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In-depth analysis of Ocean Conference Voluntary Commitments to support and monitor their implementation

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Executive Summary

The high-level United Nations Conference to Support the Implementation of Sustainable Development Goal 14: Conserve and sustainably use the oceans, seas and marine resources for sustainable development was convened at United Nations Headquarters from 5 to 9 June 2017. The Conference devoted special attention to the health of our oceans and seas and advance implementation of Sustainable Development Goal (SDG 14) 14. As part of the outcomes of the Conference, stakeholders registered voluntary commitments for implementation of SDG 14. The registration of these commitments continues, and to date 1406 of them have been registered by Governments, the United Nations system, other intergovernmental organizations, international and regional financial institutions, non-governmental organizations and civil society organizations, academic and research institutions, the scientific community, the private sector, philanthropic organizations and other actors - individually or in partnership. This document provides an analysis of the voluntary commitments to date.

A majority of the commitments were registered by governments, followed by NGOs and UN entities. Academia, scientific community and philanthropic organizations registered the fewest commitments. The commitments covered all ocean basins, with most commitments relating to the North Atlantic, South Pacific and Indian Ocean. All SDG 14 targets were also covered, and most commitments related to more than one target. The most frequently addressed target was target 14.2 (sustainable management and protection of marine and coastal ecosystems) followed by target was target 14.1 (preventing and reducing marine pollution by 2025).

A majority of the voluntary commitments relating to **target 14.1** on marine pollution proposed to address issues such as **plastics or litter in the marine environment**. Other measures and actions included **nutrient management** through treatment of wastewater and addressing agricultural inputs such as fertilizers and manure through improved management actions; as well as addressing pollution from **shipping**.

The commitments relating to **target 14.2** on sustainable management of marine and coastal ecosystems contained measures relating to **ecosystem-based management,** including **integrated coastal management** and **marine spatial planning.** As well, **the Large Marine Ecosystem (LME) approach, community-based marine managed areas, climate adaptation measures** such as **ecosystem-based adaptation and blue carbon** were an important components of this targets.

Target 14.3 on addressing ocean acidification received many commitments relating to **scientific research and research collaborations, reductions in CO_2 emissions** through energy efficiency or use of renewables, **building resilience against impacts of ocean acidification** and **adaptation to more acidic ocean conditions,** activities related to **coastal carbon sinks,** including in particular **blue carbon conservation,** and activities related to **mitigation and carbon sequestration**.

The commitments registered against **target 14.4** on sustainable fisheries contained measures and actions to **improve fisheries management, including through implementing the ecosystem approach to fisheries, eliminate or reduce harmful practices and gear, improve compliance, monitoring and enforcement, create science-based fisheries management plans, reduce by-catch**

and discards, and provide for **eco-labeling, traceability and market-based instruments.** In addition, many commitments aim to **combat IUU fishing, improve cooperation and available scientific information and expand marine protection to habitats**.

Target 14.5 on conserving at least 10% of coastal and marine areas received commitments relating to area-based management, particularly different types of **marine protected areas (MPAs) and marine managed areas,** including **community-managed marine areas**, but also other measures such as **marine spatial planning and integrated coastal management.** In the context of this target, many entities pledged to substantially increase MPA coverage and improve management, capacity and funding for MPAs.

Target 14.6 on prohibiting certain forms of fisheries subsidies saw the fewest voluntary commitments. The specific relevant activities in the voluntary commitments relate to **removal and reduction of harmful subsidies,** either directly or through related activities as well as **research and information sharing** relating to subsidies. Many of the commitments registered against this target did not directly aim to reduce subsidies.

The commitments registered against **target 14.7** on increasing economic benefits to Small Island developing States (SIDS) and least developed countries (LDCs) addressed various aspects and sectors of an ocean-based **blue economy**. These sectors included **sustainable fisheries, tourism, aquaculture and mariculture, renewable energy, transport** and **marine biotechnology.** Blue growth and transition to a blue economy were addressed by several commitments.

Target 14.a on increasing scientific knowledge, capacity and technology transfer saw commitments covering a range of activities related to **scientific and other research, developing capacity for research, training and professional development, data access and sharing** and **the transfer of marine technologies.**

The commitments relating to **target 14.b** on providing access for small-scale artisanal fishers to marine resources and markets covered issues such as **community empowerment in management of marine resources, improving access to coastal fishing grounds, improving human and institutional capacity** and **transfer of fishing technologies. Access to markets** generally included actions such as **improving traceablity**, **certification and ecolabelling** as well as access to **market-based instruments**, and **capacity building** for fishing communities relating to these actions.

Target 14.c on implementing international law as reflected in UNCLOS received commitments that included **raising awareness about UNCLOS and related agreements** for comprehensive ocean governance, **strengthening ocean governance**, for example through development of national and regional ocean policies, **capacity development** for States to provide for more effective implementation of UNCLOS and related agreements, and **development of necessary infrastructure and/or enforcement provisions to** comply with UNCLOS and other instruments.

In analyzing the voluntary commitments geographically, it was found that overall, voluntary commitments had good global coverage, spanning most of world's countries and almost all countries with access to the ocean. **While many commitments aimed for local action, mapping the commitments geographically reveals an important network of international cooperation**. The analysis found that the regions contributing the largest number of voluntary commitments were Western Europe, Central America, North America and Oceania. Developed regions with high GDPs

were active in making commitments, but many of these commitments were aimed at activities within their own regions. United Nations entities provided commitments covering the largest number of countries. Global contributions, or contributions not targeting specific countries, were the most commonly received contributions.

The timelines for target deliverables were also analyzed. While the target dates include 2020, 2025 and 2030, the timeframes for voluntary commitments vary from prior to 2017 to 2030 and beyond. Because most voluntary commitments cover multiple targets, the trends relating to deliverables for each target were similar. Spikes in numbers of deliverables could be seen for 2020, 2025 and 2030, reflecting responsiveness in the deliverables for target dates. However, even larger numbers of deliverables were registered for 2017 and 2018, indicating early results and possibly short timeframes for many commitments. This also indicates that **it would be desirable to encourage the registering of further commitments, particularly commitments that have deliverable dates matching target dates**, and thus providing for a final push to ensure that the specific SDG 14 targets are reached. In addition, a number of deliverables pre-date the Ocean Conference, often by many years, indicating ongoing projects.

In attempting to quantify how voluntary commitments can collectively help reach specific SDG 14 targets, a calculation was made to see how much marine protected area (MPA)-related voluntary commitments would increase global MPA coverage. Overall, the voluntary commitments would contribute, when achieved, **an additional 2.85% to the global coverage of marine protected areas.** The increase in protected areas will add to the 15.271 MPAs present today, covering 6.35% of the ocean. This represents an important contribution to the achievement of target 14.5, and, together with the already proposed but unimplemented MPAs (about 1.3% coverage according to the World Database on Protected Areas) would help reach the 10% objective **with approximately 10.3% attained by 2020.**

The amount of monetary resources committed is more difficult to calculate accurately, given the different methods of reporting on financial contributions by different VCs, the variety in the types of contributions, the different currencies used, and mistakes in data entry that are in the process of being rectified. **Using the best currently available data, a total of 541 individual commitments include the provision of financial resources, with the total financing amounting to approximately 25.5 billion US dollars**. In addition, almost all of the commitments include in-kind funding as well as staff and technical expertise. Some commitments have attached monetary value to the in-kind funding, while others have not. If all of the in-kind funding were to be quantified, it would add up to an impressive number due a substantial global effort by numerous people in different organizations, agencies and volunteer groups.

SDG 14 is closely interlinked with other SDGs, including, among others, those relating to climate action, poverty, hunger, life on land, industry and innovation, clean water, gender equality, decent work and economic growth, and responsible consumption and production. Thus, many voluntary commitments not only help implement aspects of SDG 14, but other SDGs as well. An analysis of how the voluntary commitments are perceived to contribute to other SDGs **demonstrates the very close linkages between SDG 14 and SDG 13 on climate action, SDG 12 on responsible consumption and production and SDG 2 on zero hunger**. Other than SDG 14, SDG 13 was the goal that the greatest number Ocean Conference voluntary commitments were seen as contributing towards, further confirming that **oceans and climate are intricately interlinked**. On the other hand, the results indicate that more attention might be needed on understanding how activities related to

improving ocean health might also address the social and economic goals of reducing inequality

In looking at relationships between the voluntary commitments and the **Call for Action**, it was found that three commitments referenced it directly and a fourth one tangentially. Because most voluntary commitments predate the Call for Action, it has mainly been taken up in a few of the later VCs. It is likely that future VCs will increasingly be influenced by the Call for Action. However, the specific actions detailed in the Call for Action are generally covered in the voluntary commitments.

A number of **gaps** emerged during the analysis of voluntary commitments. They include gaps in participation, gaps in relation to targets, geographical gaps, and gaps in relation to how the VCs address the broader landscape of sustainable development. In regards to gaps in participation, it seems that **philanthropic organizations, the scientific community and academia could be further involved** in registering voluntary commitments. In regards to gaps in targets and priority issues within those targets, it seems that more attention would need to be paid to both the politically sensitive topic of **fisheries subsidies and the issues impacting small scale and artisanal fishers**. In addition, the topic of **ocean acidification** is an important priority with many open scientific questions that deserve additional urgency. Other issues, such as **marine biotechnology** and **innovative ocean technologies and engineering solutions**, such as **renewable ocean energy** could also benefit from further attention. While there were no glaring geographical gaps, some adjustments might be necessary. For example**, it is important to ensure that efforts to increase scientific knowledge, capacity building and technology transfer (target 14.a) focus on those regions and countries that need it most**. This is also the case for **capacity building relating to ocean acidification research** (target 14.3). Finally, in regards to gaps relating to the broader sustainable development landscape, the analysis of linkages between the voluntary commitments and other SDGs point to a need to further consider issues such as **equity and strong institutions** in the implementation of voluntary commitments.

One aspect of the Ocean Conference voluntary commitments that may require further analysis is **their relationship to other similar commitments**. These commitments include, but are not limited to, the commitments made at the Our Ocean Conferences, most recently in Malta in October 2017, and commitments found in the Nationally Determined Contributions (NDCs) related to the Paris Agreement and National Biodiversity Strategies and Action Plans. Thus, there is likely room for a study that looks in detail into the collective impact of all ocean relevant commitments, and considers whether they could be tracked coherently and holistically across various platforms.

The study also considered how to **support and monitor implementation of the voluntary commitments**. The in-depth analysis of the voluntary commitments presented here demonstrates that there is great diversity in their focus, scope and ambition. The individuals and institutions involved, the deliverables, levels of funding and geographical distribution are highly variable. This is positive in the sense that in their heterogeneous scope, the voluntary commitments have become inclusive of efforts on all scales and by all actors, which is consistent with an ethos of the ocean as a common concern of all of humanity. On the other hand, the diverse nature of the commitments presents certain challenges for follow-up and monitoring.

Drawing on lessons learned from the Johannesburg partnerships for sustainable development and from other fora, some aspects of successful follow-up include (i) a framework, such a web-based registry, to review commitments and incorporate progress reports to assess individual and collective progress in a public and transparent manner; (ii) defined methods, data and indicators to support

follow-up; (iii) regular reporting by commitment makers in a manner that accounts for diversity between commitments, while including common elements that allow progress to be summarized across targets and SDG 14 as a whole; (iv) provision of support for and dialogue between commitment makers, particularly those working on similar issues; and (v) maintaining momentum through face-to-face meetings, possibly at the margins of oceans-related conferences. The latter will also provide opportunities for registering additional commitments.

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1. Introduction

At the time of writing this document, 1406 VCs have been registered by different entities (governments, UN agencies, IGOs, NGOs, civil societies, academic institutions, scientific community, private sector and other relevant actors). These commitments relate to multiple ocean basins and SDG 14 targets. The graphic below provides a breakdown of the VCs, illustrating that on an ocean basin level, most registered commitments (30%) related to the North Atlantic, which also incorporates the Caribbean and Mediterranean Seas, followed by the South Pacific (21%), Indian Ocean (17%), North Pacific (15%), South Atlantic (10%), and the Arctic and Southern Oceans (3% each). It should be noted here that many individual commitments address multiple targets and ocean basins.

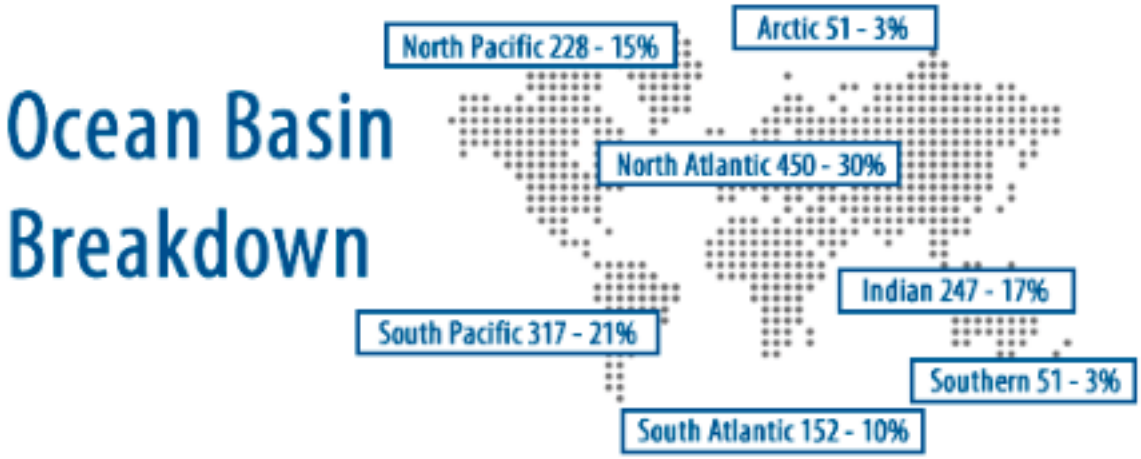

Figure 1: Voluntary commitments by ocean basin

Of the total VCs, a majority (616 or 44%) were submitted by governments, followed by NGOs (288 or 20%), United Nations entities (118 or 8%), civil society (84 or 6%), private sector (83 or 6%), IGOs (61 or 4%), partnerships (50 or 4%), academia (47 or 3%), scientific community (24 or 2%), philanthropic organizations (18 or 1%) and others (17 or 1%).

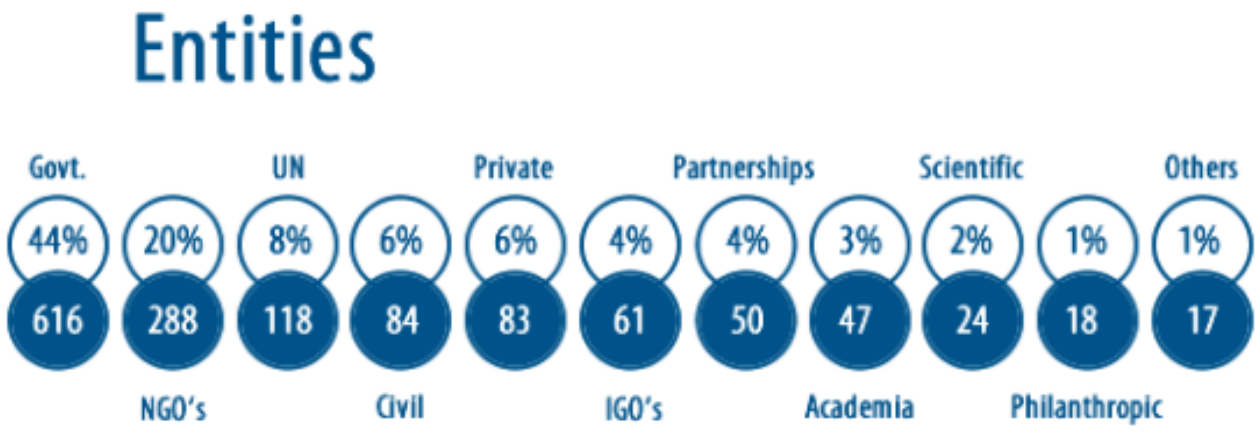

Figure 2: Voluntary commitments by entities.

