

<sup>3</sup> Ibid.

<sup>4</sup> Report of the United Nations Conference on Environment and Development, Rio de Janeiro, 3–14 June 1992, vol. I, Resolutions adopted by the Conference (United Nations publication, Sales No. E.93.I.8 and corrigendum), resolution I, annex II.

<sup>5</sup> Report of the World Summit on Sustainable Development, Johannesburg, South Africa, 26 August–4 September 2002 (United Nations publication, Sales No. E.03.II.A.1 and corrigendum), chap. I, resolution 2, annex.

<sup>6</sup> Resolution 66/288, annex.

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we want”, States stressed the importance of the conservation and sustainable use of the oceans and seas and of their resources for sustainable development, including through their contributions to poverty eradication, sustained economic growth, food security and creation of sustainable livelihoods and decent work, while at the same time protecting biodiversity and the marine environment and addressing the impacts of climate change.<sup>7</sup>

5. Integration of the environmental, social and economic dimensions is at the core of the United Nations Convention on the Law of the Sea (UNCLOS or “the Convention”). Central to the Convention is the balance of the enjoyment of rights and benefits with the concomitant undertaking of duties and obligations. Effective implementation of the Convention can therefore make a significant contribution to the integration of the three dimensions of sustainable development, and “The future we want” recognizes the importance of the Convention to advancing sustainable development.<sup>8</sup>

6. The present report highlights the current state of integration of the three dimensions of sustainable development in relation to oceans, as well as opportunities for, and challenges to, the enhanced integration of the three dimensions. In doing so, it draws attention to activities and initiatives undertaken with a view to promoting the integration of the three dimensions of sustainable development in relation to oceans.

7. The Secretary-General wishes to express his appreciation to the organizations and bodies that contributed to the present report,<sup>9</sup> namely: the European Union and the secretariats of the Baltic Marine Environment Protection Commission (HELCOM); Basel Rotterdam and Stockholm Conventions (BRS); Commission for the Conservation of Antarctic Marine Living Resources (CCAMLR); Convention on Biological Diversity (SCBD); Economic Commission for Africa (ECA); Food and Agriculture Organization of the United Nations (FAO); Forum Fisheries Agency (FFA); Intergovernmental Oceanographic Commission of the United Nations Educational, Scientific and Cultural Organization (IOC-UNESCO); International Atomic Energy Agency (IAEA); International Coral Reef Initiative (ICRI); International Hydrographic Organization (IHO); International Labour Organization (ILO); International Seabed Authority (ISA); International Maritime Organization (IMO); North Atlantic Salmon Conservation Organization (NASCO); Northwest Atlantic Fisheries Organization (NAFO); Pacific Islands Forum (PIFS); Pacific Community (SPC); Pacific Regional Environment Programme (SPREP); South East Atlantic Fisheries Organisation (SEAFO); Agency for the Prohibition of Nuclear Weapons in Latin America and the Caribbean (OPANAL); Commission for the Protection of the Marine

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<sup>7</sup> Ibid.

<sup>8</sup> Ibid.

<sup>9</sup> Contributions authorized by the authors to be posted online are available at [www.un.org/Depts/los/general\\_assembly/general\\_assembly\\_reports.htm](http://www.un.org/Depts/los/general_assembly/general_assembly_reports.htm).

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Environment of the North-East Atlantic (OSPAR); North Pacific Anadromous Fish Commission (NPAFC); and World Meteorological Organization (WMO). The Department of Economic and Social Affairs (DESA), Office of the High Representative for the Least Developed Countries, Landlocked Developing Countries and Small Island Developing States (OHRLLS), United Nations Conference on Trade and Development (UNCTAD), United Nations Development Programme (UNDP), United Nations Environment Programme (UNEP), United Nations Office on Drugs and Crime (UNODC) and United Nations University Fisheries Training Programme (UNUFTP) also made contributions. The report also draws on information from other sources.

## **II. Oceans and the three dimensions of sustainable development**

8. The oceans provide a wide range of services to human society, which play a critical role in each dimension of sustainable development, either directly, through human use, or indirectly, via impacts on such services.<sup>10</sup> The present section briefly outlines the contribution of oceans to the environmental, social and economic dimensions of sustainable development and the manner in which UNCLOS addresses these dimensions. It also presents information on how various conferences and summits on sustainable development have addressed the issue of integration.

### **A. Oceans and each dimension of sustainable development**

#### **1. Environmental dimension**

9. The environmental dimension of oceans and the importance of healthy and productive oceans to sustainable development are best reflected in the supporting (e.g., resilience to environmental change) and regulating services (e.g., climate regulation through carbon storage and sequestration, nutrient cycling) that they provide. These, in turn, allow for the continued delivery of the provisioning (e.g., food, energy, employment) and cultural services (e.g., scientific knowledge, culture, recreation), which are the basis of the economic and social dimensions of the role of oceans in sustainable development.<sup>11</sup>

10. Healthy, resilient oceans have a role in oxygen production, photosynthesis and nutrient cycling.<sup>12</sup> For

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<sup>10</sup> UNEP-WCMC, *Marine and coastal ecosystem services: Valuation methods and their application*, 2011.

<sup>11</sup> United Nations, "Ecosystems and Human Well-being Synthesis: A Report of the Millennium Ecosystem Assessment", 2005. See also UNEP, "Green Economy in a Blue World Synthesis Report", 2012.

<sup>12</sup> Millennium Ecosystem Assessment, 2005.

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example, marine phytoplankton produces 50 per cent of the oxygen on Earth,<sup>13</sup> and coastal ecosystems, such as wetlands, mangroves, coral reefs and sea-grass beds, play a major role in the life cycle of many marine organisms by providing breeding, nursing and feeding grounds.<sup>14</sup> Healthy, resilient oceans also have a role in regulating the climate, natural hazards, such as floods, and water quality. For example, coastal wetlands have a role in capturing and filtering sediments and organic wastes in transit from inland regions to the ocean. Oceans capture and store about 30 per cent of carbon dioxide produced by humans,<sup>15</sup> through fixation of atmospheric carbon by oceanic algae and its deposition in deep water, thereby influencing the global carbon cycle.

11. The importance of these services cannot be overstated given that as much as 40 per cent of the world's population lives within 100 km of the shore line,<sup>16</sup> and it is estimated that over three billion people depend on marine and coastal biodiversity for their livelihoods.<sup>17</sup>

12. In view of the above, damage to the marine environment, resulting from pollution, unsustainable extraction of marine resources, alien invasive species, ocean acidification and climate change impacts, and physical alteration and destruction of marine habitat, negatively affects the delivery of important ecosystem services and therefore sustainable development. For example, disruptions to the delivery of marine ecosystem services caused by climate change and ocean acidification will seriously affect the economy of coastal communities (see paras. 67-70) and may impact food security, livelihoods and result in increased poverty.<sup>18</sup>

13. The outcome of several conferences on sustainable development have acknowledged that healthy, productive and resilient oceans and coasts are critical for, inter alia, poverty eradication, access to sufficient, safe and nutritious food, livelihoods, economic development and essential ecosystem services (see paras. 22-27). The essential role of a healthy marine environment in supporting the objectives of UNCLOS and achieving sustainable development is taken into account in the Convention in its Part XII, which provides a framework for the protection and preservation of the marine environment, including the general obligation of States to protect and preserve the marine environment. While States have the sovereign right to exploit their natural resources, they must do so pursuant to their environmental policies and in accordance with their duty to protect and preserve the marine environment.

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<sup>13</sup> IOC/UNESCO, IMO, FAO, UNDP, A Blueprint for Ocean and Coastal Sustainability, 2011.

<sup>14</sup> A/69/71.

<sup>15</sup> Ibid.

<sup>16</sup> Ibid.

<sup>17</sup> SCBD, Biodiversity for Development and Poverty Alleviation, 2012.

<sup>18</sup> IAEA contribution.

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## 2. Social dimension

14. Oceans make important social contributions, through the provision of food security, livelihoods, and also through their significance in the heritage and culture of many States, especially coastal and small island States.<sup>19</sup> The marine environment is also a basis for the development of products, such as pharmaceuticals (see para. 63), as well as recreation and tourism (see paras. 56-60). It has been estimated that around 350 million jobs worldwide are linked to oceans.<sup>20</sup> Over 1.5 million people, the vast majority from developing countries, work as seafarers.<sup>21</sup> For example, Filipino seafarers, who represent around 20 per cent of the seafarers around the world,<sup>22</sup> contribute, through their remittances which can reach up to USD one billion, to the economic and social development of their country.

15. The fisheries and aquaculture sectors are estimated to employ 55 million people and support the livelihoods of between 660 and 820 million people globally.<sup>23</sup> Recently, the increasing and beneficial role of women in the maritime industry, including the fisheries sector, and the need to strengthen their capacity to engage in a productive manner in that sector has been recognized.<sup>24</sup> Women accounted for more than 15 per cent of all people directly engaged in the fisheries primary sector in 2012, the proportion of women rising up to 90 per cent in secondary activities (e.g. processing).<sup>25</sup>

16. Unsustainable fishing practices, including overexploitation, can have negative social impacts. In addition, conditions such as forced labour, trafficking, abandonment, highly dangerous working conditions, and the use of child labour undermine the lives of people working at sea as well as the marine environment and economic efficiency of maritime sectors.<sup>26</sup> Ensuring decent working conditions of seafarers, fishers and other maritime workers is thus essential to ensuring the economic viability of maritime sectors. In addition to the impact on economic and social development, the marine environment may also be impacted negatively<sup>27</sup> if seafarers as well as fishers are not

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<sup>19</sup> DESA contribution.

<sup>20</sup> EU contribution.

<sup>21</sup> IMO, "World Maritime Day: A Concept of a Sustainable Maritime Transportation System," 2013.

<sup>22</sup> ILO, "Decent Work for Seafarers", 2014.

<sup>23</sup> Rockefeller Foundation, "Securing the Livelihoods and Nutritional Needs of Fish-Dependent Communities," 2013.

<sup>24</sup> See A/69/71/Add.1.

<sup>25</sup> FAO, State of the World Fisheries and Aquaculture 2014.

<sup>26</sup> ILO contribution.

<sup>27</sup> Ibid.

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appropriately trained, and, inter alia, fail to take measures to avoid damage to the marine environment.<sup>28</sup>

17. Many societies regard nature, including the oceans, as an extension of human society, making the culture-sensitive stewardship of oceans crucial to sustainable development.<sup>29</sup> In many parts of the world, indigenous peoples have long been the custodians of the marine and coastal environment, and have sustainably used resources in these areas in accordance with their cultural traditions.<sup>30</sup> Natural areas held sacred by peoples are found all around the world, including in coastal and marine areas.<sup>31</sup> In some parts of the world, fish and fishing are important components of many cultural, ceremonial and social events, communal sharing, as well as tools for teaching and practicing traditional ways. For many indigenous, cultural values are attached to migratory species, such as cetaceans (whales, dolphins and porpoises), sharks and seabirds.<sup>32</sup> While culture was not originally included in the Millennium Development Goals, subsequent conferences, such as the 2005 World Summit and Rio+20, began to recognize its importance.<sup>33</sup>

18. The economic and social advancement of all peoples of the world is one of the main objectives of UNCLOS. As explained in para. 20, UNCLOS gives effect to the common heritage of mankind principle. Furthermore, it also specifically addresses seafarers and coastal communities through a number of its provisions. For example, measures to ensure safety of ships at sea include those relating to the manning of ships, labour conditions and the training of crews. In addition, the provisions of UNCLOS related to the conservation and management of marine living resources require taking into account the economic needs of coastal fishing communities, as well as nutritional needs. UNCLOS also provides a basis for modern communications by setting out a regime related to the laying of submarine cables (see paras. 53-55).

### 3. Economic dimension

19. Oceans provide a source of employment, trade and economic well-being for millions of people around the

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<sup>28</sup> The IMO has adopted instruments to address the issue of minimum standards of competence for seafarers and guidelines to improve the safety of international shipping and to reduce pollution from ships by impacting on the way ships are managed and operated. See

<http://www.imo.org/OurWork/HumanElement/Pages/Default.aspx>.

<sup>29</sup> UNESCO, "Culture in the Post-2015 Sustainable Development Agenda: Why Culture is Key to Sustainable Development," at:

<http://www.unesco.org/new/fileadmin/MULTIMEDIA/HQ/CLT/images/Post2015SustainableDevelopmentAgendaENG.pdf>.

<sup>30</sup> UNEP/CBD/SBSTTA/16/INF/10.

<sup>31</sup> Ibid.

<sup>32</sup> Ibid.

<sup>33</sup> 2005 World Summit Outcome; resolution 66/288, annex.