While all SDG 14 targets were covered in the VCs, some targets received more attention than others. The most frequently addressed target was target 14.2 (sustainable management and protection of marine and coastal ecosystems) at 719 (19% of total) registered commitments. This target is also arguably the broadest target in scope. The next most popular was target 14.1 (preventing and reducing marine pollution by 2025) at 552 commitments (14%), followed by target 14.a (increasing scientific knowledge, research capacity and technology transfer) at 544 commitments (14%), and target 14.4 (effectively regulating harvesting and ending overfishing and IUU fishing by 2020) at 426 commitments (11%). Target 14.5 (conservation of at least 10% of coastal and marine areas by 2020) received 391 (10%) commitments, target 14.7 (increasing economic benefits to SIDS and least developed countries by 2030) received 336 (9%) commitments, and target 14.c (implementing international law as reflected in UNCLOS) received 278 commitments (7%). Target 14.b (providing access to small-scale and artisanal fishers to marine resources and markets) received 243 commitments (6%) and 14.3 (minimizing and addressing impacts of ocean acidification) received 239 (6%) commitments. Target 14.6 (prohibiting certain forms of fisheries subsidies) was last with 96 (3%) commitments. It should be noted here that most commitments referred to multiple targets.

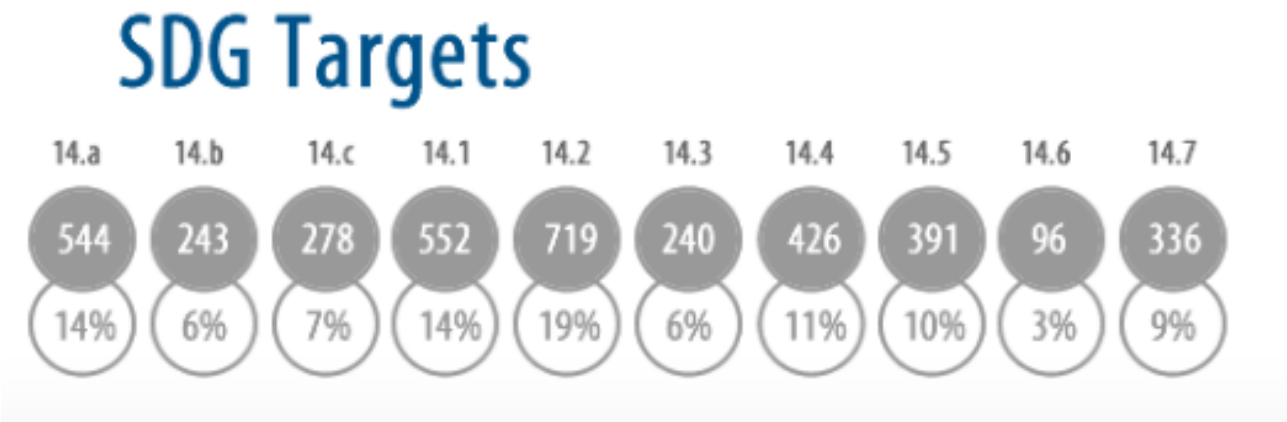

Figure 3: Voluntary commitments by SDG 14 target.

Different entities also considered different SDG 14 targets as priorities. The graphic below (figure 4) shows the most common targets by type of entity. In general, target 14.2 (sustainably manage and protect marine ecosystems) was the most popular, but also the broadest, and all entities except the scientific community had it amongst their top three targets. Target 14.1 on pollution reduction and target 14.a on increasing scientific knowledge and capacity building were also very popular with many entities. The greatest number of industry commitments related to target 14.1, and included many commitments for reducing marine litter and particularly plastics. The scientific community was the only entity with target 14.3 (ocean acidification) among its top three commitments, while civil society was the only entity with target 14.5 (conserve at least 10% of coastal and marine areas) among its top three.

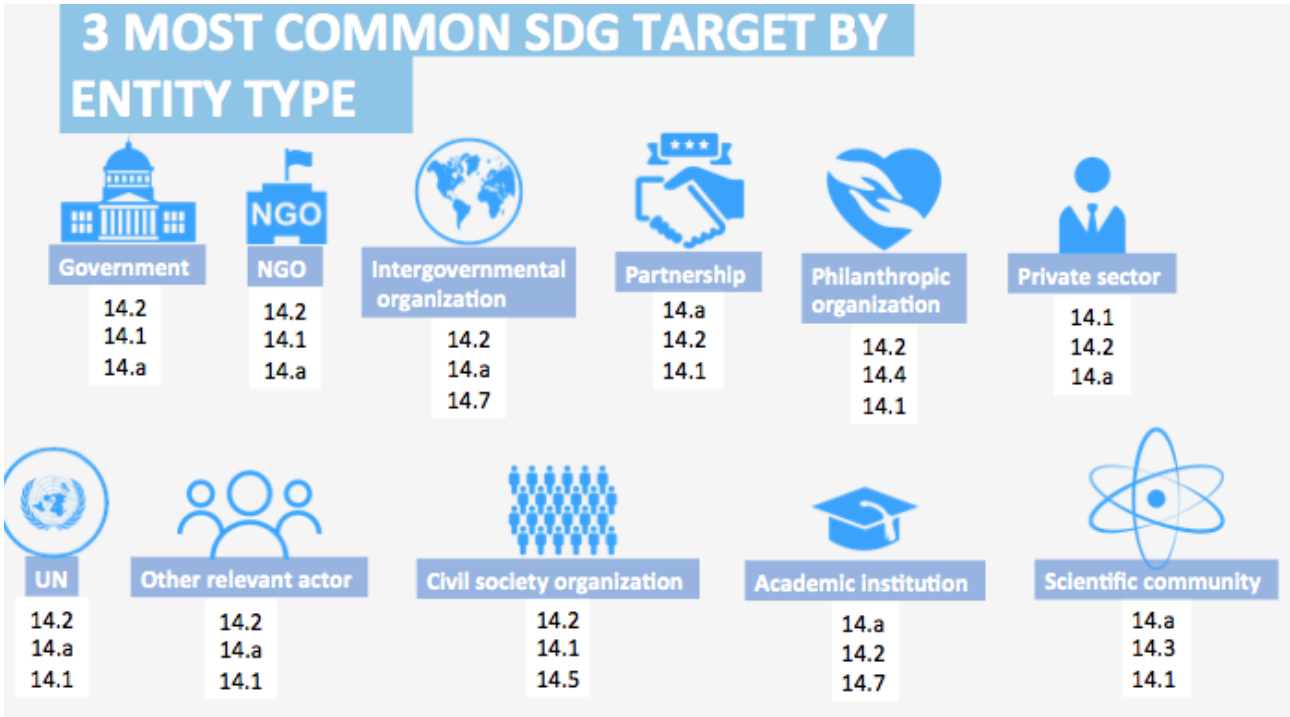

Figure 4: Most common SDG 14 targets by entity type.

2. Measures and actions identified in the Voluntary Commitments

This section will discuss the types of measures and actions found in voluntary commitments related each of the SDG 14 targets, and provide specific examples of each. In reading this section, it should be kept in mind that 97% of the VCs included actions that addressed multiple targets, and in some cases multiple SDGs. This is not surprising given the close interrelationships between the targets, and indicates that projects and even individual activities can often be used to progress multiple SDG 14 targets at the same time.

Addressing marine pollution (SDG 14.1)

The majority (52%) of VCs relating to marine pollution proposed to address **plastics or litter in the marine environment**. This is clearly a reflection of recent international attention on the problem of plastics in the ocean and their impact on the health of ecosystems, species and human communities. Addressing plastics is also a relatively new area of work in the broader context of marine pollution, and one where concrete progress can be made by raising awareness and changing consumer and producer practices. The proposed measures included bans on plastic bags and bottles, coastal clean-ups, recovery and recycling of plastics and other measures. Many measures also include broader prevention and removal of marine litter, including lost fishing gear (ghost nets). One example is a commitment by Sustainable Coastlines Charitable Trust supported by the Pacific Regional Environment Programme (SPREP) to work with community leaders in New Zealand, Papua New Guinea and Hawaii to address marine litter of all kinds through coastal cleanups, awareness raising, prevention and building human capacity ($200,000 funding commitment). Other examples include the Ocean Cleanup and a commitment by the Ocean Protection Council to reduce marine debris in California watershed and ocean waters.

Other measures and actions identified in this target include **nutrient management** through treatment of wastewater and addressing agricultural inputs such as fertilizers and manure through improved management actions. VCs relating to nutrients made up 22% of the total commitments under this target. One example of this type of VC is a commitment by the Government of Cyprus to eliminate all treated and untreated wastewater discharges in the sea by 2020 ($35,000,000 funding commitment).

Pollution from shipping was also addressed in addition to land-based sources of marine pollution, and VCs related to this aspect of pollution made up 15% of the total. An important aspect of this is preventing the spread of alien species from ballast water and biofouling, both of which are problems tackled by the VCs. Examples are an Estonian project to develop national infrastructure to implement the Ballast Water Convention ($300,000), and an IMO-facilitated effort to build partnerships to minimize impacts of biofouling ($10,000,000).

Other commitments related to pollutants included cleaner production, industrial treatment of pollutants, and pest management, and these types of VCs made up 12% of the total.

For a summary of measures and actions relating to this target, please see figure 5 below.

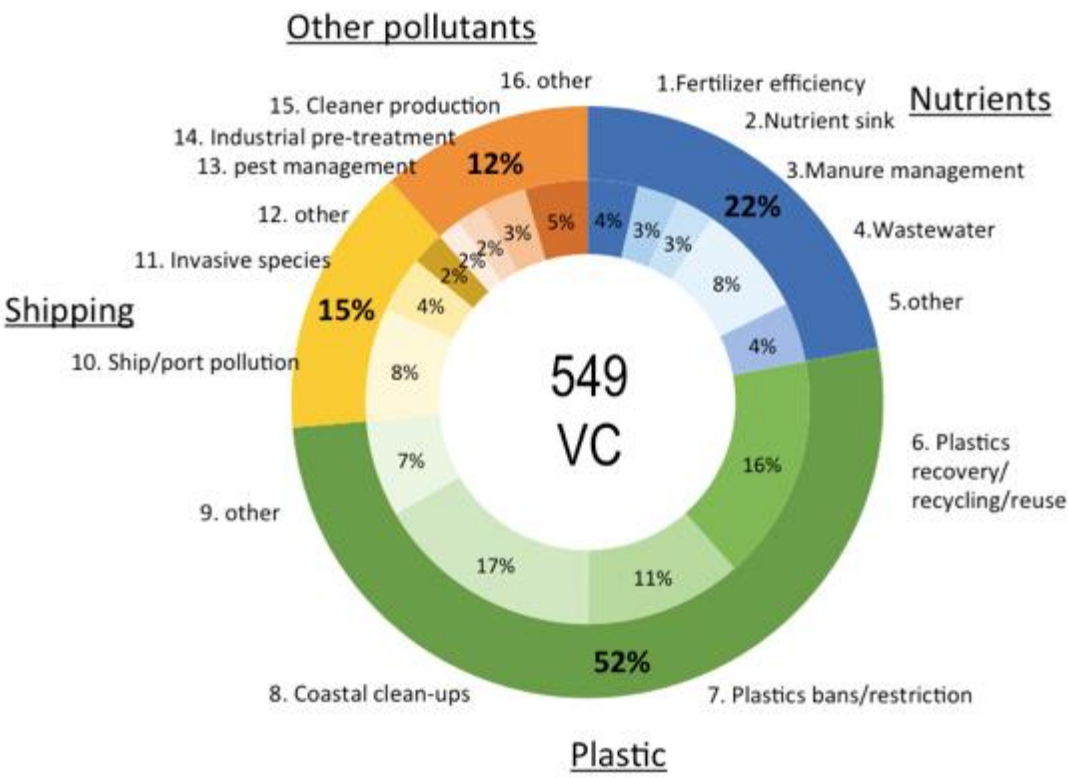

Figure 5: Measures and actions under SDG 14.1

Of the VCs related to this target, a majority (34%) were commitments made to the North Atlantic, 19% to the South Pacific, 17% to the Indian Ocean, 16% to the North Pacific, 10% to the South Atlantic and 4% to the Arctic (see figure 6). With the North Pacific and Indian Ocean receiving large inputs of plastics from land, these areas might benefit from additional action.

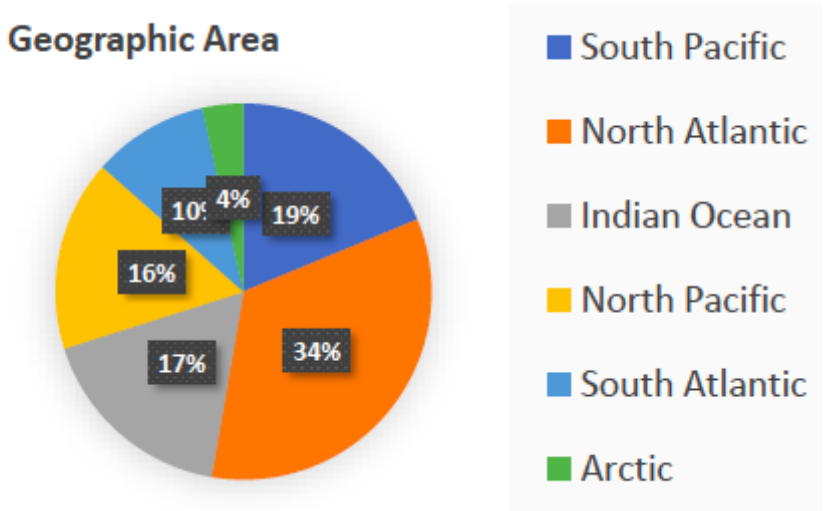

Figure 6: SDG 14.1 voluntary commitments by ocean basin.

In terms of entities making commitments, 40% were made by governments, 22% by NGOs, 9% by UN entities, 8% by the private sector, 6% by civil society, 5% by IGOs, 4% by partnerships, 2% by academic institutions, 2% by philanthropic organizations, 1% by the scientific community and 1% by others. This target had the highest involvement of private sector in the commitments, ranging from local actions to ban single use plastics from resorts to global activities to repurpose used plastics (Parley for the Oceans and Adidas) and market-based solutions for fostering plastic recycling (The Plastic Bank).

A relatively large amount of VCs under this target (24%) were not seen to relate to other targets, but were stand-alone. Most of linkages that existed were to SDG 14.7 on increasing economic benefits to SIDS and LDCs.

Sustainable management and protection of marine and coastal ecosystems (SDG 14.2)

This target received the greatest number of voluntary commitments. The measures relating to this VC generally involved some aspect of **ecosystem-based management, including integrated coastal management** (23% of total) **and marine spatial planning** (16% of total). The **Large Marine Ecosystem (LME) approach** (12% of total) was an important measure in these commitments, as were **community-based marine managed areas** (23% of total) and **climate adaptation measures such as ecosystem-based adaptation** (18% of total) **and blue carbon**.

There is a large degree of overlap between measures addressing this target and SDG 14.5, given that area-based measures can provide for both sustainable management and conservation of specific areas, and have also been proposed as a tool to enhance resilience to climate change. Target 14.4 is closely related to the present target because many of the measures to implement it (particularly the LME approach and marine managed areas) also address fisheries management.

The increasing importance of **marine spatial planning** is reflected by its inclusion in 33 VCs. Some actions relate to supporting marine spatial planning and improving the informational basis for it through research, while others relate to enhancing intersectoral cooperation and commitments to develop national marine spatial plans, for example in the Seychelles, South Africa, Mozambique, Madagascar, Argentina, Montserrat, Mexico, Brazil and Barbuda

The issues of **climate change, ecosystem-based adaptation** and **ecosystem restoration** were also reflected in VCs under this target. While climate change is not formally part of the SDG 14 targets, the emphasis on strengthening ecosystem resilience in the present target provides for adaptation measure to the impacts of climate change. One example of this is a commitment by Grenada to combat the negative effects of climate change through coastal ecosystem-based adaptation, which includes mangrove and coral reef restoration activities.

Large Marine Ecosystems (LMEs) featured in 20 commitments, many of which involved further development of, and support to, UNDP LME projects around the world.

At least five commitments aim to address this target via **community-based marine management**. One example of this includes the Food Security Project of Phang-nga Coastal Communities in

Thailand, which seeks to enhance community management and protection of mangroves, provide for climate mitigation and waste management and empower participation of women and youth in local management activities ($3,680 financing). Other community-related projects include commitment titled Pacific Women Defend the Commons – Pacific Communities Defend the Commons by Diverse Voices and Action (DIVA) for Equality, Fiji.

For a summary of measures and actions relating to this target, please see figure 7 below.

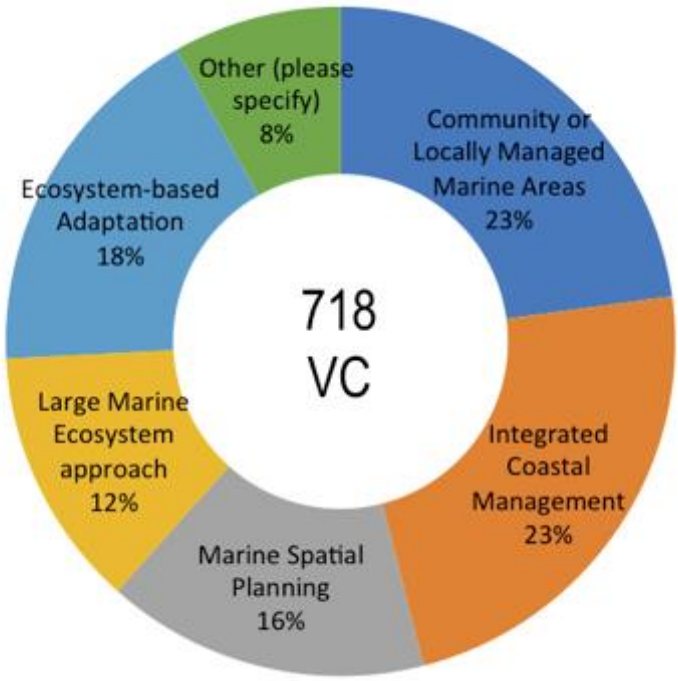

Figure 7: Measures and actions under SDG 14.2

Of the VCs related to this target, 28% address the North Atlantic, 22% the South Pacific, 18% the Indian Ocean, 17% the North Pacific, 12% the South Atlantic and 3% the Arctic (figure 8). The VCs relating to this target are well balanced across ocean regions.

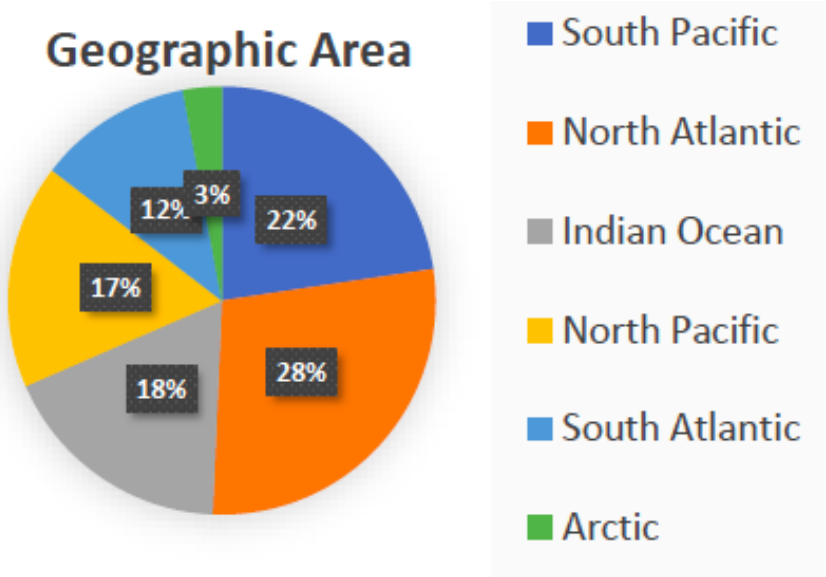

Figure 8: SDG 14.2 voluntary commitments by ocean basin.

In regards to entities, 40% of the commitments under this target were made by governments, 22% by NGOs, 10% by UN entities, 7% by civil society, 5% by private sector, 4% by partnerships, 3% by academic institutions, 2% by philanthropic organizations, 1% by scientific community and 1% by others.

This target was often linked in VCs with target 14.5, given the similarity in area-based management solutions that could be used to make progress towards both targets. Linkages were also found with target 14.4, given that many area-based management approaches are also undertaken in the context of fisheries management, and with 14.3, where area-based management approaches were part of the suite of approaches for building resilience to impacts of climate change.

Addressing ocean acidification (SDG 14.3)

A total of 239 VCs address ocean acidification, either as their main component, or as part of a broader range of management and conservation actions. Specific activities include **scientific research and research collaborations** (32% of total), **reductions in CO_2 emissions through energy efficiency or use of renewables** (20% of total)**, building resilience against impacts of ocean acidification and adaptation to more acidic ocean conditions** (11%), **activities related to coastal carbon sinks, including in particular blue carbon conservation** (17%), **and activities related to mitigation and carbon sequestration**.

Because many scientific uncertainties still exist relating to the rate and impacts of ocean acidification, as well as the potential for species to adapt, **scientific research** is one of the key components of this target. An example of scientific research collaboration is provided by the Global Ocean Acidification Observing Network (GOA-ON), which is a collaborative international network of 367 members representing 66 nations. GOA-ON undertakes monitoring of ocean acidity and undertakes capacity building in regions that currently have limited observation records and scientific capacity ($600,000 of financing). The Swedish government has pledged funds to support research, monitoring and capacity building related to ocean acidification (via IUCN and Ocean Foundation). The support contributes to training researchers in monitoring and measuring, and, if possible, contribute to create a monitoring function for ocean acidification to contribute data to GOA-ON.

While scientific research is important for the achievement of this target, several VCs also attempt to **build resilience towards the impacts of ocean acidification**. Some examples of this are provided by the New Zealand Pacific Partnership on Ocean Acidification, which aims to build resilience through practical adaptation actions, capacity building and awareness raising in the Pacific region ($NZ 2.1 million of financing) as well as the Pacific Partnership on Ocean Acidification coordinated by the Secretariat of the South Pacific Regional Environment Programme (SPREP). Another example is a commitment to address acidification in Washington State, USA, by the Marine Resources Advisory Council and the State of Washington's council on ocean acidification. Proposed actions include reducing carbon emissions, monitoring and forecasting changing ocean chemistry, conducting research on the biological responses of ecologically and economically important species, identifying land-based nutrient contributions, raising awareness of ocean acidification among key

stakeholders and affected communities, and advancing innovative approaches to adapt or remediate systems, such as buffering shellfish hatchery water and vegetation-based systems to modify local water chemistry ($3,325,000 of financing).

Other common actions include **emissions reductions, other mitigation activities, and enhancing the ability of coastal and marine ecosystems to store carbon**. In regards to emissions reductions, the private sector presented a number of strong commitments to reduce emissions from shipping. One example is a commitment by the International Chamber of Shipping to reduce CO_2 emissions from the global shipping industry.

For a summary of measures and actions relating to this target, please see figure 9 below.

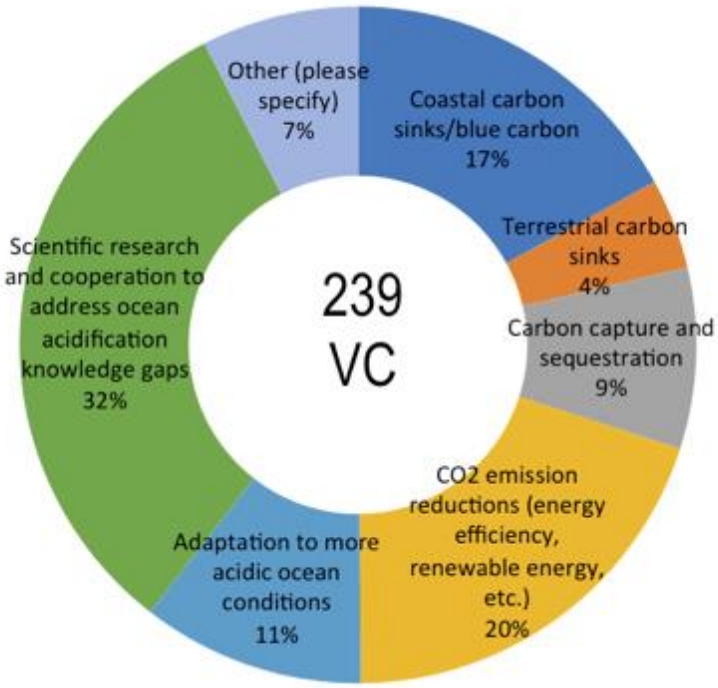

Figure 9: Measures and actions under SDG 14.3

The geographic area of commitments was spread amongst ocean basins, with 26% of the commitments addressing the North Atlantic, 20% the South Pacific, 20% the Indian Ocean, 19% the North Pacific, 10% South Atlantic and 5% the Arctic Ocean.

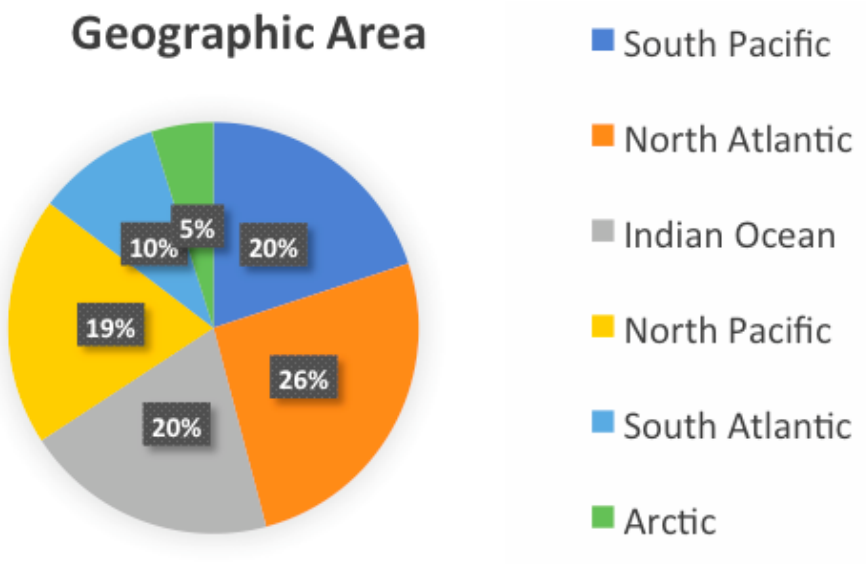

Figure 10: SDG 14.3 voluntary commitments by ocean basin.

In terms of entities making commitments, 35% of VCs belonged to governments 20% to NGOs, 9% to UN entities, 8% to the private sector, 6% to civil society, 5% to partnerships, 5% to academic institutions, 4% to scientific community, 2% to philanthropic organizations and 1% to other. This target saw relatively higher participation from the scientific community than other targets.

Effectively regulating harvesting and ending overfishing, illegal, unreported and unregulated fishing and destructive fishing practices (SDG 14.4)

SDG 14.4 and fisheries management in general received a large number of voluntary commitments. While 426 VCs were specifically registered against this target, fisheries and the management fisheries in a broader sense was a part of 439 commitments. These commitments range from the global to the local. Specific actions relate to **improved fisheries management, including through implementing the ecosystem approach to fisheries** (17%), **elimination or reduction of harmful practices and gear** (16%**), compliance, monitoring and enforcement** (19%), **creating science-based fisheries management plans** (17%)**, reducing by-catch and discards** (12%), **eco-labeling and traceability** (9%), **and market-based instruments** (5%). In addition, many commitments aim to **combat IUU fishing, improve cooperation and available scientific information and expand marine protection to habitats**. In fact, reducing IUU fishing was the most commonly mentioned aim of many of the commitments, and was addressed through tools such as the Port State Measures Agreement, capacity building and increased monitoring and enforcement.

The entering into force of the **Port State Measures Agreement** in 2016 provides an important tool for combatting Illegal, Unreported and Unregulated (IUU) fishing, though its implementation may prove difficult for some developing countries with limited resources. The importance of the measure is reflected in the14 VCs, which relate directly to the implementation of this Agreement.

For example, commitments were made by the FAO for technical assistance to developing countries, and by countries such as Myanmar, Tonga and the Maldives to implement the Agreement. New Zealand pledged to support implementation of the Agreement ($1,840,000) in Pacific Island Countries; Sweden in coastal and small island developing States ($5,700,000); and Norway in developing countries (up to ten million Norwegian kroner). Monaco supports measures to end IUU fishing in the Mediterranean and Black Sea ($90,000). Australia has developed a system for identifying suspicious activity at sea, which will help implement the Agreement ($2,800,000). Taken together, at least $11,626,686 was committed to implementation of the Port State Measures Agreement. In addition, in kind resources and staff time were committed.

A total of 22 VCs either directly address or include components relating to **bycatch prevention and mitigation**. These actions include a range of solutions relating to addressing bycatch in specific fisheries, for example by the South African Offshore Trawl Bycatch Fishery Conservation Project and the Nature Seekers Leatherback Sea Turtle Bycatch Project in Trinidad and Tobago. The VCs also include broader global initiatives by, for example by the International Whaling Commission (Global Whale Entanglement Response Network and other initiatives) and by UNEP/CMS on conservation of marine turtles.

Implementing the ecosystem approach to fisheries was another focus of action, with projects including this approach being put in practice in Kenya, Philippines, Mauritius, Australia and Brazil.

Also of note are efforts to **support Regional Fisheries Management Organizations (RFMOS)** for strengthened governance, science, capacity building and increased compliance through an EU commitment involving 18 RFMOs ($6,710,000 financing commitment).

On the national and local level, **efforts by seafood suppliers to commit to socially-responsible fisheries management** in Indonesia (North Atlantic Inc. and PT Bali Seafood) and commitments aiming **to stop fish bombing** in Malaysia, Tanzania and the Coral Triangle have the potential to provide effective solutions to make fishing more sustainable.

For a summary of measures and actions relating to this target, please see figure 11 below.

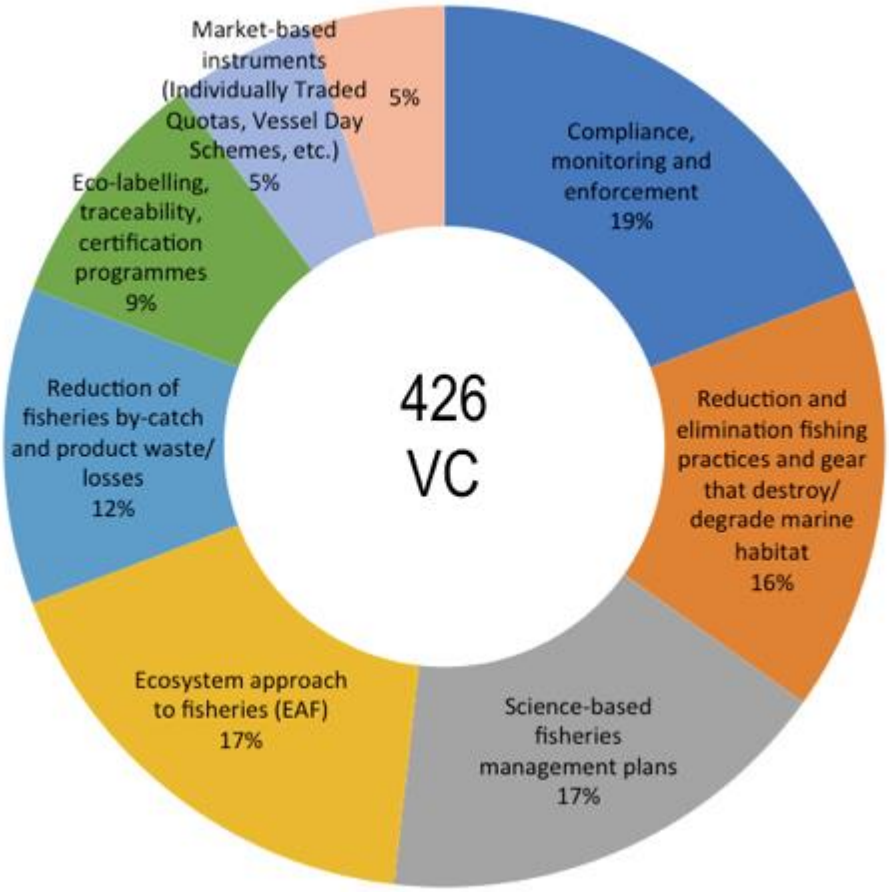

Figure 11: Measures and actions under SDG 14.4.

Of the commitments registered against this target, 26% relate to the North Atlantic, 23% to the South Pacific, 18% to the Indian Ocean, 18% to the North Pacific, 12% to the South Atlantic and 3% to the Arctic.