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world.<sup>34</sup> A number of economic activities are ocean-based or rely on the use of ocean space and its resources, including fishing, marine aquaculture, shipping, shipbuilding, tourism, oil, gas, mining, transportation and international communications industries, as well as emerging sectors such as offshore renewable energy. With more than 90 per cent of global trade being carried by shipping, maritime transport constitutes the backbone of international trade. It has been estimated that the market value of marine and coastal resources and industries is around USD three trillion annually (about five per cent of global GDP).<sup>35</sup> Other ocean-based activities, such as hydrographic and meteorological activities, also indirectly bring about economic benefits.<sup>36</sup> The manifold employment opportunities, as well as ecosystem and cultural services, provided by the oceans create the conditions for a global ocean-based economy, which is estimated at between USD three to six trillion per year.<sup>37</sup>

20. Economic aspects, including through the objectives of promoting the economic advancement of all peoples of the world and contributing to the realization of a just and equitable international economic order which takes into account the interests and needs of mankind as a whole and, in particular, the special interests and needs of developing countries, whether coastal or land-locked, are central to UNCLOS. The Convention creates an enabling legal environment for a number of economic activities relying on the use of ocean space or marine resources. For example, UNCLOS facilitates navigation and promotes the safety of navigation, which underpins cost-effective maritime transport and international trade. UNCLOS and the Part XI Agreement put into effect the concept of common heritage of mankind as applied to the development of the resources of the Area, which include polymetallic or manganese nodules and polymetallic sulphides, which contain metals and rare earth elements increasingly required by high-technology industries including electronics and clean technologies, such as hybrid cars and wind turbines.<sup>38</sup> Activities in the Area must be carried out in such a manner as to foster healthy development of the world economy and balanced growth of international trade, and to promote international cooperation for the overall development of all countries, especially developing States (see paras. 45, 48). In addition, UNCLOS and the Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of 10 December 1982 relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks (United Nations Fish Stocks Agreement) provide a comprehensive regime for the conservation and sustainable management of marine living resources, which are an

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<sup>34</sup> FAO contribution.

<sup>35</sup> EU contribution.

<sup>36</sup> IHO and WMO contributions.

<sup>37</sup> IOC/UNESCO, IMO, FAO, UNDP, A Blueprint for Ocean and Coastal Sustainability, 2011.

<sup>38</sup> See <http://www.isa.org.jm/en/about/faqs#16>.

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essential basis for a prosperous fisheries sector (see paras. 34-40). UNCLOS also provides coastal States with sovereign rights for the purpose of exploring and exploiting their non-living resources within areas under national jurisdiction and with regard to other activities for the economic exploitation and exploration of the exclusive economic zone, such as the production of energy from the water, currents and winds (see paras. 50-52). UNCLOS also facilitates the laying of submarine cables and pipelines (see paras. 53-55), thereby supporting international communication and trade in oil and gas (see paras. 41-49).

**B. Integration in the outcomes of sustainable development meetings**

21. Although oceans' issues are closely interrelated and need to be considered as a whole, integrating economic, social and environmental aspects, including in relation to oceans, has proven to be a challenge, in spite of the repeated calls made at various conferences and summits on sustainable development.

22. The 1992 United Nations Conference on Environment and Development was convened to address the environmental implications of economic development, recognizing that sustainable development depended upon a balance of environmental, social and economic approaches.<sup>39</sup> Agenda 21, the comprehensive plan of action adopted at the Conference, in its Chapter 17 on "Protection of the Oceans, all Kinds of Seas, Including Enclosed and Semi-enclosed Seas, and Coastal Areas and the Protection, Rational Use and Development of their Living Resources", acknowledged, *inter alia*, that integrated approaches to marine and coastal area management and development had to be taken at all levels.

23. In 1997, the General Assembly adopted the Programme for Further Implementation of Agenda 21, in which it recognized that "economic development, social development and environmental protection are interdependent and mutually reinforcing components of sustainable development."<sup>40</sup> With regard to oceans, the Programme stressed the need for approaches that are, *inter alia*, integrated in content and set out the commitment of States to integrated management and sustainable development of coastal areas and the marine environment.

24. The Johannesburg Plan of Implementation, the outcome document of the 2002 World Summit on Sustainable Development, established new commitments and priorities for action on sustainable development in an integrated manner, and outlined actions that could be taken at the global and regional levels towards ensuring the sustainable development of the oceans, seas, islands and coastal areas, while promoting

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<sup>39</sup> A/CONF.151/26 (Vol. I), annex I and II.

<sup>40</sup> A/RES/S-19/2, annex, and para 23.

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an integrated, multidisciplinary and multisectoral approach to policy-making at the national, regional and local levels.<sup>41</sup>

25. The outcome document of the 2005 World Summit indicated the resolve of States to improve cooperation and coordination at all levels in order to address issues related to oceans and seas in an integrated manner and promote integrated management and sustainable development of the oceans and seas.<sup>42</sup>

26. A previous report provided more detailed information on the manner in which various conferences and summits related to sustainable development have addressed oceans issues.<sup>43</sup> Since that report, “The future we want” provided an extensive assessment of the progress and gaps in the implementation of the sustainable development agenda. It dedicated a specific section to oceans and seas.<sup>44</sup> In that regard, it emphasized the importance of the conservation and sustainable use of the oceans and seas and of their resources for sustainable development.

27. However, in “The future we want”, States also acknowledged that, since 1992, there had been areas of insufficient progress and setbacks in the integration of the three dimensions of sustainable development. In that regard, they acknowledged the need to further mainstream and integrate the three pillars of sustainable development at all levels. The Rio+20 Conference launched a process to develop a set of sustainable development goals based on identified priority areas. An Open Working Group on Sustainable Development Goals produced a proposal of seventeen goals as an integrated, indivisible set of global priorities for sustainable development.<sup>45</sup> Goal 14 aims to “Conserve and sustainably use the oceans, seas and marine resources for sustainable development” and includes seven substantive targets and three targets related to means of implementation.

28. The General Assembly decided that the proposal of the Open Working Group on Sustainable Development Goals shall be the main basis for integrating sustainable development goals into the post-2015 development agenda, while recognizing that other inputs will also be considered.<sup>46</sup> Therefore, identifying the linkages between the sustainable development of oceans and seas and the Goals could contribute to understanding the role of oceans in the sustainable development agenda and the need for enhanced integration of the environmental, social and economic dimensions in relation to oceans.

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41 Report of the World Summit on Sustainable Development, Johannesburg, South Africa, 26 August–4 September 2002 (United Nations publication, Sales No. E.03.II.A.1 and corrigendum), chap. I, resolution 2, annex.

42 Resolution 60/1.

43 A/66/70/Add 1.

44 Resolution 66/288, annex.

45 A/68/970.

46 Resolution 68/309.



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### **III. Opportunities for, and challenges to, the enhanced integration of the three dimensions of sustainable development in relation to oceans**

29. The interconnectedness of the environmental, social and economic dimensions of sustainable development in relation to oceans is, by and large, well-studied as shown in this section. However, enhancing integration of these dimensions and developing and implementing policies and actions that ensure a balanced and integrated development of each dimension has been challenging for a number of reasons.<sup>47</sup> This section aims to provide a brief overview of the main challenges to, and opportunities for, the enhanced integration of the three dimensions of sustainable development in relation to oceans with a focus on some of the main sectors and ocean uses.

#### **A. Integration of the three dimensions in selected areas of ocean affairs**

##### **1. Shipping**

30. World trade and shipping, upon which it depends, are fundamental to sustaining economic growth and promoting prosperity, thereby fulfilling a critical social and economic function.<sup>48</sup> Maritime shipping contributes to all three dimensions of sustainable development, including by facilitating global commerce and the transportation of goods, by directly and indirectly supporting economies and the livelihoods of people around the world and by providing a comparatively more environmentally friendly means of transportation.<sup>49</sup> Several socio-economic benefits result from maritime shipping, including worldwide access to goods and services<sup>50</sup> that can contribute, inter alia, to poverty eradication, reducing inequality, increasing employment opportunities and promoting sustainable growth. Shipping, ports and related auxiliary services, can thus play a crucial role in supporting wealth-creating and poverty-alleviating activities in both developed and developing countries.<sup>51</sup> In

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<sup>47</sup> ECOSOC, "Integration Meeting - Achieving sustainable development: Integrating the social, economic and environmental dimensions - Concept Note", 2013.

<sup>48</sup> IMO contribution.

<sup>49</sup> See also Anna Natova, "Shipping and the three dimensions of sustainable development", UN-NF Alumni case study, <[http://www.un.org/depts/los/nippon/unnff\\_programme\\_home/unnff\\_program\\_sg\\_report.htm](http://www.un.org/depts/los/nippon/unnff_programme_home/unnff_program_sg_report.htm)>.

<sup>50</sup> IMO and UNCTAD contributions.

<sup>51</sup> UNCTAD contribution.

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this context, shipping has a strategic role in international trade and supply chains.<sup>52</sup>

31. There is a need, however, for further efforts to integrate the environmental dimension and specific aspects of the social dimension, such as the working conditions of people at sea, in the shipping sector.<sup>53</sup> Two-thirds of all active seafarers are being recruited from developing countries. The ILO has adopted standards aimed at workers in specific economic sectors such as seafarers and fishers. Effective implementation of international instruments, such as the 2006 ILO Maritime Labour Convention, is one means to improve the working and living conditions of seafarers worldwide.<sup>54</sup> Along with its 2014 amendments, it is an important instrument to protect seafarers against cases of exploitation and safety hazards, to achieve decent work for seafarers while securing economic interests in fair competition for shipowners.<sup>55</sup> Capacity-building to facilitate implementation of the 2006 Convention by States is crucial to the safety and security of maritime trade.

32. However, it is also important to strengthen action to suppress criminal acts at sea which endanger the welfare of seafarers (e.g., through hostage-taking) and the security of navigation and commerce. For example, between 2008 and 2012, piracy off the coast of Somalia caused serious and significant disruption to international navigation and trade, as well as loss of life, revenues and income, declines in seafarer recruitment, and considerable expenses by naval patrols, ship-owners and protection and indemnity clubs.<sup>56</sup> The decline in successful attacks off the coast of Somalia, which was assisted by, inter alia, naval patrols, industry best practices, capacity-building and the development of sustainable alternative livelihoods, has had a positive impact on international shipping and trade. It has also meant a decline in threat to the lives and livelihoods of seafarers.<sup>57</sup>

33. The international community has continued its efforts to integrate the environmental dimension through the development of the maritime transportation sector in a safe, efficient and environmentally sound manner, having regard to the need to ensure the protection of coastal and marine resources.<sup>58</sup> This includes, for example, developing, implementing and enforcing energy-efficiency standards for ships, thereby reducing emissions of air pollutants and

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<sup>52</sup> Ibid.

<sup>53</sup> Agenda 21.

<sup>54</sup> ICS Annual Review 2013. Women make up only an estimated 2 per cent of the world's maritime workforce. See <http://www.itfseafarers.org/ITI-women-seafarers.cfm>.

<sup>55</sup> See [www.ilo.org/global/standards/maritime-labour-convention/WCMS\\_246823/lang-en/index.htm](http://www.ilo.org/global/standards/maritime-labour-convention/WCMS_246823/lang-en/index.htm). See also A/69/71/Add.1.

<sup>56</sup> See Security Council resolution 2184 (2014). See also Oceans Beyond Piracy, The State of Maritime Piracy 2013.

<sup>57</sup> See Oceans Beyond Piracy, Seafarers- forgotten victims of piracy at <http://www.oceansbeyondpiracy.org/publications/seafarers-forgotten-victims-maritime-piracy>

<sup>58</sup> See [www.imo.org/MediaCentre/HotTopics/SMD/Pages/default.aspx](http://www.imo.org/MediaCentre/HotTopics/SMD/Pages/default.aspx). Also see the contributions of IHO, WHO, OSPAR and HELCOM.

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greenhouse gases from ships.<sup>59</sup> Regional organizations are also working to integrate aspects of international shipping with the need to ensure protection of the marine environment.<sup>60</sup>

## **2. Exploitation of marine living resources**

34. The contribution of sustainable fisheries to all three dimensions of sustainable development has been repeatedly highlighted.<sup>61</sup> Moreover, in fisheries, the linkages between the economic dimension of resource exploitation, the environmental dimension of resource and ecosystem conservation and the social dimension of the impacts on fish workers, coastal communities and others are well-documented. Thus, the integration of all three dimensions of sustainable development in the fisheries sector is considered crucial to the achievement of sustainable fisheries. Such fisheries also contribute tangibly to food security, nutrition, health, poverty alleviation, livelihoods, and gender equality and the empowerment of women.

35. The value of the marine capture seafood production at the point of harvest is approximately 20 per cent of the USD 400 billion global food fish market.<sup>62</sup> Capture fisheries and aquaculture provide about 4.3 billion people with about 15 per cent of their average per capita intake of animal protein.<sup>63</sup> In addition, the social dimension, including cultural aspects, of sustainable development prominently features in the context of fisheries, in particular small-scale fisheries.<sup>64</sup> For small island developing States (SIDS), in particular, sustainable fisheries and aquaculture are among the main building blocks of a sustainable ocean-based economy.<sup>65</sup> For example, tuna resources are critical to the livelihood, economies and culture of many Pacific islanders.<sup>66</sup>

36. Capture fisheries and aquaculture contribute, either directly or indirectly, to over 200 million jobs globally.<sup>67</sup> FAO estimates that, overall, fisheries and aquaculture assure the livelihoods of 10 to 12 per cent of the world's population.<sup>68</sup> Moreover, Africa and Asia have shown sustained growth in the number of people engaged in capture

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<sup>59</sup> See A/69/71/Add.1.

<sup>60</sup> OSPAR and HELCOM contributions.

<sup>61</sup> See, e.g., A/60/63 and A/69/71. See also resolution 69/109.

<sup>62</sup> A/69/71.

<sup>63</sup> FAO contribution.

<sup>64</sup> FAO, "Small-Scale Fisheries: Assessing their Contribution to Rural Livelihoods in Developing Countries", FIPL/C1008, 2006. See also Matthew Ansy, "Small Scale Fisheries (SSF) in India"; and Annaj Siripetch and Sampan Panjarat, "Improved Access to Fisheries Resources by Small-scale Fishers in the Andaman Sea by Construction of Artificial Reefs", UN-NF Alumni case studies, <[http://www.un.org/depts/los/nippon/unnff\\_programme\\_home/unnff\\_program\\_sg\\_report.htm](http://www.un.org/depts/los/nippon/unnff_programme_home/unnff_program_sg_report.htm)>.