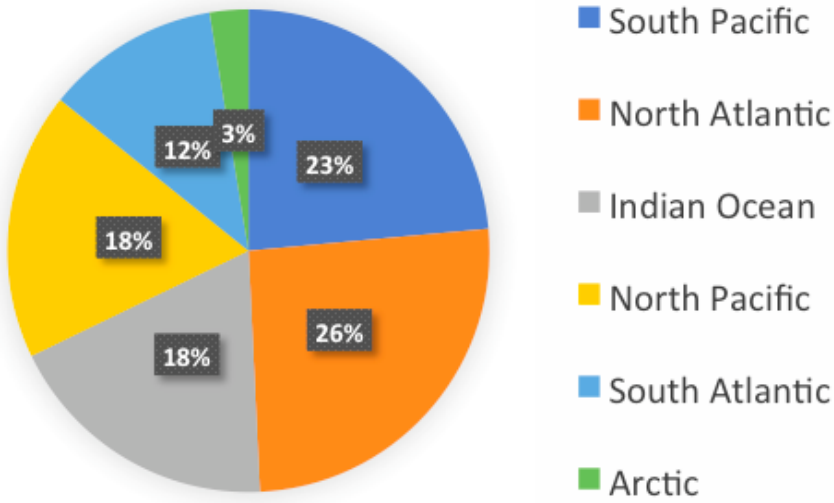

Figure 12: SDG 14.4 voluntary commitments by ocean basin.

In terms of entities, 40% of the commitments under this target were registered by governments, 25% by NGOs, 9% by UN entities, 5% by private sector, 5% by civil society, 5% by IGOs, 4% by partnerships, 3% by philanthropic organizations, 2% by academic institutions and 1% by the scientific community.

Target 14.4 was often associated with 14.2 due to the ecosystem management aspects of fisheries.

Conserving at least 10% of coastal and marine areas (SDG 14.5)

The measures in the 391 VCs registered under this target relate mainly to area-based management, particularly different types of **marine protected areas, marine managed areas,** but also other measures such as **marine spatial planning and integrated coastal management.** 23% of the commitments related to **locally management marine areas or areas managed by communities;** 22% related to **MPA management and/or enforcement**; 14% related to establishment or expansion of **multiple use MPAs**, 15% to **MPAs with partial protection** and 14% to **no-take MPAs**.

A total of 132 commitments include actions related to **marine protected areas** (MPAs). These commitments encompass a wide variety of activities including creation of MPAs and networks, support for capacity, funding, and improvement of management effectiveness, participation, as well as research to improve the knowledge base. Some examples of measures include the Wildlife Conservation Society Marine Protected Area Fund (WCS MPA Fund), which is designed to assist countries meet the 10% target. The WCS MPA Fund aims to invest a minimum of $15 million by 2020 to support legal declaration of new MPAs in 20 countries covering 3.7 million square kilometers of previously unsecured and unprotected ocean. Another example is the Pew Bertarelli Ocean Legacy project, which commits $30 million over five years in technical support and public education to promote the creation of 15 large-scale marine reserves by 2022. As part of this commitment, the project will continue to collaborate and build capacity with local and indigenous communities to protect their marine environment, support sustainable livelihoods, and increase climate resiliency.

On a national level, the government of the Seychelles committed to protecting 30% of its marine and coastal waters and is also developing a marine spatial plan. The Cook Islands is committing to dedicate its entire Exclusive Economic Zone, Marae Moana, an area of 1.9 million square kilometres to protection, conservation and integrated management. Pakistan is planning on designating its first ever MPA by 2020. And in a departure from traditional MPAs, Ecoswell, an NGO in the town of Lobitos in northern Peru is working declaring the ocean off Lobitos a World Surfing Reserve.

Several commitments relate to **community-managed marine areas**. For example, Fiji and Tuvalu commit to establishing and strengthening their network of Locally Managed Marine Areas (LMMAs). The ICCA Consortium (ICCAs are and territories conserved by indigenous peoples and local communities) commits to promoting the appropriate recognition of rights and support to marine and coastal ICCAs along with their associated small-scale fisheries in the regional, national and global arena. The Fiji LMMA Network commits to empowering communities to scale up their current

efforts to an effectively managed and governed network of LMMAs in all Fijian communities covering 100% of Fiji's customary marine areas by 2025 ($700,000 financial commitment).

For a summary of measures and actions relating to this target, please see figure 13 below.

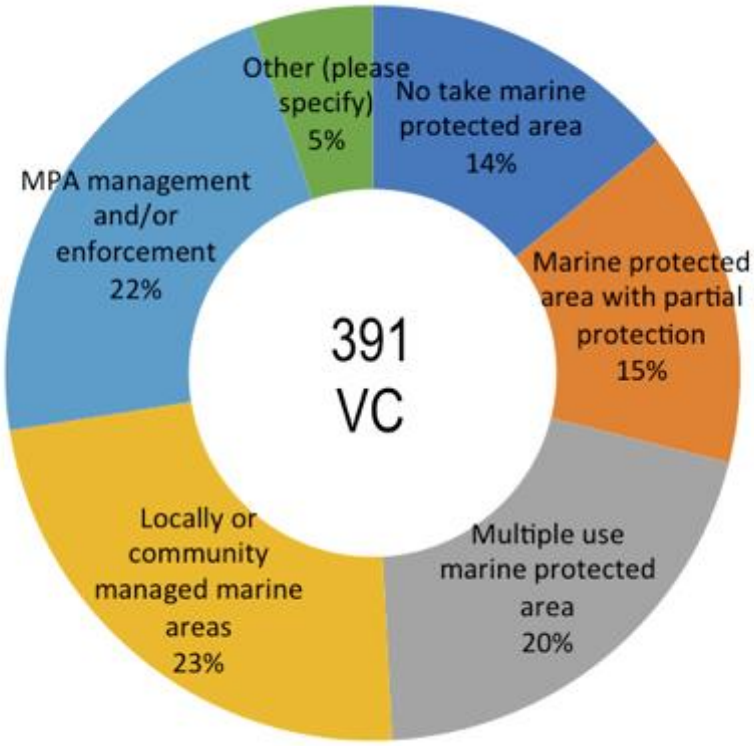

Figure 13: Measures and actions under SDG 14.5

In terms of the geographical context, 25% of the commitments related to the South Pacific, 24% to the North Atlantic, 18% to the North Pacific, 16% to the Indian Ocean, 14% to the South Pacific, and 3% to the Arctic (figure 14).

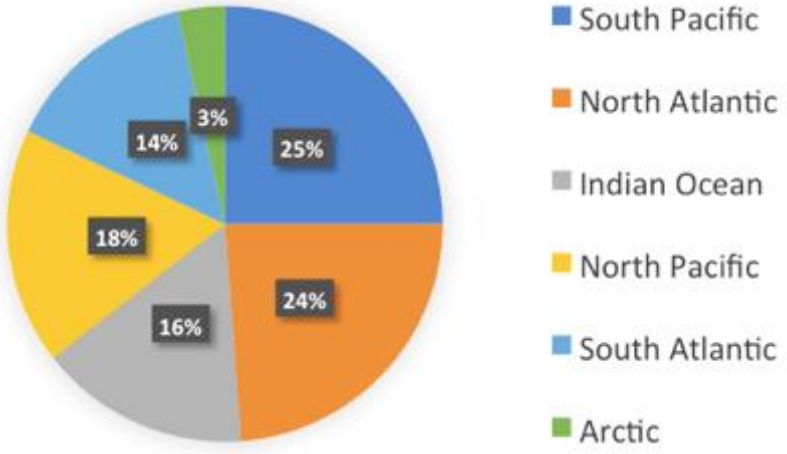

Figure 14: SDG 14.5 voluntary commitments by ocean basin.

The entities making commitments include governments (44%), NGOs (23%), UN entities (9%), civil society (9%), IGOs (3%), partnerships (3%), private sector (3%), academic institutions (2%), philanthropic organizations (2%), scientific community (1%) and other (1%). This target had the highest relative participation by governmental entities.

Target 14.5 was often associated with targets 14.7 on increasing economic benefits for SIDS and LDCs, highlighting the role of marine conservation in fisheries and tourism. In addition , this target was often related to 14.4 on fisheries management and 14.c on implementation of international law.

Prohibiting certain forms of fisheries subsidies (SDG 14.6)

This target saw the fewest VCs (95), possibly because the process leading to the prohibition of harmful capacity enhancing subsidies will need to be undertaken through WTO negotiations, and is likely to be politically sensitive. It also seems that some commitments registered against this target do not directly address subsidies, though are likely to be relevant in the broader context. The specific relevant activities in the VCs relate to **removal and reduction of harmful subsidies,** either directly or through related activities (53% of total), as well as to **information related to harmful subsidies** (47% of total). The objectives of the activities registered under this target are most often associated with **research and information sharing**.

Direct action relating to reduction of subsidies included both policies and commitments, including a commitment by Myanmar to remove or reduce harmful subsidies, the Tonga Fisheries Sector Plan, India's National Policy on Marine Fisheries 2017, Uruguay's efforts to enhance fishery management, control and surveillance, and the integrated Papua New Guinea Oceans Policy. Working internationally, Argentina and New Zealand registered commitments towards eliminating harmful

subsidies, while UNCTAD, FAO and UNEP commit to assisting governments on trade-related aspects of SDG 14

In regards to **research**, VCs related to collection and analysis of fisheries subsidies data, analysis about impacts and effects of subsidies, and country studies in the West African region on the impacts of subsidies in the sustainable management of fisheries resources.

For a summary of measures and actions relating to this target, please see figure 15 below.

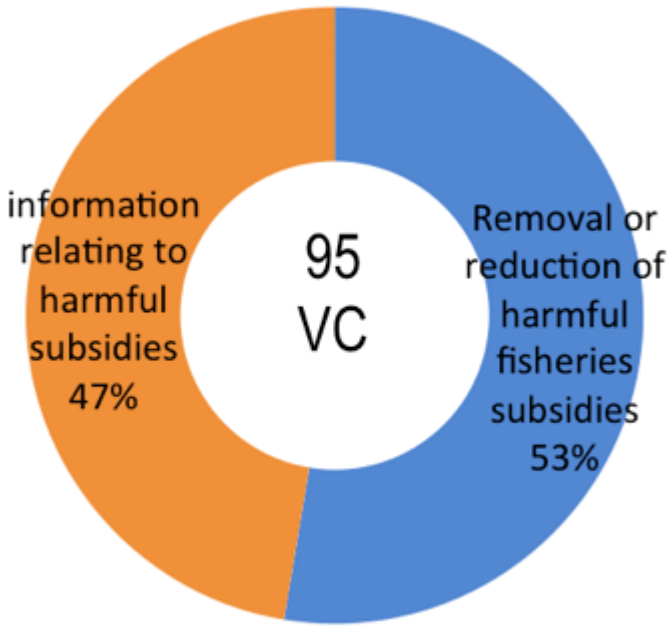

Figure 15: Measures and actions under SDG 14.6

In terms of ocean basins, 22% of the commitments related to the North Atlantic, 22% to the Indian Ocean, 20% to the South Atlantic, 19% to the South Pacific, 14% to the North Pacific and 3% to the Arctic. This commitment had a relatively high component of South Atlantic commitments.

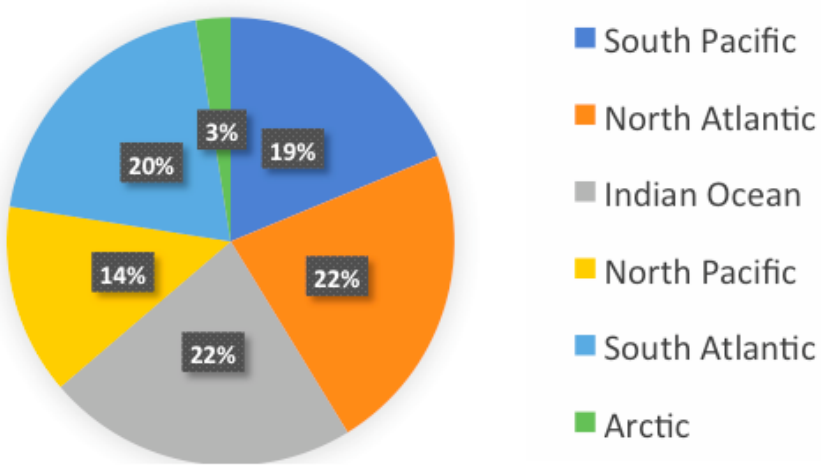

Figure 16: SDG 14.6 voluntary commitments by ocean basin.

Regarding entities, most commitments were made by governments (35%), followed by NGOs (25%), UN entities (7%), IGOs, (7%), partnerships (7%), civil society (5%), academic institutions (4%), scientific community (3%), Philanthropic organizations (2%), private sector (2%) and others (2%).

Increasing the economic benefits to Small Island developing States and least developed countries from the sustainable use of marine resources (SDG 14.7)

The 336 commitments made in reference to this target addressed various aspects and sectors of an ocean-based **blue economy**. These sectors included **sustainable fisheries** (31% of total)**, tourism** (27%)**, aquaculture and mariculture** (16%)**, renewable energy** (8%)**, transport** (7%) **and marine biotechnology** (7%).

A total of 47 VCs refer to development of a **blue economy**. The related concept of **blue growth** is mentioned in 22 commitments. It is clear that transition to a blue economy is an important undertaking for many countries. For example, in defining the blue economy, Kenya has identified the following key sectors: fisheries and aquaculture, maritime transport and logistics services, culture and tourism; and extractives (oil and gas, minerals and energy) as key to delivering quick and sustainable results for food security and employment creation ($140,000,000 financial commitment by Kenya and World Bank). A project mainly funded by the MAVA foundation aims to identify indicators, select tools and recommend policies to promote the blue economy for the Mediterranean ($425,000 financial commitment). To support its blue economy strategy, the Government of Seychelles is preparing the Third South West Indian Ocean Fisheries Governance and Shared Growth Project (SWIOFish3) with financial support from the World Bank, the GEF and from the issuance of a sovereign blue bond. Seychelles has sought to diversify its sources of funding and has turned to innovative financial instruments, such as blue bonds, which aim is to raise capital from private investors interested in supporting a sustainable development agenda.

Of the sectors, **aquaculture development** featured in 13 commitments under this target (although aquaculture in general across all targets received many more commitments). **Sustainable shipping** was part of 79 commitments relating to this target, **tourism** featured in 87 commitments and **fisheries** in 149.

Relatively new sectors were also the subject of some VCs. **Renewable energy** was part of 39 commitments. For example, the SIDS-SIDS Partnership on Sustainable Energy for Blue Island Economies, which covers SIDS in Caribbean, Pacific, Indian Ocean and Africa, aims to accelerate the market introduction and commercialization of ocean energy technologies such as wave, tidal or ocean thermal energy conversion ($1,000,000 financing). **Marine biotechnology** did not receive any dedicated commitments, but was mentioned in two more general commitments. The Netherlands has established a Blue Innovation Institute for SIDS to help meet the twin challenges of climate change and ocean degradation by promoting policy and technology innovations ($1,000,000 financing).

For a summary of measures and actions relating to this target, please see figure 17 below.

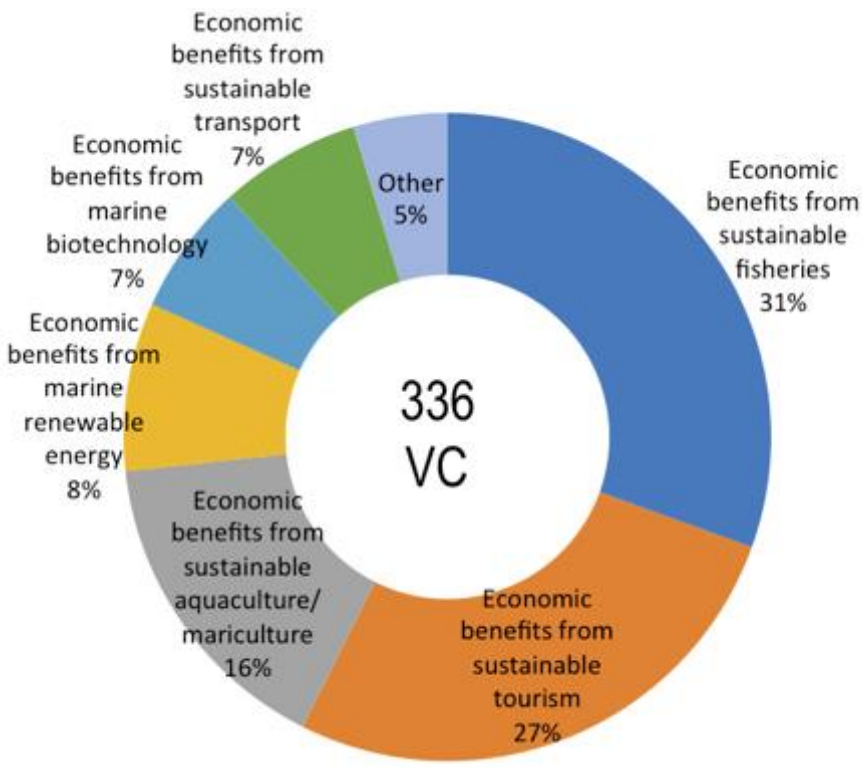

Figure 17: Measures and actions under SDG 14.7

In terms of geographic distribution, most of the commitments related to the South Pacific (30%), Indian Ocean (25%), North Pacific (16%), North Atlantic (15%), South Atlantic (11%) and Arctic (3%).

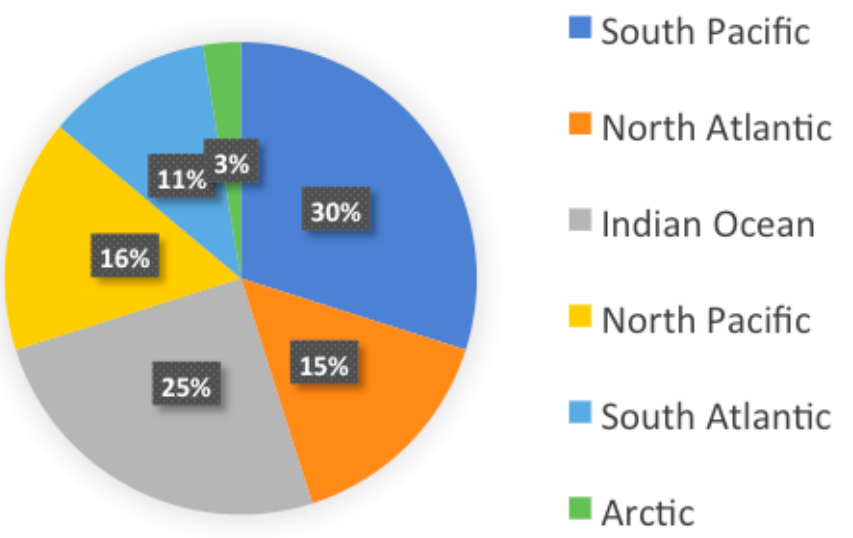

Figure 18: SDG 14.7 voluntary commitments by ocean basin.

The entities making commitments relating to this target include governments (37%), NGOs (21%), UN entities (9%), IGOs (8%), civil society (8%), academic institutions (4%), partnerships (2%), philanthropic organizations (2%), scientific community (1%) and others (1%).

This target is highly interrelated with other SDG 14 targets, in particular 14.4 and 14.2.

Increasing scientific knowledge, capacity and technology transfer (SDG 14.a)

543 VCs were registered under this target. The commitments covered a range of activities related to **scientific and other research** (17%) and **developing capacity for research** (15%), **training and professional development** (16%)**, data access and sharing** (16%), **and the transfer of marine technologies** (8%).

Several VCs aimed to **increase scientific knowledge and capacity**. For example the Intergovernmental Oceanographic Commission of UNESCO (IOC) and its partners are planning to launch for 2021-2030 an International Decade of Ocean Science for Sustainable Development, which will promote science-based solutions and their systematic transformation into informed policies and decisions in support of SDG 14. Scientific institutions also entered VCs, for example the Nippon Foundation Nereus Project, a collaboration of several scientific research centres, strives to explore a broad range of perspectives and scientific opinions on ocean sustainability, and to create an inclusive community of researchers.

A range of ocean-related issues and topics were covered under the **capacity building** component this target, and included marine protected area management, ocean acidification research, marine biodiversity and sustainable use. Some referred to developing individual capacity and others addressed institutional capacity. While **technology transfer** was mentioned in a number of commitments, practical examples of were less numerous, and included **waste management technologies, shipping related technology, power generation and desalination**.

For a summary of measures and actions relating to this target, please see figure 19 below.

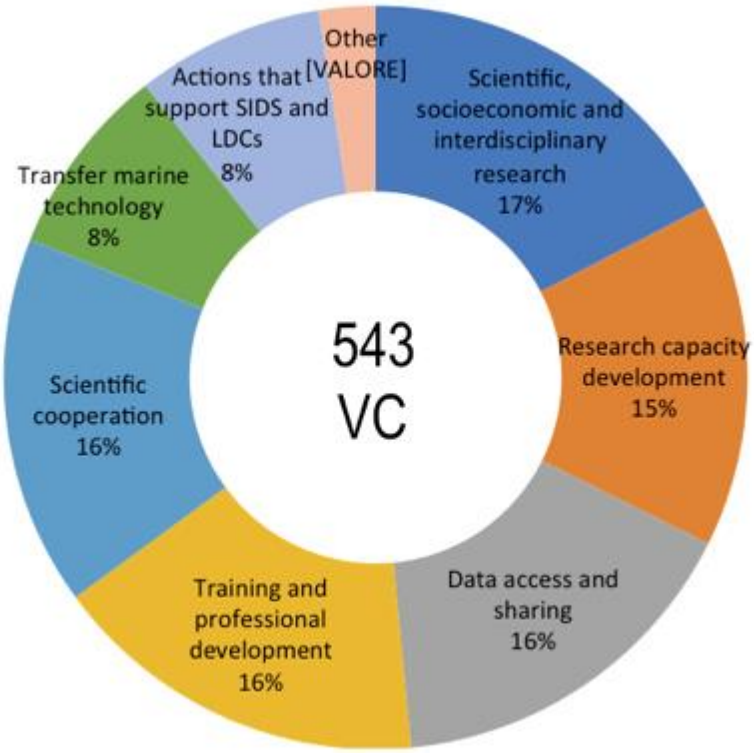

Figure 19: Measures and actions under SDG 14.a

Geographically, the commitments are spread between the North Atlantic (25%), South Pacific (22%), North Pacific (19%), Indian Ocean (17%), South Atlantic (13%) and the Arctic (4%) (see figure 20). Given the capacity building aspects of this target, more focus on other regions might also be required.

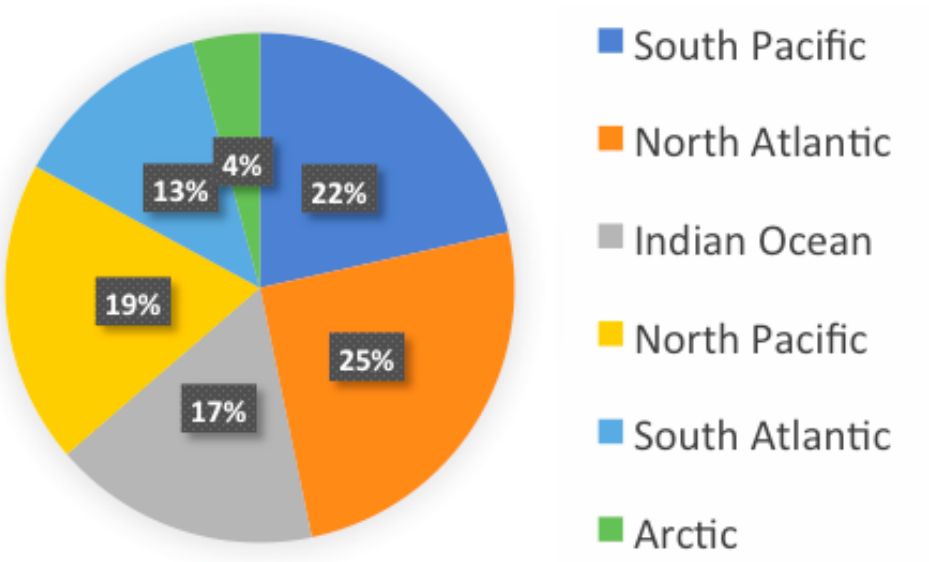

Figure 20: SDG 14.a voluntary commitments by ocean basin.

The entities making commitments include governments (36%), NGOs (22%), UN entities (11%), IGOs (6%), academic institutions (6%), partnerships (5%), private sector (5%), civil society (4%), scientific community (3%), philanthropic organizations (2%) and other (1%). The commitments focusing specifically on research were mainly lead by academic institutions.

Provide access for small-scale artisanal fishers to marine resources and markets (SDG 14.b)

The 243 VCs registered to this target included a variety of activities and measures designed to improve access of artisanal and small-scale fishers to both markets and fishing grounds. One of the most common types of commitment related to **community empowerment in management of marine resources** (25%), including community-based management and co-management. **Improving access to coastal fishing grounds** (15%) was also included in some commitments as was **improving human and institutional capacity** and **transfer of fishing technologies** (11%). **Access to markets** generally included actions such as **improving traceablity**, **certification and ecolabelling** (11%) as well as access to **market-based instruments** (14%), and **capacity building** for fishing communities relating to these actions. One example is provided by the Somalia and Yemen Development Programme on Banking and Artisanal Fisheries, which aims to enhance the knowledge and capacities of participants in artisanal fisheries, as well as banking services in support of developing small-scale activities in this sector ($60,000 financial commitment). Another example is a commitment by the Marine Stewardship Council to improve fisheries management through certification, with help to countries in how to achieve certification of their fisheries.

For a summary of measures and actions relating to this target, please see figure 21 below.

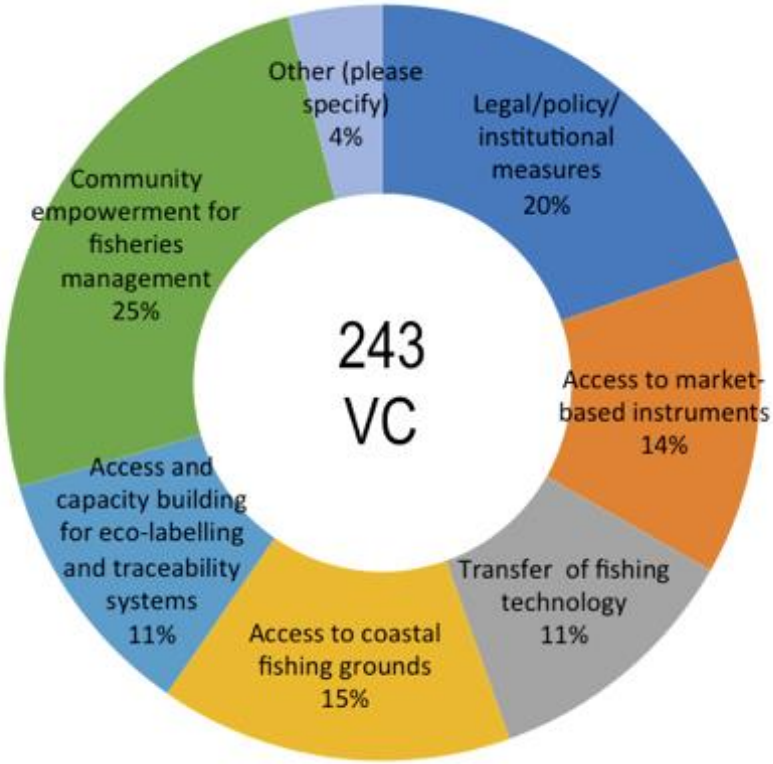

Figure 21: Measures and actions under SDG 14.b

The geographic distribution of the commitments includes the North Atlantic (24%), South Pacific (21%), Indian Ocean (21%), North Pacific (16%), South Atlantic (16%) and the Arctic (2%).

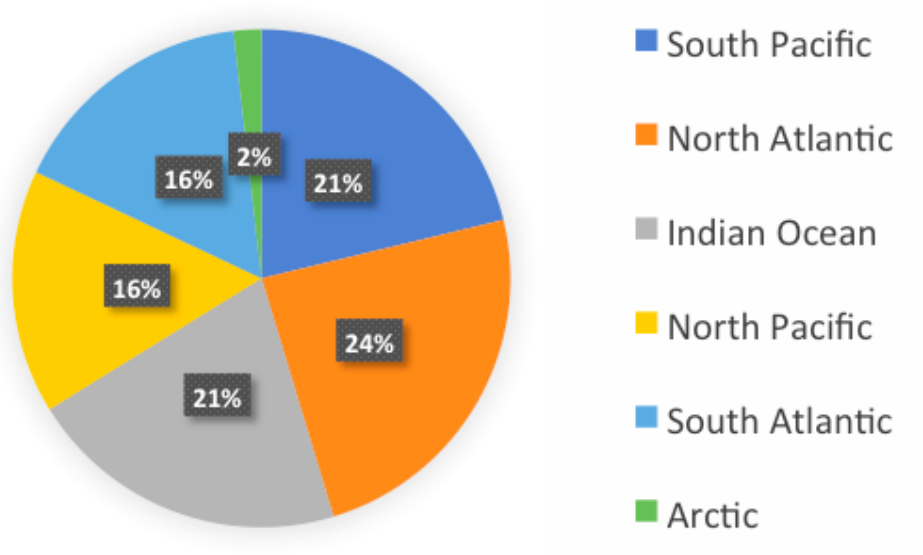

Figure 22: SDG 14.b voluntary commitments by ocean basin.

Most commitments (37%) were made by governments, followed by NGOs (22%), civil society (12%), UN entities (7%), IGOs (5%), academic institutions (4%), private sector (4%), philanthropic organizations (3%), scientific community (2%) and others (1%). This target saw a relatively high number of commitments from civil society.

Implementing international law as reflected in UNCLOS (SDG 14.c)

Activities in the 278 VCs registered to this target included a range of actions related to UNCLOS. They include **raising awareness about UNCLOS and related agreements** for comprehensive ocean governance (28%), **strengthening ocean governance**, for example through development of national and regional ocean policies (27%), **capacity development** for States to provide for more effective implementation of UNCLOS and related agreements (16%), **development of necessary infrastructure and/or enforcement provisions to** comply with UNCLOS and other instruments (15%), and encouraging ratification of UNCLOS, its implementing agreements and other ocean instruments (10%).

Specifically, activities included in the VCs include **implementation of specific provisions of UNCLOS** from ocean governance to sustainable use to seabed mining. On the issue of **seabed mining**, the International Seabed Authority is providing capacity building, disseminating research results and fostering cooperation relating to deep seabed resources. Oasis Earth is working on effective methods to achieve a rigorous Precautionary Approach to Deep Sea Mining. Awareness-raising activities include, for example by the International Cable Protection Committee, on the importance of submarine cables in sustainable socio-economic development.

For a summary of measures and actions relating to this target, please see figure 23 below.

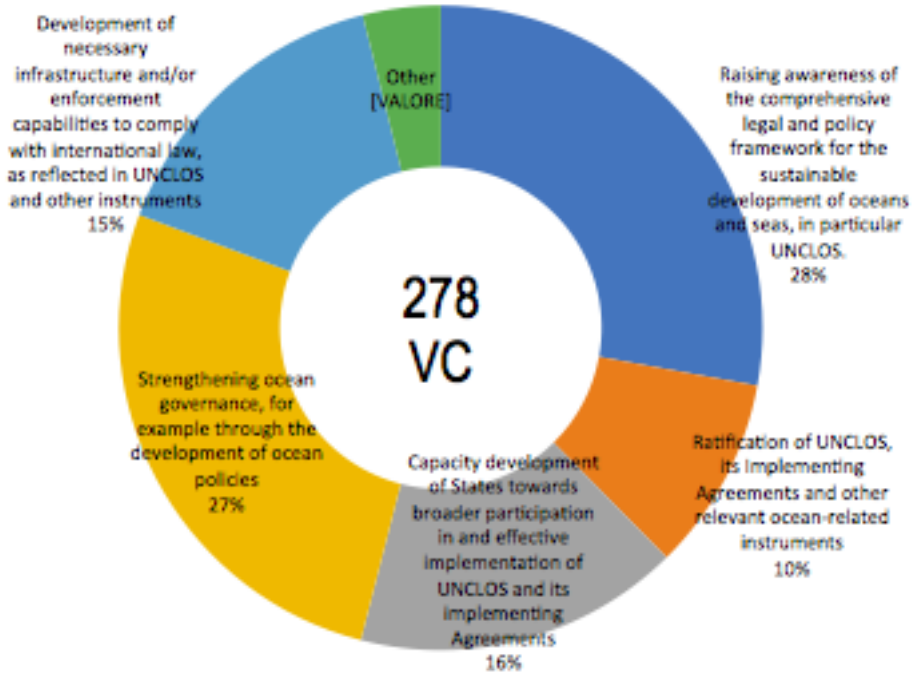

Figure 23: Measures and actions under SDG 14.c

In terms of ocean basins, 26% of the commitments related to the South Pacific, 19% to the North Atlantic, 18% to the North Pacific, 16% to the Indian Ocean, 17% to the South Atlantic and 4% to the Arctic.