<sup>65</sup> Resolution 69/15, annex.

<sup>66</sup> FFA contribution.

<sup>67</sup> FAO contribution.

<sup>68</sup> FAO, State of the World Fisheries and Aquaculture 2012.

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fishing and even higher rates of increase in those engaged in fish farming.<sup>69</sup> Women accounted for more than 15 per cent of all people directly engaged in the fisheries primary sector in 2012, the proportion of women rising up to 90 per cent in secondary activities (e.g., processing).<sup>70</sup>

37. However, the fisheries sector suffers around 24,000 human losses annually, underlining the urgent need to provide decent working conditions for fishers. Efforts are ongoing to address the issue.<sup>71</sup> Apart from the social impact, the improvement of working conditions is also important for ensuring the economic viability of this sector and protecting the marine environment.<sup>72</sup>

38. The crucial role fisheries can play in maintaining healthy marine ecosystems is attested to by the direct and indirect detrimental ecosystem effects of a wide range of unsustainable practices.<sup>73</sup> Overfishing, illegal, unreported and unregulated fishing and destructive fishing practices pose challenges to the health of marine ecosystems and the sustainability of resource exploitation.<sup>74</sup> They can also have negative economic and social consequences, in particular on coastal communities and small-scale fisheries.<sup>75</sup> The contribution of fisheries to sustainable development can be improved by appropriately balancing economic, environmental and social considerations in fisheries management.<sup>76</sup> For example, it is estimated that rebuilding overfished stocks could increase fishery production by 16.5 million tonnes and annual revenue by USD 32 billion, which would certainly increase the contribution of marine fisheries to the food security, economies and well-being of coastal communities.<sup>77</sup>

39. Several challenges remain in fully realizing the benefits of sustainable development and balancing the three dimensions of sustainable development in the context of fisheries. First and foremost, efforts should be undertaken to ensure the full and effective implementation of UNCLOS, the United Nations Fish Stocks Agreement and other relevant instruments.<sup>78</sup> Another challenge is the lack of capacity to

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<sup>69</sup> FAO, *State of the World Fisheries and Aquaculture 2014*.

<sup>70</sup> *Ibid.*

<sup>71</sup> See ILO contribution. See also A/69/71/Add.1. At the regional level, good practices for the protection of migrant fishers were discussed at the Regional Meeting on Work in Fishing organized by the Association of Southeast Asian Nations in September 2013.

<sup>72</sup> ILO contribution.

<sup>73</sup> FAO contribution.

<sup>74</sup> A/69/71.

<sup>75</sup> OECD, *Why Fish Piracy Persists: The Economics of Illegal, Unreported and Unregulated Fishing*, 2005; FAO, *State of the World Fisheries and Aquaculture 2014*; Interpol, *Study on Fisheries Crime in the West African Coastal Region*, 2014.

<sup>76</sup> FAO contribution.

<sup>77</sup> FAO, *State of the World Fisheries and Aquaculture 2014*.

<sup>78</sup> A/69/71/Add.1; FAO, *State of the World Fisheries and Aquaculture 2014*. It has been noted that, in some RFMOs, the maximum sustainable yield is insufficiently qualified by relevant environmental and economic factors as required in article 61(3) of UNCLOS. FFA contribution.



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develop and manage fisheries in a sustainable manner.<sup>79</sup> In addition, different States or stakeholders may have different objectives for a fishery on the basis of their perceptions of economic or social context and values.<sup>80</sup> Modernization also poses challenges since, in some cases, traditional knowledge and community-based resource management practices, which may provide the most appropriate and unique opportunities for achieving sustainable use of coastal and oceanic resources, may be abandoned or lost.<sup>81</sup>

40. At the global, regional and national levels, various ongoing fisheries-related initiatives are aimed at furthering the goal of achieving sustainable development by integrating its three dimensions, often explicitly considering socio-economic aspects, including coastal communities dependent on such resources.<sup>82</sup> Issues covered in such initiatives include enhanced cooperation, including in enforcement activities,<sup>83</sup> cross-sectoral cooperation,<sup>84</sup> capacity-building<sup>85</sup> and the application of ecosystem and precautionary approaches.<sup>86</sup>

### **3. Exploitation of non-living resources**

41. The sustainable exploitation of non-living resources can have direct economic and social benefits and the potential to contribute to other areas recognized as important for sustainable development, including energy and sustainable consumption and production patterns. For example, with regard to oil extraction, it is estimated that, for 2015, the total offshore oil production will be 26.7 million barrels per day,<sup>87</sup> constituting almost a third of the total oil production for the year.<sup>88</sup> Offshore deposits will continue to be an important source of oil and gas for years to come given that out of the estimated 565 billion barrels of undiscovered conventional crude oil resources, almost two-thirds are estimated to lie offshore, and almost three-quarters of the estimated 167 billion barrels of undiscovered natural gas liquids are offshore.<sup>89</sup> The potential of seabed mining is more difficult to estimate, as exploration is still under way. However, it is estimated that polymetallic nodules in the Clarion Clipperton Zone alone potentially contain 17,500 million tonnes of

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<sup>79</sup> SPC contribution.

<sup>80</sup> Ibid.

<sup>81</sup> SPREP contribution.

<sup>82</sup> See FAO, CBD, UNDP and NASCO contributions. See also EU contribution.

<sup>83</sup> NPAFC contribution.

<sup>84</sup> NAFO contribution.

<sup>85</sup> SEAFO and FFA contributions. See also UNU-FTP contribution.

<sup>86</sup> FAO, NAFO and SEAFO contributions.

<sup>87</sup> See <http://www.rystadenergy.com/>.

<sup>88</sup> EIA, Medium-term Market Report 2015.

<sup>89</sup> EIA, World Energy Outlook 2014.

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manganese, 761 million tonnes of nickel, 669 million tonnes of copper and 134 million tonnes of cobalt.<sup>90</sup>

42. While the potential collateral environmental damage of unsustainable extraction, including through oil spills and habitat destruction, have attracted most of the attention, it is important to also consider the social aspects.

43. Efforts have been taken to integrate environmental and social aspects into the operations of extractive industries.

44. Mining and oil and gas industry associations have placed great emphasis on the development and use of international standards to increase safety and reduce the environmental impact of operations.<sup>91</sup> This is a direct consequence of the growing impetus from various stakeholders, including Governments,<sup>92</sup> to integrate environmental, economic and social aspects through all phases of work in the extractive industries.

45. With regard to deep-sea mining, the work of the International Seabed Authority (ISA) towards the development of a mining code to regulate prospecting, exploration and exploitation of marine minerals in the Area, places emphasis on finding the optimum fiscal balance to provide sufficient profitability, while identifying the threshold standards for environmental and mining safety. The development of a code will also help determine whether exploitation can provide sufficient returns to benefit mankind as a whole, and respond to the real and perceived environmental concerns, before full-scale mining can commence.<sup>93</sup> Most notably, an Environmental Management Plan for the Clarion-Clipperton Zone was issued by the Legal and Technical Commission of ISA in 2011.<sup>94</sup> Also, studies are underway seeking to investigate the potential environmental impacts of different mining technologies.<sup>95</sup>

46. Environmental concerns are also present in the regulation of offshore oil and gas installations. A number of provisions of international instruments concerning dumping, pollution from ships and pollution from ballast water also apply to fixed and floating drilling rigs and other platforms.<sup>96</sup>

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90 Geological Model of Polymetallic Nodule Deposits in the Clarion-Clipperton Fracture Zone, ISA Briefing Paper 01/12, 2012.

91 See e.g., International Association of Oil & Gas Producers, Regulators' use of standards, at <http://www.ogp.org.uk/pubs/426.pdf>; International Council on Mining and Metals, Sustainable Development Framework, at <http://www.icmm.com/our-work/sustainable-development-framework>; International Association of Drilling Contractors, Health, Safety and Environment Case Guidelines for offshore drilling rigs, at <http://www.iadc.org/iadc-hse-case-guidelines/>.

92 See e.g., Australian Government, Leading Practice Sustainable Development Program for the Mining Industry, at <http://www.ret.gov.au>.

93 See ISA, Technical Study No. 11, Towards the Development of a Regulatory Framework for Polymetallic Nodule Exploitation in the Area.

94 ISBA/17/LTC/7.

95 <http://www.jpi-oceans.eu/news-events/news/deep-sea-mining-what-are-risks-kick-meeting-pilot-action-impact-assessment>.

96 For example, International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978; the International Convention for the Control and Management of Ships' Ballast Water

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47. From a socio-economic perspective, the oil and gas sector has the potential to create local value by providing employment and developing local value chains as a consequence of its operations. That potential is often harnessed, thanks to local-content requirements, which are the legal requirements that foreign oil and gas companies source part of their work force, services and/or materials in the countries where they operate.<sup>97</sup>

48. In the context of deep seabed mining, the Convention and the Part XI Agreement put into effect the common heritage of mankind as applied to the Area and its resources.<sup>98</sup> This includes promoting cooperation in marine scientific research and transfer of technology and scientific knowledge to developing countries.<sup>99</sup>

49. The Deep Sea Minerals Project of the Secretariat of the Pacific Community and the European Union provides an example of the integration of the three dimensions of sustainable development.<sup>100</sup> The Project aims at strengthening national efforts in favour of increased economic growth for the Pacific region while promoting national regulatory frameworks requiring environmental management and public participation and securing reasonable and equitable arrangements. The Project, which has a strong focus on a multi-stakeholder approach and capacity-building, has led to the development of comprehensive national offshore policies and legislation for an integrated approach to the sustainable development of deep sea mineral resources.

#### **4. Marine renewable energy**

50. Marine renewable energy remains an untapped source of energy,<sup>101</sup> which as of 2010 represented less than 0.01 per cent of global energy consumption.<sup>102</sup> However, the potential of marine renewable energy is significant, with estimates of technically exploitable energy exceeding current and projected energy usage.<sup>103</sup> Just as renewable energy has the capacity to deliver multiple economic, environmental and social benefits,<sup>104</sup> marine renewables have a similar potential

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and Sediments; and the 1996 Protocol to the Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter, 1972.

97 EIA, Medium-term Market Report 2015.

98 UNCLOS, Part XI.

99 ISA contribution.

100 See SPC contribution and <http://www.sopac.org/dsm/>.

101 See A/67/120 and A/67/79.

102 S. G. Banerjee et al., 2013, "Global tracking framework", in The World Bank, Sustainable energy for all.

103 A/67/79.

104 Economic and Social Integration Meeting, "Achieving sustainable development: Integrating the social, economic and environmental dimensions - Concept Note", 2013.

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and have been considered, in detail, in the context of sustainable development.<sup>105</sup>

51. Access to energy is a fundamental factor of economic growth and human development which are preconditions for poverty alleviation, and the improvement of health, education, gender equality, and environmental safety.<sup>106</sup> It is recognized, however, that the marine renewables sector is nascent and the potential of marine renewables is largely unproven pending further research and development.<sup>107</sup> Offshore wind generation, which is the most advanced of marine renewables,<sup>108</sup> typically has higher costs than fossil fuel-based power generation and other renewables such as land-based wind power generation.<sup>109</sup> However, costs vary depending upon site-specific factors, including availability of existing infrastructure, grid connection costs, and local labour rates.<sup>110</sup> It is expected that offshore wind will be an increasing part of the energy mix as costs decrease.<sup>111</sup> The unbalanced state of utilisation of marine renewables between developed and developing States has been noted and, in order to ensure access to marine renewables for all peoples, calls have been made for capacity-building and technology transfer.<sup>112</sup>

52. Marine renewable energy can, if proven, contribute to affordable, reliable, sustainable, and modern energy in the future. It can also lead to several socio-economic benefits resulting from access to power, inter alia, to poverty eradication, promoting sustainable growth, reducing inequality, and increasing employment opportunities. It also contributes to mitigation efforts in relation to climate change by offering low- and no-carbon footprint alternatives to fossil fuels.

## **5. Laying of submarine cables**

53. Submarine cables are critical communications infrastructure, being used for more than 98 per cent of international internet, data, and telephone traffic, with only a few States being without fibre connectivity, and many of these having cable projects currently underway.<sup>113</sup> Submarine cables are recognized as vitally important to the global

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105 The thirteenth meeting of the United Nations Open-ended Informal Consultative Process on Oceans and the Law of the Sea addressed marine renewable energy as its topic of focus in 2012, including opportunities and challenges within the context of sustainable development. See *A/67/120*.

106 IPCC, "Special Report on Renewable Energy Sources and Climate Change Mitigation", 2011.

107 *A/67/120* and *A/67/79*.

108 *Ibid*.

109 IRENA, 2015, "Renewable Power Generation Costs in 2014".

110 *Ibid*.

111 *Ibid*.

112 *A/67/120*.

113 D. Burnett et al., 2015, "Submarine Cables in the Sargasso Sea: Legal and Environmental Issues in Areas Beyond National Jurisdiction", Workshop Report.

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economy<sup>114</sup> and hence to economic growth. By underpinning international communications, their role in providing access to data and information for all peoples is evident.