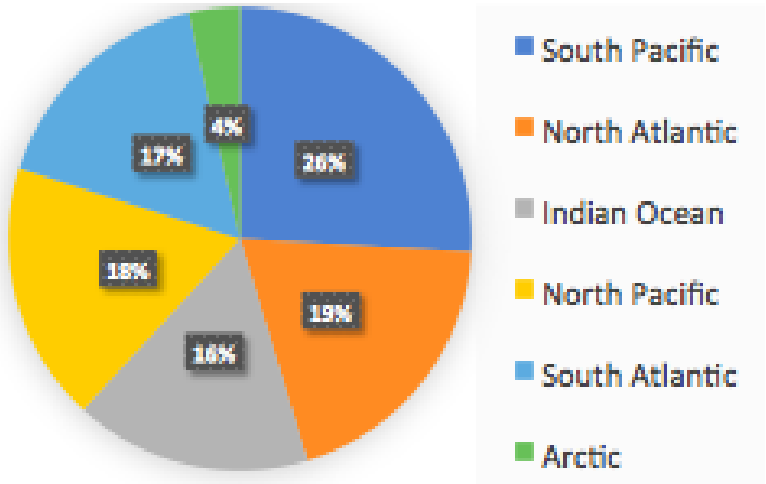

Figure 24: SDG 14.c voluntary commitments by ocean basin.

In regards to entities, commitments were made by governments (40%), NGOs (18%), UN organizations (12%), civil society (9%), IGOs (7%), private sector (3%), partnerships (3%), academic

institutions (2%), scientific community (2%), others (2%) and scientific community (1%).

3. Voluntary Commitments by ocean basin: a geographical analysis

This section provides a detailed analysis of the geographic component of the voluntary commitments. The maps presented here show:

- The geographic distribution of the entities that have made a commitment and the location of the target action (figure 2) also aggregated by macroregions (figure 1).
- The number of actions and proportion of lead entity types for action beneficiaries and providers (figure 1).
- An overview of the interlinkages between receivers and providers of the voluntary commitments at global scale (figure 2).
- Detailed maps by region showing the regional cooperation among receivers and providers of the voluntary commitments.

Overall voluntary commitments had good global coverage, spanning most of world's countries and almost all countries with access to the ocean. While many VCs target local issues, providing local solutions within a given country, a valuable network of international cooperation emerges in the following analysis. Numerous VCs contain actions that have global relevance while others focus on helping to improve environmental, societal and economic conditions in third countries. The United Nations has a lead role in these collaborations and are, together with those governments with greater economic resources, the main suppliers of international commitments. In addition, a high degree of regional cooperation emerges in different geographical regions such as Oceania, Asia, South Asia and Central America.

The regions that contributed the largest number of voluntary commitments were Western Europe, Central America, North America and Oceania. Some regions tended to be more active contributors than recipients. These regions include countries with the highest GDP, and they also had the highest number of contributions remaining inside the region. These "self-contributions" account for 95% of the VCs in North America and 82% of the VCs in Europe. Conversely only about 9% of Eastern Europe VCs and 25% of those targeting African countries originated within the region (see table below). While only about half of the contributions delivered by Western Europe were directed to areas outside of the region of origin, Western Europe still was the biggest contributor in terms of number of different countries reached outside its borders (106). However, the single entity with the highest diversity of countries covered by its commitments was by far the United Nations, spanning 95 countries with 223 actions (see figure 26).

Region	*n° of received actions*	*n° of delivered actions*	*received from within the region*	*delivered outside of the region*	*n° of different countries connected outsied of region*
Western Europe	265	482	83%	52%	106
Eastern Europe	23	2	9%	0%	0
Middle East	23	14	43%	29%	2
South Asia	127	78	51%	17%	9
Asia	98	137	66%	43%	38
Oceania	216	178	70%	14%	10
Central America	280	215	76%	1%	3
South America	121	92	73%	4%	2
North America	60	186	95%	68%	47
Indian ocean	98	53	52%	4%	2
North Africa	33	9	27%	0%	0
West Africa	66	26	36%	8%	2
Africa	71	21	25%	14%	2
Polar regions	20	0	0%	N/A	N/A
SIDS/LDCs	20	0	0%	N/A	N/A
United Nations	0	223	N/A	94%	95
Global	282	110	27%	32%	28

Table 1: Received and delivered actions by region

In most of the regions the main contributors of voluntary commitments are governmental entities. However, significant differences can be found across the geographic regions. Eastern Europe's actions are lead exclusively by governmental entities, while North America's main contributions come from NGOs. United Nations contributions commonly focus on Eastern Europe, Middle East and North Africa, but less commonly on Oceania, North America and West Africa. Commitments from private sector organizations are missing in different geographic areas, including the African continent, Middle East, Eastern Europe and Central America. Those regions are also seldom recipients of private sector commitments from other regions, though this absence is often compensated by commitments from civil society.

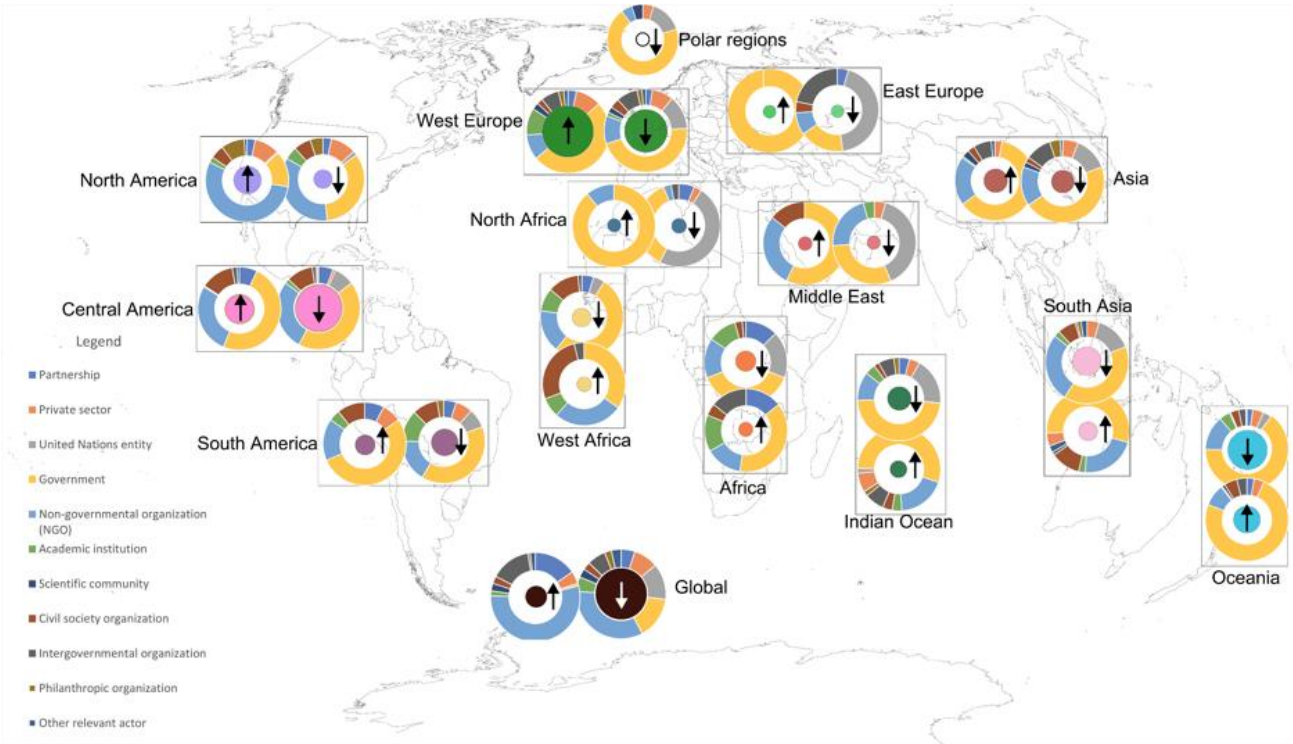

Figure 25: Geographic distribution of voluntary commitments. The sizes of the circles inside the ring charts are proportional to the number of commitments received by recipient geographic region (downward arrow) and to the number of proposed commitments provided (upward arrow). Colors of the circles reflect the geographic region as in figure 26. The external ring chart shows the proportion of lead entity type color-coded according to the legend.

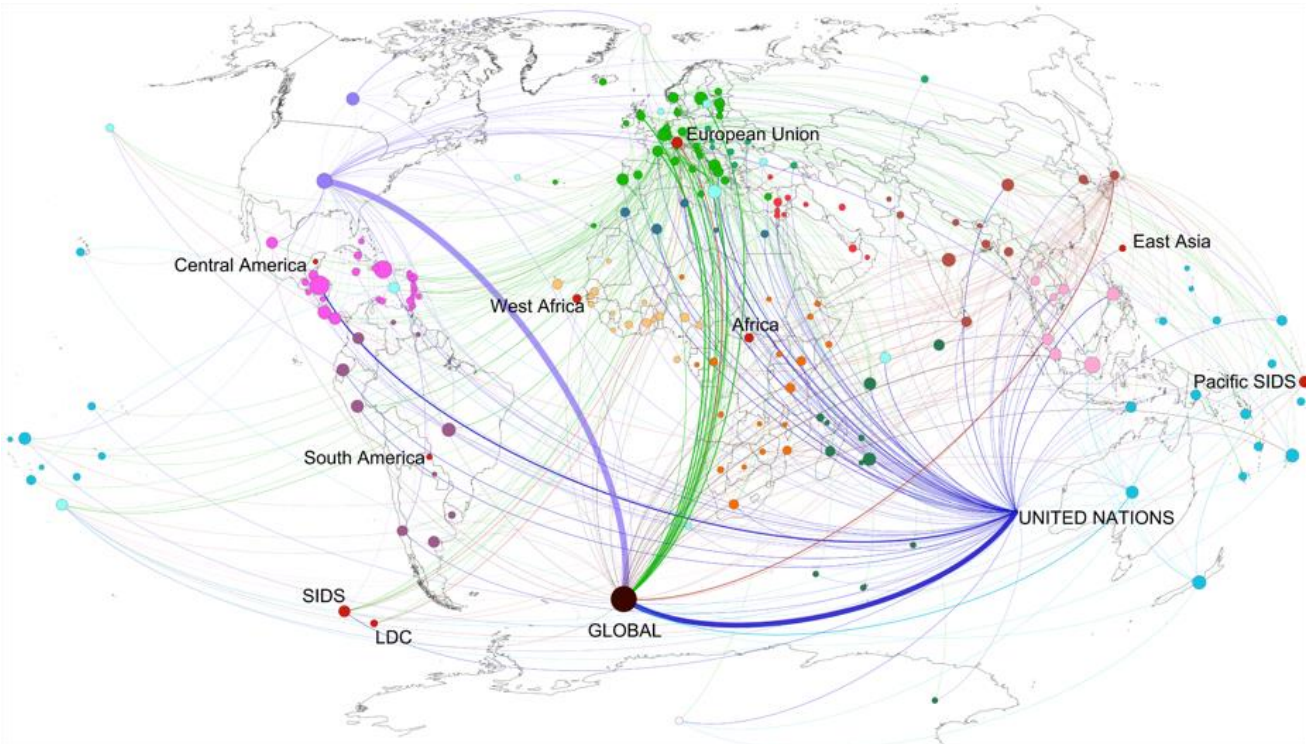

Figure 26: Map showing relationships between entities and geographic regions. Node size is proportional to the number of voluntary commitment of the recipient country, group (SIDS, LDC), basin (light-blue), United Nations entity and global actions. Color is specific for each geographic region as in figure 1. Connections among nodes indicate the direction (clockwise from providers to recipients) of the actions. Thickness of the

lines is proportional to the number of connections between each node pairs. "Global" node represents the commitments not targeting specific countries or regions but focusing instead on global issues.

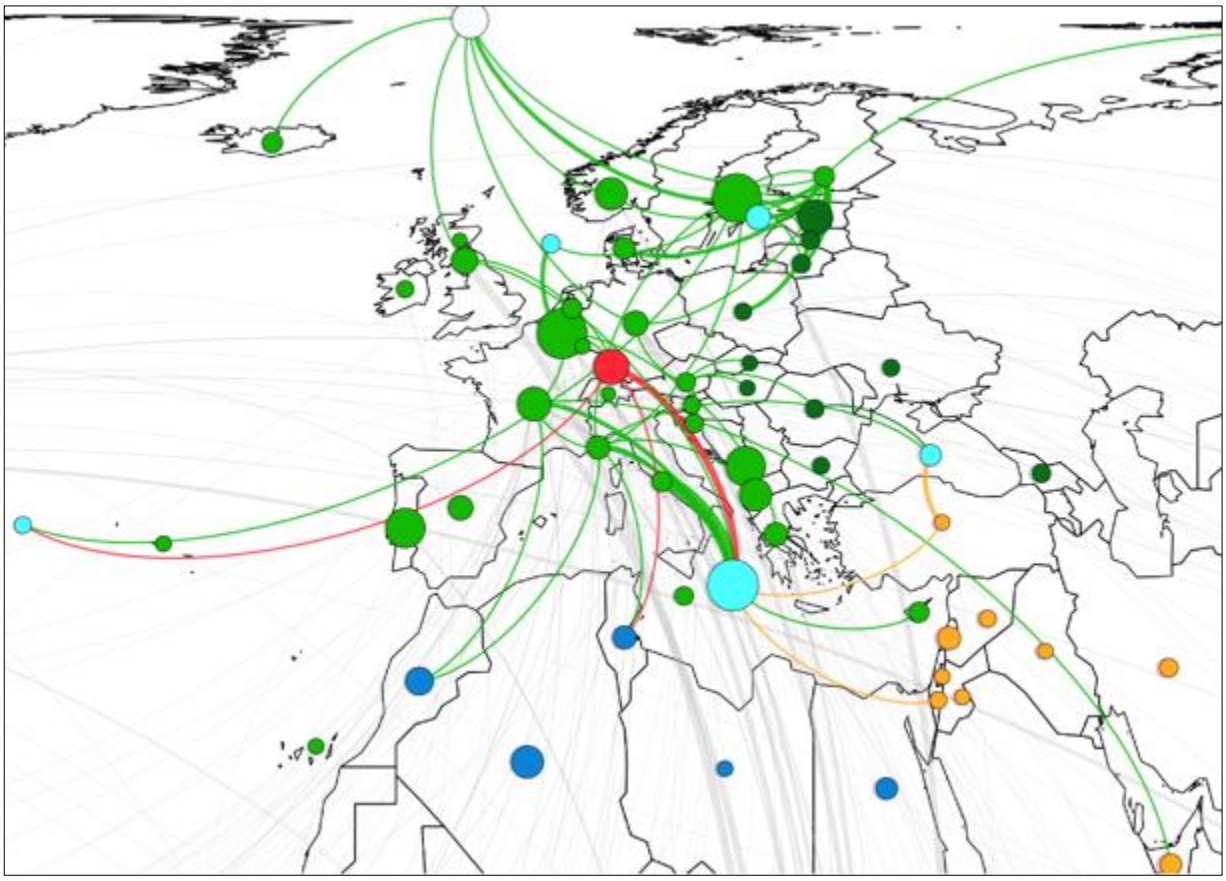

Figure 27: Detailed regional map for Europe, North Africa and Middle East. The lines representing internal (within region) linkages and linkages between regions are the only ones colored with the same color as the node of origin. All the other connection lines are represented in grey.