54. The environmental dimension of submarine cables is, however, less apparent. Submarine cables themselves are considered to have a low-carbon footprint and a small relative impact on the environment, with the maintenance of submarine cables causing the highest impacts as a result of the operation of the cable ships themselves.<sup>115</sup> Submarine cables have the potential to be an active contributor towards disaster warning and addressing climate change with work underway to examine the potential for monitoring purposes.<sup>116</sup>

55. Functioning as the backbone of the international telecommunications system, submarine cables are directly part of global critical infrastructure and sustainable industrialization and indirectly they contribute to all other areas recognized as important for sustainable development.

## 6. Tourism

56. Over the last fifty years, tourism has become one of the largest economic sectors in the world, accounting for an estimated nine per cent of world GDP.<sup>117</sup> Cultural tourism is one of the largest and fastest-growing global tourism markets, encouraging tourist locations to actively develop their cultural assets.<sup>118</sup> The growth in tourism has been especially significant in developing and least developed countries where it is one of the principal sources of foreign exchange and often the most viable and sustainable economic development option.<sup>119</sup> For example, tourism was a main factor in the recent advancement of Botswana, Cabo Verde and the Maldives from their status as least developed countries.<sup>120</sup>

57. It is recognized that well designed and managed tourism can make a significant contribution to the three dimensions of sustainable development.<sup>121</sup> Sustainable tourism, can, in particular, contribute to eradicating extreme poverty and hunger.<sup>122</sup> It may also have beneficial impacts on livelihoods and infrastructure development.

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<sup>114</sup> Resolution 69/245.

<sup>115</sup> C. Donovan, 2009, "Twenty Thousand Leagues Under the Sea: A Life Cycle Assessment of Fibre Optic Submarine Cable Systems".

<sup>116</sup> See A/69/71/Add.1 and A/69/79/Add.1. See also [www.itu.int/en/ITU-T/climatechange/task-force-sc/Pages/default.aspx](http://www.itu.int/en/ITU-T/climatechange/task-force-sc/Pages/default.aspx).

<sup>117</sup> UNWTO, "Sustainable Tourism for Development," 2013.

<sup>118</sup> Ibid.

<sup>119</sup> Ibid.

<sup>120</sup> Ibid.

<sup>121</sup> Resolution 66/288, annex.

<sup>122</sup> A/68/278.

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58. Sustainable tourism is based on visitors seeking to experience intact and clean environments, and attractive natural areas.<sup>123</sup> This provides incentives for host countries to protect and preserve their environments. The past few decades have seen a substantial growth in coastal ecotourism,<sup>124</sup> which encourages increased protection of coastal ecological attractions, such as coral reefs and marine wildlife, including through marine parks and pollution control measures.

59. Despite its positive potential, tourism can also have a number of negative impacts. For example, it is a significant and growing contributor to carbon dioxide emissions, a growing cause of pollution of land and sea, and a major user of non-renewable resources.<sup>125</sup> In addition, the economic benefits of the sector do not necessarily accrue to local populations, as illustrated by cruise tourism, one of the fastest growing segments of tourism. The foreign cruise ship companies enjoy most of the economic benefits, while many of the costs are borne by the port cities and their local populations.<sup>126</sup> On the social front, tourism can also lead to socio-economic stratification, strained public services and infrastructure and resource conflicts, among others.<sup>127</sup>

60. In order for tourism to make a positive contribution to sustainable development, it is crucial that it be sustainable itself and take full account of its current and future economic, social and environmental impacts, addressing the needs of visitors, the industry, the environment and host communities.<sup>128</sup>

## 7. Natural and cultural heritage

61. The preservation of natural and cultural heritage sites can promote a balance among the economic, social and environmental aspects, if all three aspects are integrated. Such sites can contribute to the conservation and sustainable management of ecosystems and protection of historical or archaeological sites and their integrity, thereby sustaining societies that depend on them and their economic activities.

62. However, if measures solely protect the environment from disturbance of people, some local groups may be losing their traditional fishing grounds, natural habitat and cultural identity.<sup>129</sup> The protection of natural or cultural sites must

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123 John Davenport and Julia L. Davenport, "The impact of tourism and personal leisure transport on coastal environments: A review", *Estuarine, Coastal and Shelf Science*, Volume 67, Issues 1–2, March 2006.

124 Ibid.

125 Ibid.

126 Juan Gabriel Brida, "Cruise Tourism: Economic, Socio-Cultural and Environmental Impacts", *International Journal of Leisure and Tourism Marketing*, 2009, Vol. 1, No. 3.

127 Bruce Epler, Charles Darwin Foundation, "Tourism, the Economy, Population Growth, and Conservation in Galapagos", 2007.

128 UNEP and UNWTO, "Making Tourism More Sustainable: A Guide for Policy Makers," 2005.

129 See "The Wadden Sea fishing community, a tangible and intangible heritage?," at [http://www.slowfood.com/slowfish/pagine/eng/news/dettaglio\\_news.lasso?-idn=126](http://www.slowfood.com/slowfish/pagine/eng/news/dettaglio_news.lasso?-idn=126)

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occur in parallel to the safekeeping of societal traditions and practices on the sites, and the economic revenues deriving from both, in order to ensure sustainable development. For example, small-scale fisheries or traditional practices are an integral part of the community lifestyle with skills, knowledge and values that have roots in the natural environment and coastal societies.<sup>130</sup> Successful examples of the environmental, social and economic benefits of the preservation of underwater cultural heritage include the “Gaiola” and “Baia” underwater parks including roman structures of great archaeological interest.<sup>131</sup>

## 8. Conservation and sustainable use of marine biodiversity

63. In addition to its intrinsic value, biodiversity is the basis for many of the ecosystem services provided by the oceans, including supporting, provisioning, regulating and cultural services, which are critical foundations for sustainable development and human well-being (see paras. 9-13).<sup>132</sup> The importance of the conservation and sustainable use of marine biodiversity, both within and beyond national jurisdiction, for sustainable development has been repeatedly recognized.<sup>133</sup> In particular, the significant economic, social and environmental contributions of coral reefs, especially to islands and other coastal States, have been highlighted,<sup>134</sup> as has the value of marine genetic resources.<sup>135</sup> Biodiversity and the related traditional knowledge are particularly important for the sustainable livelihoods of indigenous and local communities as well as vulnerable groups (see paras. 79-83).<sup>136</sup>

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130 A. Rim-Rukeh, G. Irehievwie and I. E. Agbozu, Traditional beliefs and conservation of natural resources: Evidences from selected communities in Delta State, Nigeria, *International Journal of Biodiversity and Conservation*, Vol. 5(7), July 2013.

131 Gonzalo Rodríguez Prado, “Underwater Cultural Heritage - Public Private Partnership examples”, UN-NF Alumni case study, <[http://www.un.org/depts/los/nippon/unff\\_programme\\_home/unff\\_program\\_sg\\_report.htm](http://www.un.org/depts/los/nippon/unff_programme_home/unff_program_sg_report.htm)>

132 See e.g., Resolution 66/288, annex. See also Gangwon Declaration on Biodiversity for Sustainable Development adopted on 16 October 2014 by the High-Level Segment of CBD COP-12, at <http://www.cbd.int/cop12/hls.shtml>.

133 Resolution 66/288, annex.

134 Resolution 66/194; resolution 66/288, annex; resolution 69/245. See also the Micronesia Challenge, the Eastern Tropical Pacific Seascape project, the Caribbean Challenge and the Coral Triangle Initiative which recognize the significant economic, social and environmental contributions of coral reefs, in particular to islands and other coastal States’ development.

135 Resolution 69/245. See also A/62/66. An OECD report noted that marine biotechnology may help to address the global challenges of food, energy security and health and contribute to green growth and sustainable industries. It also indicated that the global market for marine biotechnology products and processes is believed to offer a significant and growing economic opportunity, with an estimated global market for marine biotechnology of € 2.8 billion (2010 estimate), with a compound annual growth rate of 4-5 per cent (or 10-12 per cent under less conservative assumptions). See OECD, *Marine Biotechnology: Enabling Solutions for Ocean Productivity and Sustainability*, 2013.

136 Gangwon Declaration on Biodiversity for Sustainable Development and resolution 66/288, annex.

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64. The impacts resulting from an increasing global population in terms of production and consumption patterns for food, energy and shelter, among others, as well as unsustainable resource extraction, pollution, the impacts of climate change and ocean acidification, invasive alien species and habitat destruction are among the several causes and drivers of marine biodiversity loss. At the same time, marine biodiversity loss undermines sustainable economic growth and social development as well as poverty eradication by affecting the continued provisions of many ecosystem services provided by the oceans.<sup>137</sup>

65. A number of initiatives at global and regional levels have been undertaken to promote, inter alia: mainstreaming of the consideration of the socio-economic impacts and benefits of the conservation and sustainable use of biodiversity and its components into relevant programmes and policies;<sup>138</sup> integrated planning and management (see paras 89-101), in particular with regard to coral reefs; and community-based measures.<sup>139</sup> In light of the role that economic valuation may have in raising awareness of the economic benefits of biodiversity and ecosystem services and consequently fostering conservation and sustainable use, work is also being carried out in that regard.<sup>140</sup> The role of access to, and benefit-sharing arising from the utilization of, genetic resources in contributing to the conservation and sustainable use of biodiversity, poverty eradication, and environmental sustainability, has also been recognized and measures taken to promote it.<sup>141</sup>

66. Effective integration is still hampered by a number of challenges. In particular, there is a need to strengthen efforts towards the effective implementation of relevant international instruments, as well as cooperation for capacity-building and transfer of technology. A better understanding of the causes and drivers of biodiversity loss that exacerbate poverty is also critical.<sup>142</sup> In addition, existing knowledge, including traditional knowledge, appears to be underused in decision-making at all levels.<sup>143</sup> Significant investments are required for scaling-up successful approaches.<sup>144</sup> Greater emphasis on the links between biodiversity loss and consumption choices may also be beneficial in bringing about sustainable consumption patterns.<sup>145</sup> While approaches linked to economic benefits, such as environmentally friendly and culturally responsible tourism (see paras 56-60) or payments

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<sup>137</sup> Resolution 66/288, annex, and CBD Decision XII/5, Annex. See also Paul L. Lucas, Marcel T.J. Kok, Måns Nilsson and Rob Alkemade, "Integrating Biodiversity and Ecosystem Services in the Post-2015 Development Agenda: Goal Structure, Target Areas and Means of Implementation", Sustainability 2014, 6.

<sup>138</sup> See Chennai Guidance for the Integration of Biodiversity and Poverty Eradication, CBD Decision XII/5, Annex. See also information material available at <http://www.cbd.int/development/default.shtml>.

<sup>139</sup> See CBD, CCAMLR, ICRI and UNEP contributions.

<sup>140</sup> ICRI contribution.

<sup>141</sup> Gangwon Declaration on Biodiversity for Sustainable Development. See also CBD contribution.

<sup>142</sup> CBD Decision XII/5, Annex. See also CBD Decision XII/4.

<sup>143</sup> Michael R. W. Rands et al.

<sup>144</sup> Ibid.

<sup>145</sup> Ibid.



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for ecosystem services, may help in meeting the costs of conservation,<sup>146</sup> and also benefit local communities and women (see paras 79-84),<sup>147</sup> challenges remain. For example, it is thought that, in order to bring about a change in behaviour, economic valuation must be accompanied by supporting public policies that either reward positive individual actions or disincentivize harm.<sup>148</sup> In addition, any economic assessment should include a thorough accounting of market and non-market values. Given the difficulty of valuing less tangible or quantifiable non-market values, there is a need for additional socio-economic and environmental indicators.<sup>149</sup> The existence of an appropriate institutional and governance framework for designing and implementing payments, together with the associated monitoring and regulation, are critical to the success of such initiatives.<sup>150</sup>

## 9. Oceans and climate change and ocean acidification

67. Climate change, including its impacts on oceans, and ocean acidification affect all States and undermine their ability, in particular that of developing countries, to achieve sustainable development and threaten the viability and survival of nations.<sup>151</sup> Sea level rise, loss of polar ice, extreme weather events, ocean warming and acidification are causing, inter alia, destruction of property and loss of lives, changing coastlines, coral bleaching, displacement of fish stocks and ecosystem degradation, all of which affect the food security, livelihood and development of communities both in developing and developed States. The opening of new navigational routes, for example in the Arctic region, as a result of climate change may have a positive impact on international trade. However, the environmental and social impacts also need to be considered.<sup>152</sup>

68. Actions targeting the causes of climate change and ocean acidification, in particular cuts in greenhouse gas (GHG) emissions, are essential to addressing the above challenges. At the same time, the importance of maintaining healthy marine and coastal ecosystems to ensure their continued climate change mitigation and adaptation functions, as well as building resilience to ocean acidification, cannot be overstated also in view of the link to poverty eradication, food security and sustainable economic growth. Action aimed

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<sup>146</sup> Ibid.

<sup>147</sup> See Laely Nurhidayah, "Conservation and sustainable use of marine biodiversity", UN-NF Alumni case study, <[http://www.un.org/depts/los/nippon/unff\\_programme\\_home/unff\\_program\\_sg\\_report.htm](http://www.un.org/depts/los/nippon/unff_programme_home/unff_program_sg_report.htm)>. See also the case studies on marine and coastal biodiversity provided on the SCBD website at <http://www.cbd.int/case-studies/default.shtml>.

<sup>148</sup> Michael R. W. Rands et al.

<sup>149</sup> OECD, *Marine Biotechnology: Enabling Solutions for Ocean Productivity and Sustainability*, 2013.

<sup>150</sup> Michael R. W. Rands et al.

<sup>151</sup> Resolution 66/288, annex. See also A/69/71 and A/69/71/Add.1.

<sup>152</sup> See also IPCC (2014), *Climate Change 2014: Impacts, Adaptation, and Vulnerability*. Chapter 6, Ocean Systems.

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at the management of climate-related coastal and marine hazards is also of major importance in view of the critical impediment they pose to social and economic development and poverty eradication.<sup>153</sup> Also crucial is the strengthening of capacity, particularly in SIDS, for the collection of climate data and information for early warning and disaster risk reduction.<sup>154</sup>

69. In addition, the development of marine renewable energies (see paras 50-52) could foster increased energy security, generate employment and play a role in mitigating the impacts of climate change.<sup>155</sup>

70. Coastal wetlands (salt marshes, mangroves, and seagrass beds) provide a good example of ecosystems which support coastal development and function as important carbon sinks, absorbing and holding large quantities of carbon dioxide (CO<sub>2</sub>).<sup>156</sup> It is estimated that, annually, these ecosystems sequester carbon at a rate two to four times greater than mature tropical forests and store three to five times more carbon per equivalent area than tropical forests.<sup>157</sup> These coastal habitats also provide rich fishing grounds for coastal communities, support nutrient recycling and shoreline stabilization, provide storm protection and flood attenuation, hence providing essential ecosystem services for food security, sustainable livelihoods, disaster reduction and adaptation to climate change. These ecosystems are under increasing pressure from coastal development projects, to the extent that globally about 35 per cent of mangroves have disappeared since 1980. With their destruction, ecosystem services are lost and large quantities of stored CO<sub>2</sub> are emitted, from the oxidization of organic sediments and biomass.<sup>158</sup> Better protecting the world's fast-disappearing coastal wetlands could have economic, social and environmental benefits, while at the same time providing quantifiable mitigation outcomes, which may also generate capital through climate finance mechanisms.<sup>159</sup>

## **B. Addressing vulnerabilities**

71. Owing to their particular vulnerabilities, certain States and groups are particularly challenged in their efforts to achieve sustained and inclusive economic growth, social development and environmental protection. In “The future we

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<sup>153</sup> WMO contribution.

<sup>154</sup> UNECA contribution.

<sup>155</sup> A/67/120.

<sup>156</sup> IPCC 2014, 2013 Supplement to the 2006 IPCC Guidelines for National Greenhouse Gas Inventories: Wetlands.

<sup>157</sup> Murray, B.C., Linwood, P., Jenkins, W.A., & Sifleet, S., “Green Payments for Blue Carbon Economic Incentives for Protecting Threatened Coastal Habitats”, Nicholas Institute for Environmental Policy Solutions Report. NI\_R\_11-04, 2011.

<sup>158</sup> IPCC 2014, 2013 Supplement to the 2006 IPCC Guidelines for National Greenhouse Gas Inventories: Wetlands.

<sup>159</sup> UNEP and CIFOR 2014. Guiding principles for delivering coastal wetland carbon projects.

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want”, States recognized that each country faces specific challenges to achieve sustainable development and underscored the special challenges facing the most vulnerable countries and, in particular, African countries, least developed countries (LDCs), landlocked developing countries (LLDCs), and small island developing States (SIDS). It was further recognized that countries in situations of conflict also needed special attention.<sup>160</sup>

72. Despite the growing understanding of the importance of disaster risk reduction and increased disaster response capacities,<sup>161</sup> the vulnerabilities of all States to various shocks and disasters, as well as mitigating, preparing for and building resilience against such risks remain a global concern. Such shocks and disasters include environmental risks, such as extreme weather events, sea level rise and major biodiversity loss; economic risks such as energy price shocks, fiscal and/or financial crisis and high structural unemployment; and social risks such as conflicts, civil unrest, food crises, and rapid and massive spread of infectious diseases.<sup>162</sup>

73. Global risks are interconnected. The occurrence of any major shock or disaster in any area has the potential to extend and cause other shocks, as well as long-term consequences for affected States and individuals and the world economy.<sup>163</sup> The manifestations of global risks are often regional, national or local. Hence, tailored approaches at each of those levels are often more effective in accounting for variations in transnational, national, and local vulnerabilities as well as building mitigation strategies.<sup>164</sup>

74. In the context of oceans, it is of paramount importance to work towards mitigation and preparation for risks associated with extreme weather events, such as hurricanes and tsunamis, as well as those associated with climate change and sea-level rise.<sup>165</sup> Of particular concern in that regard are the unique and particular vulnerabilities of SIDS. Adaptation to the impacts of climate change represents an immediate and urgent global priority for all States given the challenges it poses to sustainable development.<sup>166</sup>

75. *African States.* The 2050 Africa’s Integrated Maritime Strategy (“2050 AIM Strategy”) notes that Africa’s oceans and seas are under pressure from various threats such as crimes at sea, degradation of the marine environment, loss of

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<sup>160</sup> Resolution 66/288, annex.

<sup>161</sup> See, for example, the Hyogo Framework for Action, as well as the Post-2015 Framework for Disaster Risk Reduction.

<sup>162</sup> For a comprehensive list of global risks see World Economic Forum, *Global Risks 2015*, 10th Edition, 2015.

<sup>163</sup> *Ibid.*

<sup>164</sup> UNDP Human Development Report 2014, *Sustaining Human Progress: Reducing Vulnerabilities and Building Resilience*; IPCC, *Climate Change 2014, Impacts, Adaptation, and Vulnerability (Part A: Global and Sectoral Aspects)*.

<sup>165</sup> Resolution 66/288, annex.

<sup>166</sup> Resolution 69/15, annex.

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biodiversity and aggravated effects of climate change.<sup>167</sup> The decision of the twenty-second ordinary session of the African Union, in January 2014, to adopt the 2050 AIM Strategy and to retain 2015 to 2025 as the “Decade of African Seas and Oceans” represents an opportunity for integrated sustainable development of the oceans by African States at both the regional and national level.<sup>168</sup> The recently adopted Africa Agenda 2063 recognizes the important role of the 2050 AIM Strategy in facilitating sustainable development on the continent and also includes an aspiration that “Africa will be a continent with the sustainable use, equitable sharing of benefits and conservation of its vast natural and marine resources, including the “Blue Economy”<sup>169</sup> as well as a chapter to guide the continent’s pursuit of a Blue Economy development model for African SIDS.<sup>170</sup>

76. *LDCs*. Maritime traffic constitutes the main transport mode through which most LDCs conduct international trade.<sup>171</sup> However, container dwell times in some African LDCs ports range from 12 to 15 days, above the international practice of seven days. Highway networks have been developed or are being developed to facilitate transport, including for LDCs. The Istanbul Programme of Action recognizes the importance of marine and coastal resources and of access to the sea for the economic growth of LDCs; it also refers to the utilization of tidal energy to increase the capacity for energy generation in LDCs.<sup>172</sup>

77. *LLDCs*. The average distance to the seaport for LLDCs is 1,370 km.<sup>173</sup> Despite an overall trend in reduced export delays, it takes an average of 43 days to export from LLDCs. This is reportedly more than twice the time required to export from coastal developing countries and 20 days more than the time required to export from transit countries.<sup>174</sup> In 2011, LLDCs’ exports accounted for 1.2 per cent of world exports and their total share in global trade was 1.17 per cent showing continued marginalization of the group of LLDCs in the world economy.<sup>175</sup> In recognition of the special situation of LLDCs, UNCLOS devotes an entire section, to their needs as well as those of geographically disadvantaged States. The Vienna Programme of Action<sup>176</sup> adopted during the second United Nations Conference on Landlocked Developing Countries in November 2014, highlighted the key role that freedom of transit and transit facilities play in the overall development of LLDCs in order to fully integrate into the

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<sup>167</sup> See [pages.au.int/maritime/documents/2050-aim-strategy-0](http://pages.au.int/maritime/documents/2050-aim-strategy-0).

<sup>168</sup> See <http://au.int/en/content/addis-ababa-30-31-january-2014-%E2%80%93-assembly-african-union-twenty-second-ordinary-session>.

<sup>169</sup> See [http://agenda2063.au.int/en/sites/default/files/01\\_Agenda2063\\_popular\\_version\\_ENGs.pdf](http://agenda2063.au.int/en/sites/default/files/01_Agenda2063_popular_version_ENGs.pdf).

<sup>170</sup> ECA contribution.

<sup>171</sup> UNOHRLLS, *State of the Least Developed Countries*, 2014.

<sup>172</sup> See <http://unohrlls.org/about-ldcs/istanbul-programme-of-action/>.

<sup>173</sup> UNOHRLLS, *Landlocked Developing Countries Factsheet*, 2013.

<sup>174</sup> UNOHRLLS, *Development Costs of Landlockedness*, 2013.

<sup>175</sup> UNHORLLS, *Landlocked Developing Countries Factsheet*, 2013.

<sup>176</sup> A/CONF.225/L.1.

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global trading system.<sup>177</sup> A number of transit cooperation agreements including transport corridors have been concluded, such as in Asia and Africa.<sup>178</sup> The General Assembly in its resolution 69/245, noted the need for cooperation to address the development needs and challenges faced by landlocked developing countries associated with, inter alia, their lack of direct territorial access to the sea, remoteness and isolation from world markets, in line with the objectives of the Vienna Programme of Action.

78. *SIDS*. Sustainable fisheries and aquaculture, coastal tourism, the possible use of seabed resources and potential sources of renewable energy are among the main building blocks of a sustainable ocean-based economy in SIDS.<sup>179</sup> Challenges include limited economic capacity and knowledge, resource management, climate change and sea level rise and growing populations.<sup>180</sup> Particular challenges also remain for Pacific SIDS in the integration of the three dimensions of sustainable development, which stem in part from geographic remoteness from main trade partners, limited volumes of trade, heavy reliance on imports and low volumes of exports highly concentrated in a few products.<sup>181</sup> The effective participation of SIDS in global trade requires addressing both port facilities and trade logistics, in order to develop a sustainable transport system,<sup>182</sup> as well as increased capacity-building and improved transfer of technologies. In the SIDS Accelerated Modalities of Action (SAMOA) Pathway, States reaffirmed the status of SIDS as a special case for sustainable development in view of their unique and particular vulnerabilities. They recognized the significant challenges that SIDS face in the attainment of sustainable development goals and highlighted the crucial importance of international cooperation and partnerships to that end.<sup>183</sup> A number of activities have been undertaken by Pacific SIDS related to maritime boundaries, oceanic fisheries, coastal fisheries, and deep sea mining aimed at strengthening policies, legal frameworks, institutions and management measures at the national level,<sup>184</sup> including fostering the use of traditional knowledge and community-based resource management practices,<sup>185</sup> ecosystem-based management and adaptation of ocean and island natural resources (ridge-to-reef, integrated island management).<sup>186</sup>

79. *Vulnerable groups*. Vulnerable groups include, but are not limited to, the poor, migrants, refugees, displaced persons, women, children and indigenous groups, and others who

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177 Ibid. See also UNOHRLLS contribution.

178 UNOHRLLS, *State of the Least Developed Countries 2014*. See also A/68/15.

179 UNOHRLLS contribution.

180 SPREP contribution.

181 UNCTAD, *Review of Maritime Transport, 2014*. See also ECA contribution.

182 Ibid.

183 Resolution 69/15, annex.

184 SPC contribution.

185 SPREP contribution.

186 Ibid.

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experience “exposure to contingencies and stress, and difficulty in coping with them.”<sup>187</sup> The deterioration of coastal and marine ecosystems and habitats is negatively affecting human well-being worldwide, with more severe and immediate impacts on the poor and vulnerable, women, children and indigenous peoples due, inter alia, to their oftentimes high dependency on natural resources.

80. Impoverished people are more likely to take dangerous jobs at sea. Small-scale fishers, in particular in SIDS, are particularly vulnerable to environmental impacts and high occupational risk, with few alternative livelihoods.<sup>188</sup> They are also exposed to natural disasters<sup>189</sup> and violence, among others.<sup>190</sup> Integrated management of social, economic and environmental systems underpinning small-scale fisheries can mitigate these risks (see paras. 34-40).<sup>191</sup>

81. Indigenous peoples may sometimes not be involved in decision-making about development policies.<sup>192</sup> The international community is increasingly attentive to the need to recognize the cultural relationships of indigenous peoples to the oceans and their resources (see paras. 17, 61-62), and the need to obtain their consent for commercially exploitative activities that might affect them.<sup>193</sup>

82. Persisting gender gaps relative to women’s economic positions, their dominant role in the care economy, and their increased likelihood of participating in the informal economy may cause women’s contributions to sustainable development to be undervalued.<sup>194</sup> Yet, evidence suggests that investing in women-owned food enterprises could narrow the resource gap and improve food security; and their participation in trade and services has contributed not only to their own economic empowerment, but also to national competitiveness.<sup>195</sup> For example, women represent the majority in secondary activities related to marine fisheries and marine aquaculture, such as fish processing and marketing (see also para. 36).

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187 FAO, “Small-Scale Fisheries: Assessing their Contribution to Rural Livelihoods in Developing Countries,” FIPL/C1008, 2006.

188 FAO contribution.

189 UNECA contribution.

190 FAO, “Small-Scale Fisheries: Assessing their Contribution to Rural Livelihoods in Developing Countries,” FIPL/C1008, 2006.

191 Matthew Ansy, “Small Scale Fisheries (SSF) in India”, UN-NF Alumni case study, <[http://www.un.org/depts/los/nippon/unff\\_programme\\_home/unff\\_program\\_sg\\_report.htm](http://www.un.org/depts/los/nippon/unff_programme_home/unff_program_sg_report.htm)>.