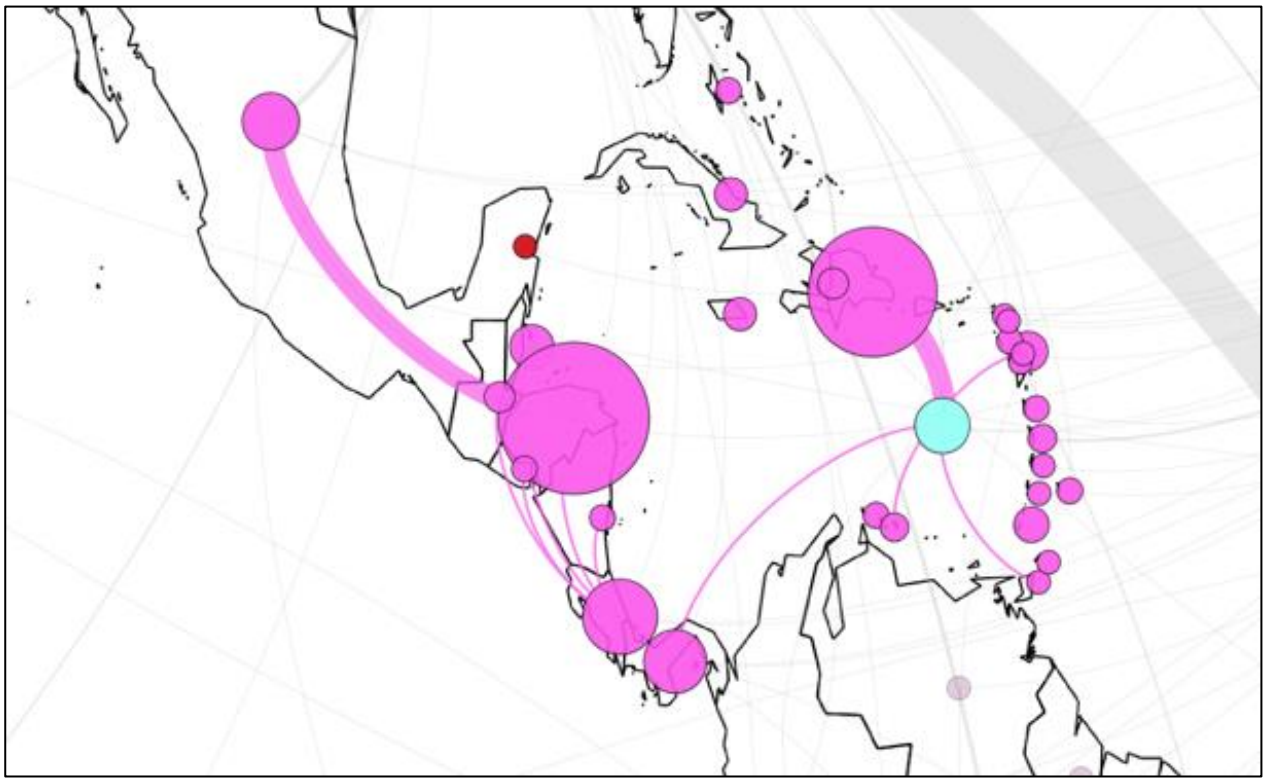

Figure 28: Detailed regional map for Central America. The lines representing internal linkages are the only one colored with the same color as the node of origin. All the other connection lines are represented in grey.

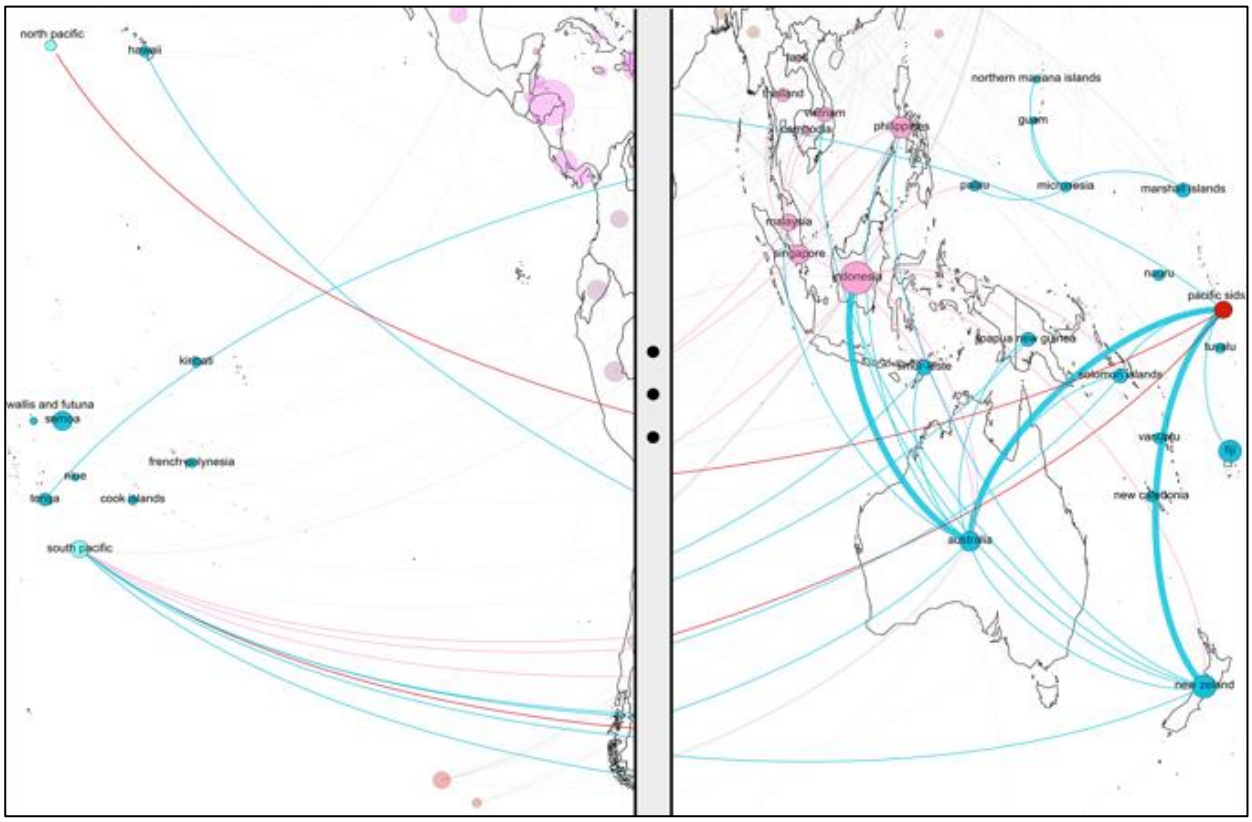

Figure 29: Detailed regional map for Oceania and South Asia. The lines representing internal (within region) linkages and linkages amongst the two regions are the only one colored with the same color as the node of origin. All the other connection lines are represented in grey.

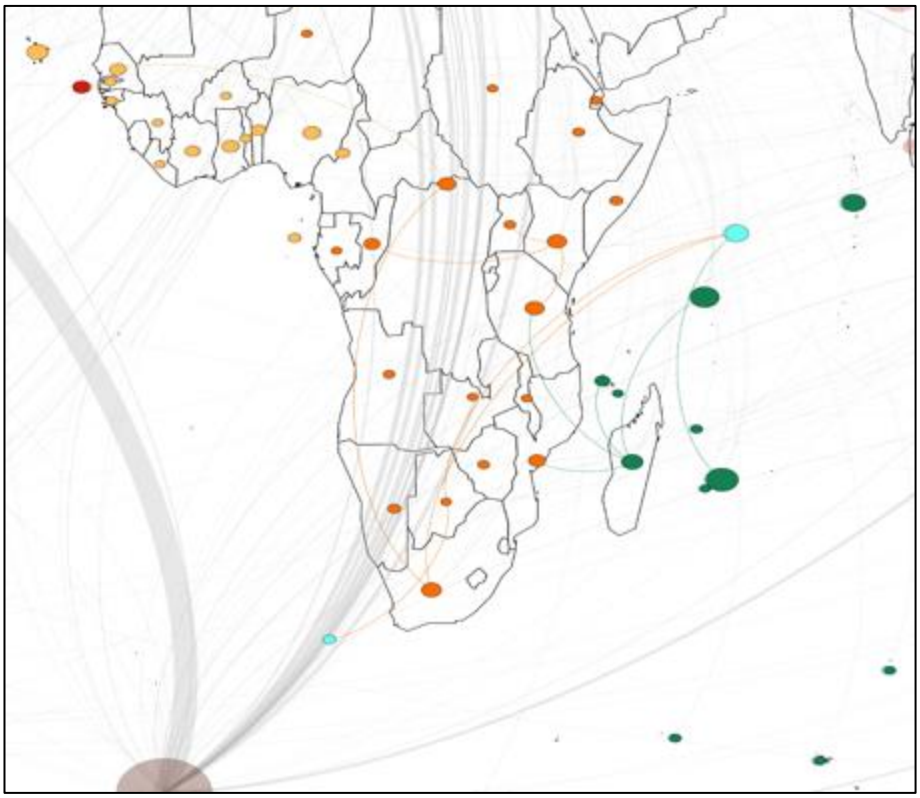

Figure 30: Detailed regional map for Oceania and South Asia. The lines representing internal (within region) linkages and linkages amongst the two regions are the only one colored with the same color as the node of origin. All the other connection lines are represented in grey.

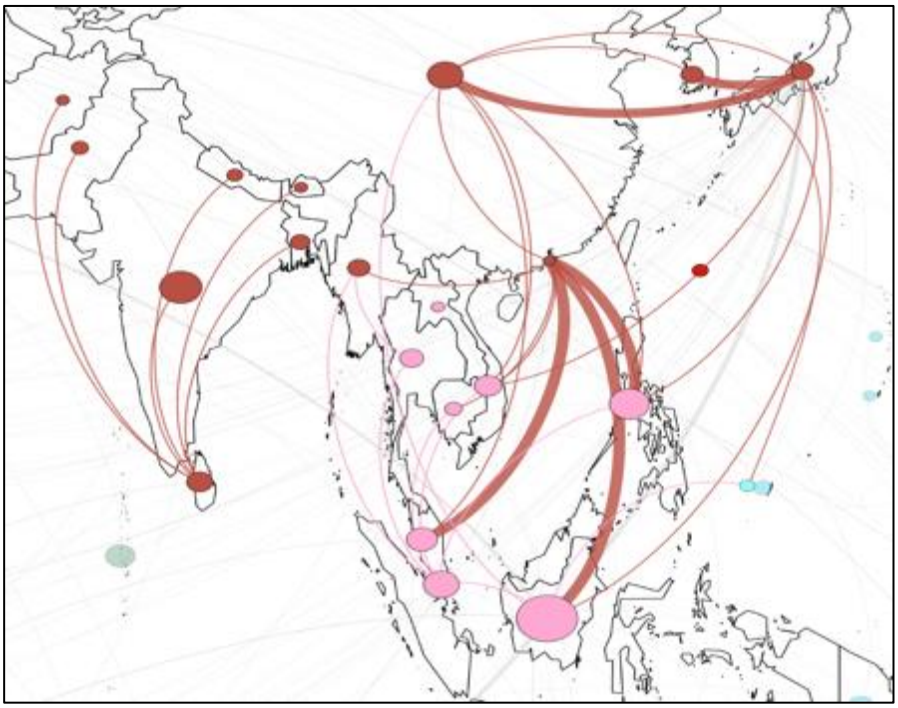

Figure 31: Detailed regional map for Asia and South Asia. The lines representing internal (within region) linkages and linkages amongst the two regions are the only one colored with the same color as the node of origin. All the other connection lines are represented in grey.

4. Timeline of Voluntary Commitments

Achieving SDG 14 and its targets will require concerted action within the timeframe of the targets. This section provides an analysis of the timing of the deliverables in relation to the timelines of the individual targets.

While the target dates include 2020 (targets 14.2, 14.4, 14.5 and 14.6), 2025 (target 14.1) and 2030 (14.7), the timeframes for voluntary commitments vary from prior to 2017 to 2030 and beyond. While some commitments have a distinct time period, others are clearly intended to carry on in the long term.

The graphs below in figures 32, 33 and 34 show the dates for deliverables in commitments related to targets 14.1, 14.2 and 14.4. The fourth graph (figure 35) relates to target 14.5 and will be discussed separately.

Several trends are evident when looking at the first three graphs:

- Most voluntary commitments state that they contribute to multiple SDG 14 targets. Thus, because they have many commitments in common, the trends for all graphs are relatively similar.
- There are spikes in the number of deliverables for 2020, 2025 and 2030, reflecting a responsiveness in the commitments to the dates of the targets.
- However, there are even larger spikes in the numbers of deliverables for the years 2017 and 2018, indicating an early production of specific deliverables, and possibly also the short timeframe of a number of the commitments. This also indicates that it would be desirable to encourage the registering of further commitments, particularly commitments that have deliverables extending to the later target dates, and thus allowing for a final push to ensure that the specific SDG 14 targets are reached.
- There are a number of deliverables that pre-date the Ocean Conference, often by many years. This indicates that a number of the voluntary commitments are ongoing projects. Ideally, such commitments contain additional elements to qualify them as Ocean Conference voluntary commitments, thus demonstrating an important continuity where successful projects are extended and built upon further. It is also likely that some commitments are ongoing projects registered without any additional elements.

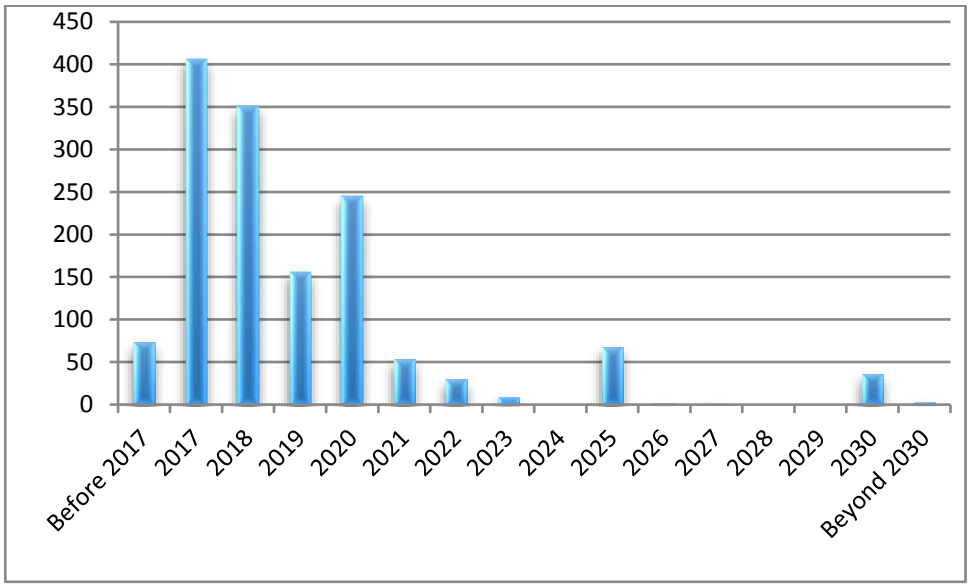

Figure 32: Number of specific deliverables per year for target 14.1 (By 2025, prevent and significantly reduce marine pollution of all kinds, in particular from land-based activities, including marine debris and nutrient pollution)

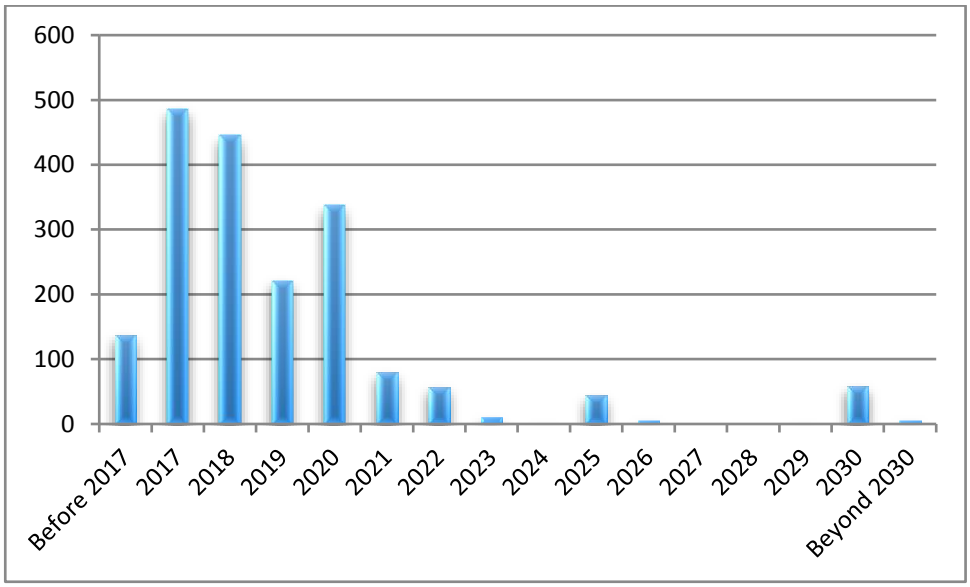

Figure 33: Number of specific deliverables per year for target 14.2 (By 2020, sustainably manage and protect marine and coastal ecosystems to avoid significant adverse impacts, including by strengthening their resilience, and take action for their restoration in order to achieve healthy and productive oceans)

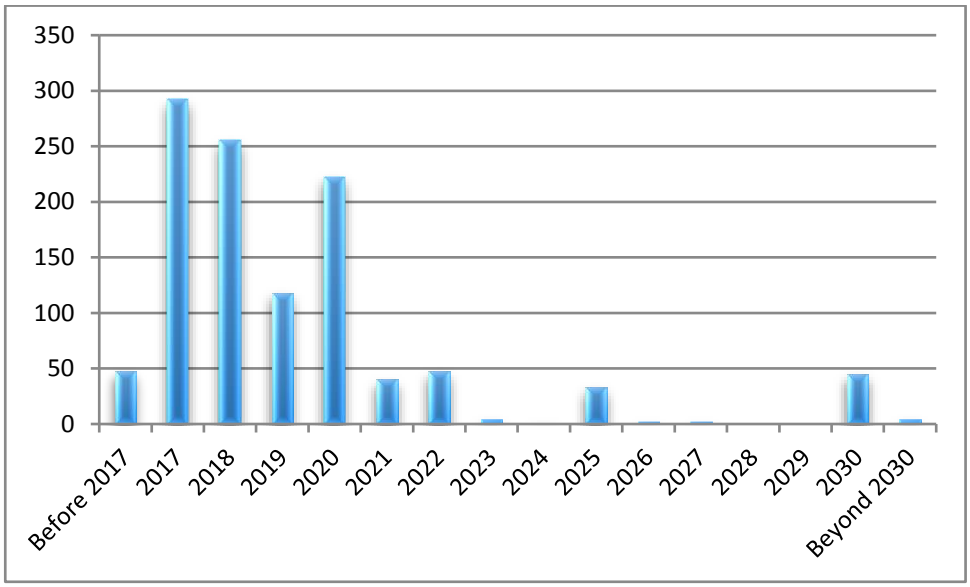

Figure 34: Number of specific deliverables per year for target 14.2 (By 2020, effectively regulate harvesting and end overfishing, illegal, unreported and unregulated fishing and destructive fishing practices and implement science-based management plans, in order to restore fish stocks in the shortest time feasible, at least to levels that can produce maximum sustainable yield as determined by their biological characteristics)

The graph for target 14.5 is slightly different in that it only includes commitments relating to marine protected areas. When other commitments are filtered out, the graph shows a clear spike in deliverables for the year 2020, which is the due date for target 14.5. This indicates a high degree of responsiveness by those registering commitments towards this target. The considerable number of commitments to expand the number of MPAs globally is discussed in more detail in section 5 below.