192 Permanent Forum on Indigenous Issues, “Indigenous Peoples’ Participation in Decisions Impacting Community, Land, Culture Critical to Their Human Rights, Speakers Tell Permanent Forum,” 22 May 2013, at <http://www.un.org/press/en/2013/hr5134.doc.htm>. See also Yetunde E. Agbeja, “Sustaining Livelihood through Community managed fishing license banks – The case of First Nations of British Columbia”, UN-NF Alumni case study, <[http://www.un.org/depts/los/nippon/unff\\_programme\\_home/unff\\_program\\_sg\\_report.htm](http://www.un.org/depts/los/nippon/unff_programme_home/unff_program_sg_report.htm)>.

193 See The Pacific Declaration of the Preparatory Meeting for Pacific Indigenous Peoples on the 2014 World Conference on Indigenous Peoples, 2013, at:

<http://www.un.org/esa/socdev/unpfii/documents/WCIP-Pacific-Statement-Outcome-Documents.pdf>.

194 Willemijn de Jong, “The Female Face of Sustainable Development,” 8 April 2013, at: <http://www.europarl.europa.eu/eplibrary/The-female-face-of-sustainable-development.pdf>

195 UN Women, “The Future Women Want,” 2012.

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83. As indicated in paragraph 14, migrants can contribute to economic growth and social development. However they are also vulnerable. Migrants, refugees and asylum-seekers travelling by sea in an irregular situation are especially at risk of human rights abuses by traffickers and smugglers.<sup>196</sup> Work is ongoing to promote better coordination and cooperation in combatting transnational crime, including trafficking and smuggling.<sup>197</sup>

84. Activities to benefit vulnerable people have, for example, focused on youth and women,<sup>198</sup> migrants,<sup>199</sup> and the empowerment of fishing communities as a non-conventional measure to address armed robbery against ships.<sup>200</sup>

### **C. Enabling framework for enhanced integration of the three dimensions in relation to oceans**

85. While the challenges are many, opportunities exist to enhance integration of the three dimensions of sustainable development with a view to achieving “triple wins” (see para. 2). Continuing efforts to address the global drivers of change which have negative impacts on national and local economies, on social systems and on the marine environment and exacerbate vulnerabilities is critical. At the same time, developing the elements that constitute the basic enabling framework for integration, some of which are outlined below, is essential.

#### **1. Legal framework**

86. The development and implementation of a supporting legal framework at the national level, in conformity with the Convention can play a critical role in achieving successful integration. UNCLOS is recognized as the legal framework within which all activities in the oceans and seas must be carried out. As noted in para. 5, the Convention reflects the inter-relatedness of the environmental, social and economic aspects of the oceans. The role of the Convention with regard to the integration of those three dimensions is even greater by virtue of the fact that it is a framework instrument. As such, its provisions are complemented by its two implementing

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196 OHCHR, “Human Rights at International Borders: Exploring Gaps in Policy and Practice,” March 2012, [at http://www.ohchr.org/Documents/Issues/Migration/Events/HumanRightsatInternationalBorders\\_backgrounderpaper2012.pdf](http://www.ohchr.org/Documents/Issues/Migration/Events/HumanRightsatInternationalBorders_backgrounderpaper2012.pdf).

197 UNODC contribution. The UNODC Global Maritime Crime Programme has developed an Indian Ocean Forum on Maritime Crime to share information and strategies, and collaborate in investigating and prosecuting, maritime crimes, including trafficking and smuggling of persons. See also A/69/71/Add.1.

198 SPC contribution.

199 See note 197.

200 Senia Febriana, “Empowerment of coastal communities as a non-conventional measure to address armed robbery against ships, Indonesia”, UN-NF Alumni case study, <[http://www.un.org/depts/los/nippon/unff\\_programme\\_home/unff\\_program\\_sg\\_report.htm](http://www.un.org/depts/los/nippon/unff_programme_home/unff_program_sg_report.htm)>.

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Agreements as well as by other instruments in various sectors. This normative integration finds explicit recognition in the provisions of the Convention itself.<sup>201</sup> The effective implementation of the Convention and its implementing Agreements would, therefore, advance the achievement of sustained and inclusive economic growth, social development and environmental protection and further the goal of integration. This is also recognized in Goal 14(c) in the proposal of the Open Working Group on Sustainable Development Goals which puts emphasis on ensuring “the full implementation of international law, as reflected in the United Nations Convention on the Law of the Sea for States parties thereto, including, where applicable, existing regional and international regimes for the conservation and sustainable use of oceans and their resources by their parties”. The General Assembly has also consistently emphasized that capacity-building is essential to ensure that States, especially developing countries, in particular the least developed countries and small island developing States, as well as coastal African States, are able to fully implement the Convention, benefit from the sustainable development of the oceans and seas and participate fully in global and regional forums on ocean affairs and the law of the sea<sup>202</sup> (see also para. 75).

87. In that regard, it is important to bear in mind that the Convention also indirectly contributes to the three dimensions and their integration by providing the tools that promote, inter alia, the legal certainty stemming from precise jurisdictional entitlements, the peaceful settlement of disputes, the suppression of criminal activities at sea as well as the transfer of technology (see paras. 106-110).

88. For example, clearly defined and publicized limits of maritime zones under national jurisdiction are an essential basis for peace and security and the sustainable management of activities and resources, as they provide certainty with regard to the extent of the sovereignty or sovereign rights and jurisdiction of coastal States. Such certainty has an impact on the effectiveness of an integrated approach to oceans. However, a significant number of maritime boundaries have not been settled, thereby preventing some States from fully and effectively deriving benefits from the oceans. In response, in some cases, States have negotiated temporary provisional arrangements for joint exploration/exploitation of resources pending more permanent solutions.<sup>203</sup>

## **2. Integration at the policy, planning and management levels**

89. The General Assembly has consistently acknowledged that the problems of ocean space are closely interrelated and need to be considered as a whole through an integrated,

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<sup>201</sup> See, e.g. articles 197 and 282.

<sup>202</sup> Resolution 69/245.

<sup>203</sup> United Nations, 2000, “Handbook on the Delimitation of Maritime Boundaries”.



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interdisciplinary and intersectoral approach, and reaffirmed the need to improve cooperation and coordination at the national, regional and global levels, in accordance with the Convention, to support and supplement the efforts of each State in promoting the implementation and observance of the Convention and the integrated management and sustainable development of the oceans and seas.<sup>204</sup>

90. Cross-sectoral cooperation and coordination amongst different Government ministries and agencies in relation to ocean issues can foster more integrated consideration and decision-making, reflecting a broad range of interests and viewpoints.

91. Efforts in the integration of the three dimensions of sustainable development have been demonstrated in the adoption and implementation of integrated national ocean policies in several countries, including, with a view to developing sustainable-ocean based economies or “blue growth”.<sup>205</sup> In some countries, integration has included establishing an inter-agency coordination body overseeing the implementation of an ocean policy.<sup>206</sup> At the regional level, the European Union and the African Union (see para. 75), among others, have adopted integrated maritime policies.<sup>207</sup>

92. Institutional mechanisms are needed to harness socio-economic and environmental knowledge for decision-making and to ensure the administration, implementation and monitoring of integrated policies. Fragmentation and lack of cooperation and coordination represent one of the main challenges to institutional effectiveness at all levels.<sup>208</sup> Cross-sectoral cooperation and coordination and sustainable development of oceans and seas are therefore inter-twined. Opportunities remain in terms of capacity-development and institutional strengthening to ensure cooperation and collaboration between different government institutions in implementation of national strategies and plans,<sup>209</sup> including the development and implementation of national ocean policies and mechanisms on integrated coastal management.

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204 See e.g., resolution 69/245.

205 See [www.ioc-unesco.org/index.php?option=com\\_content&view=article&id=362&Itemid=100036](http://www.ioc-unesco.org/index.php?option=com_content&view=article&id=362&Itemid=100036). See case study by Laely Nurhidayah, “Conservation and sustainable use of marine biodiversity”, UN-NF Alumni case study, <[http://www.un.org/depts/los/nippon/unff\\_programme\\_home/unff\\_program\\_sg\\_report.htm](http://www.un.org/depts/los/nippon/unff_programme_home/unff_program_sg_report.htm)>

206 See, e.g., the UK Marine and Coastal Access Act 2009 (establishing the Marine Management Organisation); the Basic Act on Ocean Policy of Japan (establishing the Headquarters for Ocean Policy); US Executive Order of 19 July 2010 on Stewardship of the Ocean, Our Coasts and the Great Lakes (establishing the National Ocean Council).

207 The Integrated Maritime Policy of the European Union, including its Marine Strategy Framework Directive; the African Union’s 2050 African Maritime Integrated Strategy and Plan of Action. See also case study by Nicole Parris, “The Caribbean Sea Commission (CSC): Working toward the sustainable development of the Caribbean Sea”, UN-NF Alumni case study, <[http://www.un.org/depts/los/nippon/unff\\_programme\\_home/unff\\_program\\_sg\\_report.htm](http://www.un.org/depts/los/nippon/unff_programme_home/unff_program_sg_report.htm)>.

208 See OECD, Sustainable Development Critical issues, 2001.

209 Synthesis of National Reports for Rio +20.

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93. *Participatory approaches.* Participatory approaches play a key role in the integration of the three dimensions of sustainable development in oceans law and policy by ensuring that a broad range of interests are represented and economic, environmental and social considerations are taken into account, at all levels of decision-making and governance.<sup>210</sup> Sustainable development must, therefore, be inclusive and people-centred, benefiting and involving all relevant stakeholders.<sup>211</sup>

94. Effective participation by the broadest possible range of States in decision-making that affects them is very important. In this regard, international legal instruments, such as UNCLOS and the United Nations Fish Stocks Agreement, recognize the need for participation by all States, including developing States, in the management of the ocean and its resources and highlight the importance of capacity-building and transfer of technology to support such participation.

95. Poor stakeholder participation is one of the critical factors exacerbating ineffective fisheries governance and management which is at the heart of decline in fisheries resources.<sup>212</sup> A number of international instruments call for participatory approaches, including the Voluntary Guidelines for Securing Sustainable Small-Scale Fisheries in the Context of Food Security and Poverty Eradication, which propose guidance for the enhancement of sustainable small-scale fisheries governance and development.<sup>213</sup>

96. Moreover, participatory approaches are already incorporated in various forums and processes for the development of ocean law and policy at the global, regional and national levels. At the global level, civil society, including non-governmental organizations, industry groups and media, play an important role through their participation in ocean- and sustainable development-related meetings, such as the United Nations Open-ended Informal Consultative Process on Oceans and the Law of the Sea and the High Level Political Forum on Sustainable Development. The International Labour Organization's tripartite structure and approach presents a unique example, bringing together governments, employers and workers to set labour standards, develop policies and devise programmes.<sup>214</sup> The Conference of the Parties of the Convention on Biological Diversity (CBD) encouraged the use of the traditional, scientific, technical and technological knowledge of indigenous and local communities at the national level, with their full and effective participation, and requested CBD's Executive

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210 Resolution 66/288, annex.

211 Ibid.

212 FAO contribution.

213 Ibid. See also Yetunde E. Agbeja, "Sustaining Livelihood through Community managed fishing license banks – The case of First Nations of British Columbia"; Amnaj Siripetch and Sampan Panjarat, "Improved Access to Fisheries Resources by Small-scale Fishers in the Andaman Sea by Construction of Artificial Reefs", and L. Ylenia Randrianarisoa, "Participatory Approach in Management" UN-NF Alumni case study, [http://www.un.org/depts/los/nippon/unnff\\_programme\\_home/unnff\\_program\\_sg\\_report.htm](http://www.un.org/depts/los/nippon/unnff_programme_home/unnff_program_sg_report.htm).

214 ILO contribution.

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Secretary to facilitate participation of such groups, including fisheries communities, in regional or subregional workshops on ecologically or biologically significant marine areas.<sup>215</sup>

97. At the national level, the participation of various stakeholders into decision-making processes has been key to considering different interests and perspectives.<sup>216</sup> At the local level, participation of coastal communities and small-scale and artisanal fishers in resource-management, land and maritime area usage decision-making may help achieve a balance of economic, social and environmental considerations.

98. Another key aspect of participatory approaches is the sharing of benefits derived from the oceans and their resources. The importance of benefit-sharing in the maritime context has been recognized through, for example, the principle of the common heritage of mankind, the recognition of the special requirements of developing States,<sup>217</sup> access and benefit-sharing arising out of the utilization of genetic resources through the Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization, and participatory rights in regional fisheries management organizations and arrangements.<sup>218</sup> In “The future we want”, States committed “to observe the need to ensure access to fisheries and the importance of access to markets, by subsistence, small-scale and artisanal fisherfolk and women fish workers, as well as indigenous peoples and their communities, particularly in developing countries, especially small island developing States”.<sup>219</sup>

99. *Management tools.* Progress continues to be made in the development and application of various integrated tools to manage the impacts of human activities on marine ecosystems. Integrated approaches to the management of human activities in the oceans and seas include ecosystem approaches, integrated coastal zone management and marine spatial planning. A previous meeting of the Informal Consultative Process focused on ecosystem approaches,<sup>220</sup> which have been applied in single sectors (e.g., fisheries management)<sup>221</sup> as well as in a cross-sectoral manner.<sup>222</sup>

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215 SCBD contribution.

216 See e.g. Belgium Royal Decree of 20 March 2014 at [www.health.belgium.be/filestore/19094275/Summary%20Marine%20Spatial%20Plan.pdf](http://www.health.belgium.be/filestore/19094275/Summary%20Marine%20Spatial%20Plan.pdf), and the Integrated Management Plans adopted by Norway for the Lofoten–Barents Sea, Norwegian Sea, and the North Sea and Skagerrak area at [www.fisheries.no/resource\\_management/Area\\_management/Integrated\\_management\\_plans/#.VPTTQS6eom8](http://www.fisheries.no/resource_management/Area_management/Integrated_management_plans/#.VPTTQS6eom8).

217 UNFSA, article 24.

218 UNFSA, article 11.

219 Resolution 66/288, annex.

220 A/61/156.

221 See, e.g., FAO’s Ecosystem Approach to Fisheries and Ecosystem Approach to Aquaculture; CBD COP decision XI/18. FAO and CBD contributions.

222 See, e.g., the EU’s MSFD; the OSPAR North-East Atlantic Environmental Strategy; the Baltic Sea Action Plan of HELCOM; UNDP’s Sustainable Ocean Management Programme; SPREP’s projects and

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Integrated coastal zone management is a continuous and dynamic process, which, among others, aims to achieve intersectoral, intergovernmental and spatial integration as well as the integration of science and management.<sup>223</sup>

100. Marine spatial planning aims at enabling informed planning of the uses of ocean space and resources through the application of a number of management tools such as ecosystem assessments, strategic environmental assessment, area-based management tools, such as marine protected areas,<sup>224</sup> and ecosystem service valuation in trade-off analysis. It promotes broad and transparent stakeholder engagement.<sup>225</sup> While still in the early stages of implementation, marine spatial planning offers opportunities for coordination between sea and land planning, resolution of user conflicts, increased focus on performance monitoring and evaluation and stakeholders' participation. Based on experience at the national level, MSP is increasingly being promoted as a useful integrated approach at the regional and global levels.<sup>226</sup>

101. Environmental impact assessments and strategic environmental assessments that assess cumulative impacts are also a tool that can support the implementation of integrated approaches.<sup>227</sup> As yet, models of how to assess cumulative impacts and their interactions with the ecosystem are in their infancy and vary from country to country, and region to region. This remains a major challenge to an integrated approach to managing human activities in the marine environment.<sup>228</sup> In this regard, ongoing marine science initiatives (see para. 104-105) particularly the first global integrated assessment of the state of the marine environment, including socio-economic aspects (see para. 105) would contribute to the enhancement of the understanding of cumulative impacts and their interactions with the ecosystem.

### 3. Marine science

102. Understanding the economic and social benefits and costs of human activity in the marine environment is essential, as is a means of understanding the linkage between human activities and pressures and the associated impacts on the ecosystem in interaction with natural environmental change.<sup>229</sup> In that regard, sound data, information and knowledge is critical for informed decision-making. It also enables the monitoring of progress towards internationally-agreed commitments (see para. 131).

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programmes concerning, among others, ecosystem-based management and adaptation of ocean and island natural resources.

223 A/57/57 and A/57/80.

224 Ibid.

225 UNEP, IOC, CBD, EU, HELCOM contributions.

226 Ibid.

227 See, e.g., A/66/119, A/67/95, A/69/82 and A/69/177.

228 OSPAR contribution.

229 Ibid.

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103. By providing the necessary data through marine scientific research and its supporting technologies, our knowledge of various drivers of change can be improved. Marine science can, therefore, make a major contribution to eliminating poverty, ensuring food security, supporting sustainable management of activities at sea, protecting the marine environment, and helping predict and mitigate the impacts of and respond to natural events and disasters.<sup>230</sup> In order to do so effectively, marine science needs to be mainstreamed into decision-making and be interdisciplinary and intersectoral, including through an increased appreciation of the ocean/atmosphere interface<sup>231</sup> and land-ocean connection.

104. Numerous organizations, agencies and collaborative endeavours collect information and data for their particular sectoral use.<sup>232</sup> However, the effective application of marine scientific knowledge and technology in an integrated manner requires the development of the appropriate national and regional approaches and mechanisms to overcome current challenges relating to, inter alia, lack of cohesion among particular scientific disciplines, and the production of aggregated, integrated and coherent datasets supporting statistics and indicators for oceans and seas (see paras. 129-130).<sup>233</sup> Such efforts could contribute to increasing integration of information on the variables that affect ocean health, human well-being and economic growth, and consequently ensure that decisions drawing on marine science take, where applicable, full account of environmental and socio-economic factors, including traditional knowledge.<sup>234</sup>

105. Strengthening the science-policy interface is also essential. In that regard, the first global integrated marine assessment under the Regular Process for Global Reporting and Assessment of the State of the Marine Environment, including Socio-economic Aspects (the World Ocean Assessment), which is underpinned by marine science, provides an important example of the integration of the three dimensions of sustainable development. It aims to respond to the need for a new form of integrated assessment that is global in scope, comprehensive in the issues it covers, and with an emphasis on the socio-economic causes and consequences of the degradation of the marine environment. The assessment can provide a scientific basis and rationale for policy, integrated management planning and the sustainable development of coastal and marine areas.

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<sup>230</sup> A/56/21. See also resolution 69/245.

<sup>231</sup> A/56/21.

<sup>232</sup> See for example, the International Oceanographic Data and Information Exchange which facilitates the exchange of oceanographic data and information, in particular through its Ocean Data and Information Networks and Ocean Biogeographic Information System; FAO statistical information on fisheries; IMO statistical information on shipping.

<sup>233</sup> Additional challenges are set out in A/69/71/Add.1.

<sup>234</sup> An example of the multidimensional aspect of marine science to that end is found in the Global Ocean Observation System which is considered necessary for rapid detection of changes in the ecosystems, accurate and timely predictions of natural hazards, safe and efficient maritime operations and more effective human use of the marine environment. See IOC contribution.

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#### **4. Infrastructure, including technology and technology transfer**

106. Adequate infrastructure and technology are also critical in supporting sustainable development. For example, secure port facilities are crucial for maritime transport and commerce amongst others, thereby contributing to socio-economic development. In addition, control measures within ports provide an effective tool for the enforcement of environmental, security, social and economic laws and regulations, thus supporting the sustainability of activities. Monitoring, control and surveillance to combat illegal activities, which undermine the benefits that a coastal State may gain from sustainable activities under its jurisdiction, also enhance the sustainability of related activities.<sup>235</sup>

107. Technological innovation and change, which also underpins infrastructure development, is pervasive in the world today, including in the ocean environment. New technologies are unlocking possibilities for sustainable development,<sup>236</sup> such as with marine renewable energy (see paras. 50-52). Technological advancement can improve existing technologies, making them more environmentally sound, more economic and able to achieve outcomes for people more efficiently and effectively. For example, with regard to marine data acquisition, one of the key drivers of the use of autonomous technology has been the increased cost of ship-borne research coupled with the growing demand for continuous, high-resolution, long-term ocean observations for both research and societal needs.<sup>237</sup>

108. Improvements to technologies are often cited as being directly sought-after within various areas such as shipping,<sup>238</sup> marine renewable energies,<sup>239</sup> and submarine cables to assist those areas in being better able to integrate the three dimensions of sustainable development.

109. Technological advancements are, however, unevenly spread within and between countries with many developing countries locked out and the poor in other countries also being priced out.<sup>240</sup> This is of particular concern for developing countries where the protection of the marine environment is dependent upon the technological and financial capacities of individual countries and technology transfer and financial resources are required.<sup>241</sup>

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<sup>235</sup> FAO contribution.

<sup>236</sup> A/69/700.

<sup>237</sup> The Law of the Sea: Marine Scientific Research. A revised guide to the implementation of the relevant provisions of the United Nations Convention on the Law of the Sea; United Nations Publications (2010); Sales No. E.10.V.12.

<sup>238</sup> A/65/69/Add.2; A/63/63; and A/63/63/Add.1.

<sup>239</sup> A/67/79.

<sup>240</sup> A/69/700.

<sup>241</sup> Agenda 21.

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110. The Convention, *inter alia*, requires States to establish programmes of technical cooperation for the effective transfer of marine technology. To this end, guidelines have been developed for the transfer of marine technology.<sup>242</sup> Capacity-building activities to promote such transfer are being carried out.<sup>243</sup>

## 5. Capacity-building and resource mobilization

111. The effective implementation of States' obligations under UNCLOS and related Agreements, as well as other commitments related to oceans, provides significant opportunities for sustainable development in all of its social, environmental and economic dimensions. It will also significantly contribute to, *inter alia*, poverty eradication, sustained economic growth and food security.<sup>244</sup> The capacity to fully participate in the elaboration and implementation of the legal regime for the oceans and seas also fosters peace and security – a necessary precondition to sustainable development. However, human, institutional and systemic capacities, as well as financing, continue to be the primary limiting factors for States in this regard, particularly with respect to least developed countries and small island developing States.

112. A previous report<sup>245</sup> presented an overview of the capacity-building needs of States and reviewed capacity-building activities and initiatives. It also addressed the challenges in implementing capacity-building activities and initiatives, and identified opportunities for ways to move forward. The contents of this report remain relevant today, and the magnitude of the need for capacity-building interventions is becoming increasingly clear as States continue to call for strengthened cooperation for capacity-building<sup>246</sup> at all levels and across all sectors. The need for integrated approaches is clearly present in capacity requirements as States increasingly seek to harness ocean-based economies in a sustainable manner.<sup>247</sup> These capacity-building requirements are particularly high for small island developing States.

113. More recently, the key importance of capacity-building was reiterated in the post-2015 development process, including through the work of the Open Working Group on Sustainable Development Goals, and in the SAMOA Pathway. Despite this recognition, significant lacunae remain in terms of integrated approaches to the building of capacity and even

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<sup>242</sup> IOC Criteria and Guidelines on the Transfer of Marine Technology.

<sup>243</sup> See IOC, ISA and FAO contributions. See also IMO Resolution MEPC.229(65) on the promotion of technical cooperation and transfer of technology relating to the improvement of energy efficiency of ships; IHO activities at [iho.int/mtg\\_docs/CB/IHO\\_CB\\_Strategy\\_EN.pdf](http://iho.int/mtg_docs/CB/IHO_CB_Strategy_EN.pdf).

<sup>244</sup> Resolution 69/245. See also Resolution 66/288, annex.

<sup>245</sup> A/65/69.

<sup>246</sup> Resolution 66/288, annex.

<sup>247</sup> A/69/71/Add.1.

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larger ones with respect to sustained funding for capacity-development in oceans.

114. In order to be effective, human, institutional and systemic capacity must be reinforced so that States, civil society, and the private sector are able to address the closely interrelated problems of oceans as a whole.<sup>248</sup> Therefore, in addition to the necessary sectoral capacity-building programmes,<sup>249</sup> capacity-building initiatives across sectors, disciplines and geographic scales must be fostered. For example, integrated human capacity-building interventions are essential in support of sustainable development. With a view to providing integrated human resource development, the Division for Ocean Affairs and the Law of the Sea manages two Fellowships: the United Nations – The Nippon Foundation of Japan Fellowship Programme and the Hamilton Shirley Amerasinghe Memorial Fellowship. The case studies kindly provided by some Alumni for the benefit of this report and referred to therein, demonstrate how individual capacity-building is an essential element in enhancing the sustainable development of oceans and their resources at national/regional levels.<sup>250</sup>

115. The science-policy interface must also be woven into initiatives so as to not only enable an understanding of the possibilities afforded by oceans, but also to ensure informed decisions and the proper monitoring of the resultant actions (see paras. 129-132). Capacity-building must also be accompanied by significant resource mobilization and sustained funding. In this regard, it is important to note that UNCLOS lacks a funding mechanism, and the Secretariat's support to States in the implementation of the Convention and related Agreements is largely dependent on voluntary trust funds with narrow mandates and modest capacity-building projects addressing specific issues.<sup>251</sup> The recent focus by many States on harnessing their sustainable ocean economies could provide an opportunity to unlock potential for public-private partnerships (see paras. 125-127), including for funding of the necessary capacity-building initiatives. Furthermore, potential synergies across disciplines and sectors may provide opportunity for economies of scale and drive the necessary integration of all three aspects of sustainable development.<sup>252</sup>

116. Harnessing the oceans to pursue sustainable development in an integrated manner across its three dimensions must be accompanied by the operationalization of the reality that "capacity is development."<sup>253</sup>

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248 A/65/69.

249 See contributions from CBD, FAO, UNECA, WMO, IHO, UNESCO, UNCTAD and UNODC.

250 The full text of the case studies submitted is available at <...>.

251 A/69/71/Add.1.

252 For example, climate change financing could be directed at capacity-building initiatives within the various ocean sectors which also support climate change adaptation and mitigation objectives, see para. 70.

253 UNDP, Capacity is Development: Report of A Global Event on Smart Strategies and Capable Institutions for 2015 and Beyond, 2010.



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## 6. Cooperation and coordination

117. The General Assembly has consistently recognized the need to improve cooperation and coordination at the national, regional and global levels, in accordance with the Convention, to support and supplement, *inter alia*, the efforts of each State in promoting the sustainable development of the oceans and seas.<sup>254</sup>

118. International cooperation and coordination, in its many different forms, can contribute to the integration of the three dimensions of sustainable development in ocean affairs and the law of the sea, as well as sharing of experiences, best practices, resources and knowledge.

119. At the global level, since the entry into force of UNCLOS, the General Assembly has undertaken an annual review of developments relating to ocean affairs and the law of the sea, as the global institution having the competence to undertake such a review. In particular, the Informal Consultative Process was established by the General Assembly in order to facilitate its annual review of developments in ocean affairs and the law of the sea, with an emphasis on identifying areas where coordination and cooperation at the intergovernmental and inter-agency levels should be enhanced.<sup>255</sup> The Assembly has recognized the role of the Informal Consultative Process as a unique forum for comprehensive discussions on issues related to oceans and the law of the sea, consistent with the framework provided by the Convention and chapter 17 of Agenda 21, and that the perspective of the three pillars of sustainable development should be further enhanced in the examination of the selected topics.<sup>256</sup>

120. From Agenda 21 to “The future we want”, Member States have continuously highlighted the crucial need for greater coherence and coordination among the various initiatives and funding mechanisms related to sustainable development. As regards inter-agency cooperation, UN-Oceans was established as the inter-agency mechanism that seeks to enhance the coordination, coherence and effectiveness of competent organizations of the United Nations system activities related to oceans and coastal areas. It is comprised of 22 members including the International Seabed Authority. It operates under the overall supervision of the General Assembly, and in accordance with the Convention, the respective competences of each of its participating organizations and the mandates and priorities approved by their respective governing bodies. Currently, UN-Oceans is developing an inventory of mandates and specific activities of its members, which will be available on the UN-Oceans website, with a view to identifying possible areas for collaboration and synergy.

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<sup>254</sup> See e.g., resolutions 69/245 and 66/288, annex.

<sup>255</sup> Resolution 54/33.

<sup>256</sup> Resolution 69/245.

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121. Modalities of cooperation and coordination among States have evolved to address emerging challenges. Member States have recognized that new aid providers and novel partnership approaches have contributed to increasing the flow of resources, and that the interplay of development assistance with private investment, trade and new development actors provides opportunities for aid to leverage private resources.<sup>257</sup>

122. In terms of the source of the assistance, whether financial or technical, Member States have recognized that North-South cooperation remains the core type of international cooperation and that South-South cooperation is not a substitute for, but rather a complement, for it.<sup>258</sup> In this regard, the donor community, including through international financial institutions, remains a key player in providing assistance for sustainable development by ensuring steady and predictable access to adequate financing.

123. An example of inter-State cooperation, with the financial and technical assistance of the donor community, is the UNDP-GEF's Sustainable Ocean Management Programme.<sup>259</sup>

124. South-South and triangular cooperation, which provide effective approaches for mobilizing human and financial resources, expertise, technology and knowledge, remain important.<sup>260</sup>

125. In the context of the post-2015 development agenda, the Secretary-General has also noted that inclusive partnerships must be a key feature of implementation at all levels.<sup>261</sup>

126. The special needs of SIDS and the increasingly important role of the private sector in achieving sustainable development have been recognized in the SAMOA Pathway. In order to address that challenge, Pacific SIDS are working towards a multi-stakeholder partnership entitled the Pacific Ocean Alliance. Among its goals, the Alliance aims to foster informed and balanced decision-making at all levels, which factors in the economic, social, environmental and cultural benefits of the Pacific Ocean and islands, their coasts and coastal areas, and associated resources.<sup>262</sup>

127. Partnerships of all types provide a mechanism for engagement of different actors and stakeholder in achieving sustainable development. Public-private sector partnerships represent important opportunities for the integration of the three dimensions of sustainable development.<sup>263</sup>

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<sup>257</sup> Resolution 66/288, annex.

<sup>258</sup> Ibid. See also resolution 69/15, annex.

<sup>259</sup> UNDP contribution.

<sup>260</sup> For example, the Coral Triangle Initiative on Coral Reefs, Fisheries and Food Security is a multilateral partnership of six countries, which integrates the three dimensions of sustainable development.

<sup>261</sup> A/69/700.

<sup>262</sup> See <http://www.forumsec.org/resources/uploads/embeds/file/poa-flyer-web.pdf>

<sup>263</sup> See Private Sector Partnerships Forum convened in the context of the Samoa Conference on SIDS at [http://unohrlls.org/custom-content/uploads/2014/08/Co-Chairs-Summary\\_Private-Sector-Partnerships-Forum.pdf](http://unohrlls.org/custom-content/uploads/2014/08/Co-Chairs-Summary_Private-Sector-Partnerships-Forum.pdf). See also Senia Febrica, "Public-Private Partnership for the Safety of Navigation and Pollution

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128. Many existing initiatives have not necessarily included an integrated approach since the beginning of their work, but rather developed it through adjusting mandates or methods. For example, the Global Programme of Action for the Protection of the Marine Environment from Land-based Activities includes multi-stakeholder partnerships in nutrients wastewater management and marine litter which consider the economic and social issues in addition to the environmental aspects.<sup>264</sup> Similarly, ongoing work on chemicals and waste management has included cross-sectoral cooperation and outreach activities targeting stakeholders outside of chemicals and waste on various inter-linkages between chemicals and wastes and thematic areas.<sup>265</sup>

## **7. Systems for measuring progress in the integration of environmental, economic and social dimensions**

129. Several summits and conferences on sustainable development have recognized the importance of indicators in assisting informed-decision making and spearheaded the development of suitable indicators.<sup>266</sup>

130. In the context of the post-2015 development agenda, the UN Statistical Commission has started the process of developing a draft set of indicative global indicators which would accompany the sustainable development goals (SDGs) and targets, with the view of adopting the indicator framework in March 2016.<sup>267</sup> While taking different approaches, various civil society initiatives have been undertaken to develop global monitoring indicators for SDGs and ensure their implementation.<sup>268</sup> It is generally observed

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Prevention in the Straits of Malacca and Singapore”, UN-NF Alumni case study, <[http://www.un.org/depts/los/nippon/unnff\\_programme\\_home/unnff\\_program\\_sg\\_report.htm](http://www.un.org/depts/los/nippon/unnff_programme_home/unnff_program_sg_report.htm)>.

264 UNEP contribution.

265 BRS Secretariat contribution.

266 See e.g., Agenda 21; the United Nations, Indicators of Sustainable Development: Guidelines and Methodologies, October 2007 Third Edition; A/56/326 and resolution 56/95; and UN System Task Team on the Post-2015 UN Development Agenda, Statistics and indicators for the post-2015 development agenda, at: [http://www.un.org/en/development/desa/policy/untaskteam\\_undf/UNTT\\_MonitoringReport\\_WEB.pdf](http://www.un.org/en/development/desa/policy/untaskteam_undf/UNTT_MonitoringReport_WEB.pdf).

267 Technical report by the Bureau of the United Nations Statistical Commission (UNSC) on the process of the development of an indicator framework for the goals and targets of the post-2015 development agenda - Working draft, at: [https://sustainabledevelopment.un.org/content/documents/6754Technical%20report%20of%20the%20UNSC%20Bureau%20\(final\).pdf](https://sustainabledevelopment.un.org/content/documents/6754Technical%20report%20of%20the%20UNSC%20Bureau%20(final).pdf).

268 See, e.g., Sustainable Development Solutions Network, Indicators and a Monitoring Framework for the Sustainable Development Goals: Launching a data revolution for the SDGs, A report by the Leadership Council of the Sustainable Development Solutions Network, Revised working draft (Version 6), 18 February 2015, at: <http://unsdsn.org/wp-content/uploads/2015/01/150218-SDSN-Indicator-Report-FEB-FINAL.pdf>; Global Ocean Commission, Proposed Elements of Indicators for SDG Goal 14 – Oceans, Seas And Marine Resources: A contribution by the Global Ocean Commission to the Post-2015 Intergovernmental Negotiation - February 2015, at: [http://www.globaloceancommission.org/wp-content/uploads/GOC\\_Post2015\\_Ocean-indicators\\_final.pdf](http://www.globaloceancommission.org/wp-content/uploads/GOC_Post2015_Ocean-indicators_final.pdf); International Council for Science (ICSU), in partnership with the International Social Science Council (ISSC), Review of Targets for the Sustainable

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that indicators should be, inter alia, limited in number, simple, intuitive, and policy-relevant, as well as relevant to all countries and people, lend themselves to fine levels of disaggregation, be complemented by national indicators, track cross-cutting issues and support integrated, systems-based approaches to implementation.

131. Various mechanisms exist in the context of ocean affairs for data gathering and monitoring. Some mechanisms aim at monitoring progress in implementing internationally agreed commitments. However, to date, such efforts remain sector-based. For example, the IMO developed the IMO Member State Audit Scheme, which will become mandatory from 1 January 2016. The Scheme aims to determine the extent to which IMO Member States give full and complete effect to their obligations and responsibilities contained in a number of IMO treaty instruments.<sup>269</sup> The FAO Voluntary Guidelines for Flag State Performance address issues such as performance assessment criteria and a procedure for carrying out an assessment. They are expected to provide a valuable tool for strengthening compliance by flag States with their international duties and obligations regarding the flagging and control of fishing vessels.<sup>270</sup> In addition, several regional fisheries management organizations have undergone performance reviews.

132. Some mechanisms aim at monitoring the state of the marine environment in a cross-sectoral manner. In addition to the first global integrated marine assessment (see para. 105), other mechanisms include the Global Environment Outlook, GPA National Plan of Action reporting, Global Coral Reef Monitoring Network, Global Ocean Observing System, Ocean Biogeographic Information System, Global Ocean Acidification Observation Network, Transboundary Water Assessment Programme, Global Biodiversity Outlook and Biodiversity Indicator Partnership. At the regional level, regional seas conventions and action plans have produced assessments of the state of the marine environment.<sup>271</sup>

## IV. Conclusions

133. The role of oceans and ocean activities in achieving sustainable development is well-established as outlined throughout this report. Not only do oceans contribute directly to the environmental, social and economic dimensions of sustainable development, but they also contribute to other areas recognized as important for sustainable development as outlined in the present report. In particular, they can make a positive contribution to poverty alleviation, food security and

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Development Goals: The Science Perspective, at: <http://www.icsu.org/publications/reports-and-reviews/review-of-targets-for-the-sustainable-development-goals-the-science-perspective-2015/SDG-Report.pdf>.

<sup>269</sup> <http://www.imo.org/OurWork/MSAS/Pages/default.aspx>.

<sup>270</sup> COFI/2014/4.2/Rev.1.

<sup>271</sup> OSPAR, HELCOM contributions. See also EU contribution.

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nutrition, health, gender equality and empowerment of women, energy availability and sustainability, combatting climate change and its impacts, and infrastructure development and innovation. As a result, they can also contribute to sustainable consumption and production patterns, sustained economic growth and employment, reducing inequalities within and among countries and promoting peaceful and inclusive societies. In that regard, I concur with the High-Level Panel of Eminent Persons on the Post-2015 Development Agenda in emphasizing that oceans and seas should not be forgotten in the post-2015 development agenda.<sup>272</sup>

134. Investing in the health, resilience and productivity of our oceans and the sustainability of the activities taking place in, or impacting, the oceans is essential as this can have a multiplier effect through direct and indirect contribution to other priorities for sustainable development. As I have highlighted in my synthesis report on the post-2015 sustainable development agenda, a transformational approach as well as mobilizing the necessary means of implementation are essential<sup>273</sup> to promote a balanced integration that promotes sustained and inclusive economic growth, social development and environmental protection and thereby benefits all. Besides the necessary financing, developing an appropriate enabling framework is critical to support and promote enhanced integration of the three dimensions of sustainable development. This includes developing a supporting policy framework; implementing the legal measures that facilitate integrated approaches; establishing the supporting institutional mechanisms for cross-sectoral cooperation and coordination; promoting technology development and transfer, as well as science to support sound-decision making; developing suitable indicators to measure progress in integration; and investing in capacity-building, including with a view to adapting to vulnerabilities to various global risks.

135. I wish to highlight the opportunity that an effective implementation of UNCLOS, which provides the basis for addressing the closely interrelated problems of ocean space as a whole, offers in achieving the objective of integration of the three dimensions of sustainable development. The Convention sets out a legal order for the seas and oceans which facilitates international communication, and promotes the peaceful uses of the seas and oceans, the equitable and efficient utilization of their resources, the conservation of their living resources, and the study, protection and preservation of the marine environment. In doing so, it aims to, inter alia, promote the economic and social advancement of all peoples of the world. It also takes into account the interests and needs of mankind as a whole and, in particular, the special interests and needs of

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272 High-Level Panel on the Post-2015 Development Agenda (2013): A New Global Partnership: Eradicate Poverty and Transform Economies through Sustainable Development.

273 “The road to dignity by 2030: ending poverty, transforming all lives and protecting the planet - Synthesis report of the Secretary-General on the post-2015 sustainable development agenda”, A/69/700.

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developing countries, whether coastal or land-locked. In that regard, stepping up efforts to develop the capacity to effectively implement UNCLOS, its implementing Agreements and other relevant instruments will be an essential building-block of successful integration.

136. Owing to the paucity of available information, assessing the status of integration of the three dimensions of sustainable development in relation to oceans and seas is challenging. While examples of good practices exist, they are often sparse and thus do not allow for a comprehensive assessment. Nonetheless, as indicated in the report, there are a number of persistent challenges facing our oceans and the people whose livelihood depends thereon which demonstrate that we have to enhance our efforts to achieve an effective and balanced integration of the environmental, economic and social dimensions.

137. There are different approaches, visions, models and tools available to achieve such effective and balanced integration of the three dimensions. It is, however, clear that sustainable development is our shared responsibility. The enabling measures, of which the aforementioned are only examples, need to be further developed by each State on the basis of its national priorities and circumstances. In addition, improved integration of the three dimensions in relation to oceans and seas should be a constant and determining factor in regional and global decision-making as well as in cooperation and coordination efforts.