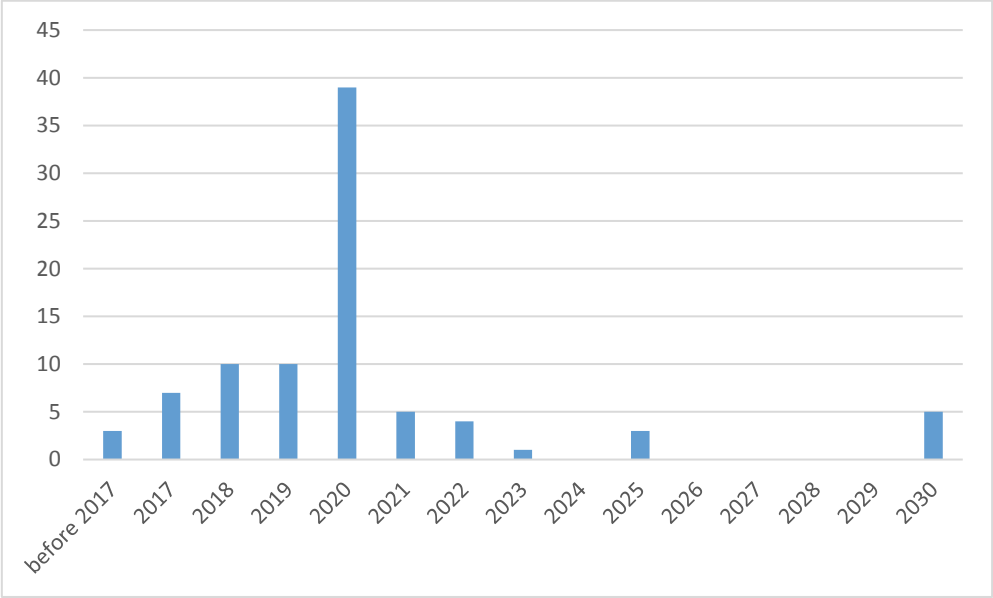

Figure 35: Number of MPA-related deliverables for target 14.5 (By 2020, conserve at least 10 per cent of coastal and marine areas, consistent with national and international law and based on the best available scientific information).

5. How Voluntary Commitments can collectively provide for implementing SDG 14 targets: A case study on marine conservation

Ideally, the voluntary commitments will collectively contribute to the achievement of specific SDG 14 targets. While quantification of the anticipated collective results is difficult to undertake for most SDG 14 targets, it is feasible to do so in the case of in the case of target 14.5. This target aims to, by 2020, conserve at least 10% of marine and coastal areas. This section focuses on an analysis of the 391 commitments addressing target 14.5, with the purpose of understanding the degree to which the VCs of the 1st UN Ocean Conference can contribute to the successful attainment of this target. The analysis is based on the information provided in the VCs integrated with the data of the World Database on Protected Areas (WDPA)[1].

Out of 391 VCs, which included target 14.5 as part of their commitment, only 85 specifically addressed the creation or increase of MPA area. The other commitments aimed to provide for marine conservation through financial contribution, improved enforcement and/or regulation, education, public engagement, capacity building or research. While these are important activities for effective conservation, their quantification in this context is not possible. Only 47 VCs included quantifiable increases to MPAs coverage, and those were used in the following analysis. The remaining 38 committed to MPAs establishment or improvement but did not provide a quantification of the commitment, often because they are at an early planning stage.

Most of the VCs explicitly targeting MPAs were made by governmental entities (58%) with some contribution from partnerships (6%), NGOs (13%), United Nations (12%), civil society (8%) and philanthropic organizations (2%). However, in terms of increasing area coverage, governmental entities are inevitably the lead actors (97% of the total pledged MPA area coverage). An important commitment from the Wildlife Conservation Society (WCS) was left outside of these calculations to avoid double counting, as it is also included as partner in other VCs. WCS committed to financially contributing to the protection of 3.7 M Km^2 worldwide, largely increasing the weight of NGOs in the previous statistics.

Overall the quantifiable actions committed to the protection of about 10.2M km^2 (up to 13,900,000 km^2 considering the Wildlife Conservation Society financial commitment) of coastal and marine area. This would contribute, when achieved, **an additional 2,85% to the global coverage of marine protected areas** (figure 35). The increase in protected areas will add to the 15.271 MPAs already present today, covering 6,35% of world oceans. This represents an important contribution to the achievement of target 14.5, and, together with the already proposed but unimplemented MPAs (about 1.3% coverage according to the World Database on Protected Areas) would help to reach the 10% objective **with approximately 10.3% attained by 2020.**

However, VCs have scheduled different deliverable deadlines and about 95% will be delivered according to 2020 target (figure 36). In addition, most of the actions are focused in the South-West Pacific area, encompassing EEZs of Micronesia, Australia, Melanesia and Polynesia (24 VCs), followed by South-East Pacific (8 VCs) and Mediterranean Sea (8VCs - figure 37). In terms of the

[1] These statistics might differ from those reported officially by countries in cases where these were not specifically included in the VCs. This is because WDPA might use different methodologies to measure marine area of a country territory or to assess protected area coverage baseline

commitments allowing an estimation of MPA coverage, the Pacific Ocean showed the highest number of VCs (9) as well as the highest protected area coverage (figure 38). All together, Oceanian countries pledged to protect approximately 7.2 M km^2, with the largest contribution being French Polynesia's commitment to manage 100% of its EEZ (figure 39). The top VCs in terms of increases in protected area coverage included the "Te Tai Nui Atea" in French Polynesia, the WCS MPA fund including different MPA contributions worldwide, the Marae Moana project of Cook Islands and the proposed Weddell Sea no-take area in Antarctica.

MPAs differ in their level of protection and management objective, but those were rarely detailed in the VCs. Most of the VCs, however, allow multiple uses in all or in portions of the proposed protected area. The total no-take MPA area accounted for about 2M km^2 mainly thanks to the contribution of a large MPA of 1.8M Km^2 proposed for Antarctica (figure 40). The focus of the protected areas is often centered on biodiversity protection or fisheries management and less often also includes ecotourism, reforestation and protection of migratory species.

Figure 35: Global MPAs coverage by areas already protected, Voluntary Commitments at the 1st UN Ocean Conference and other MPAs planned but not yet established. Boxes are proportional to the global ocean surface

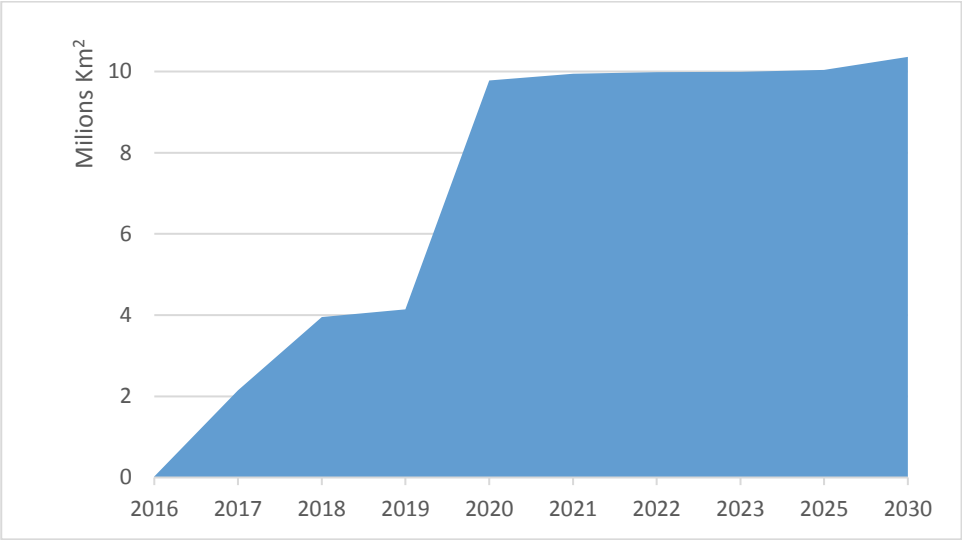

Figure 36: Deliverables timeline of the Voluntary Commitments concerning MPAs (see companion graph in figure 32 in previous section).

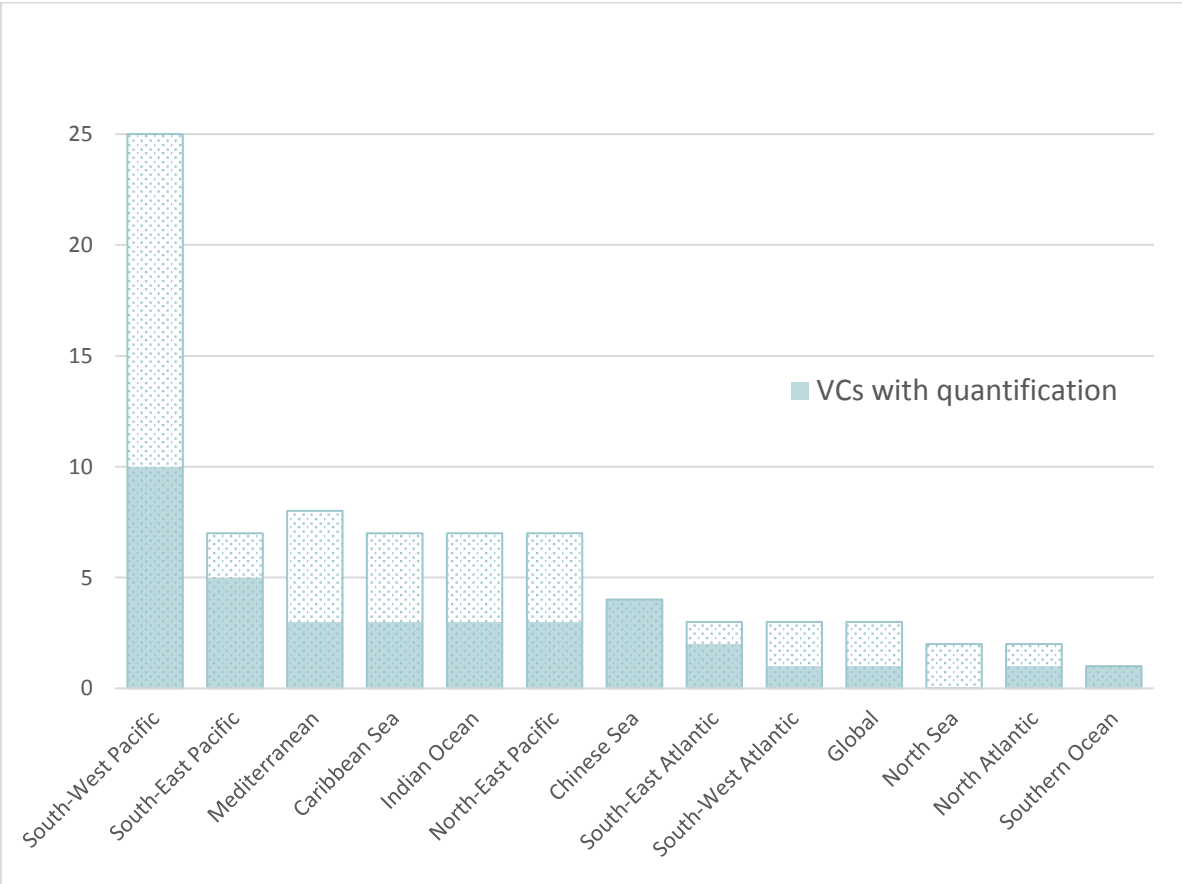

Figure 37 – Total number of VCs pledging for MPAs by ocean basin and number of VCs with MPA area coverage quantification

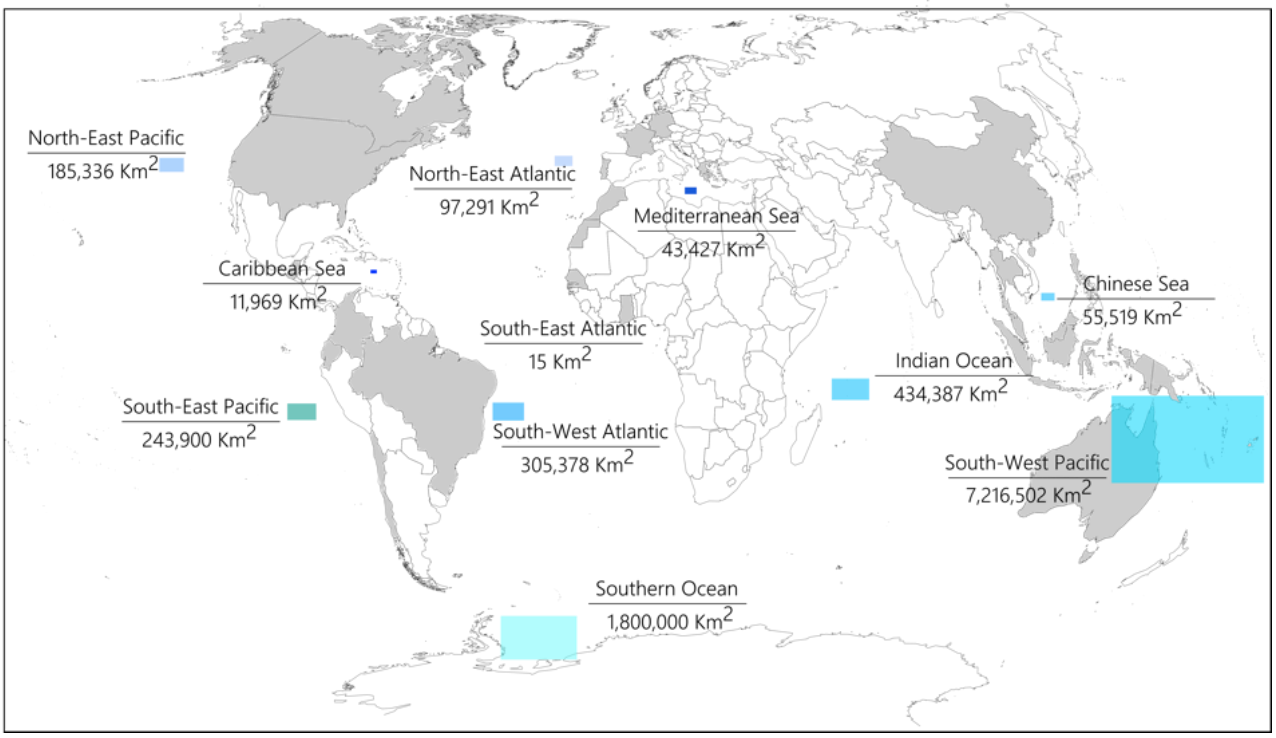

Figure 38: Geographic distribution and area coverage of the VCs. Size of boxes represents the protected area coverage of each region in relation to the global ocean surface. Countries leading the VCs are highlighted in grey.

Figure 39: Top 10 VCs in terms of protected area coverage. For Tonga VCs, minimum and maximum area is represented

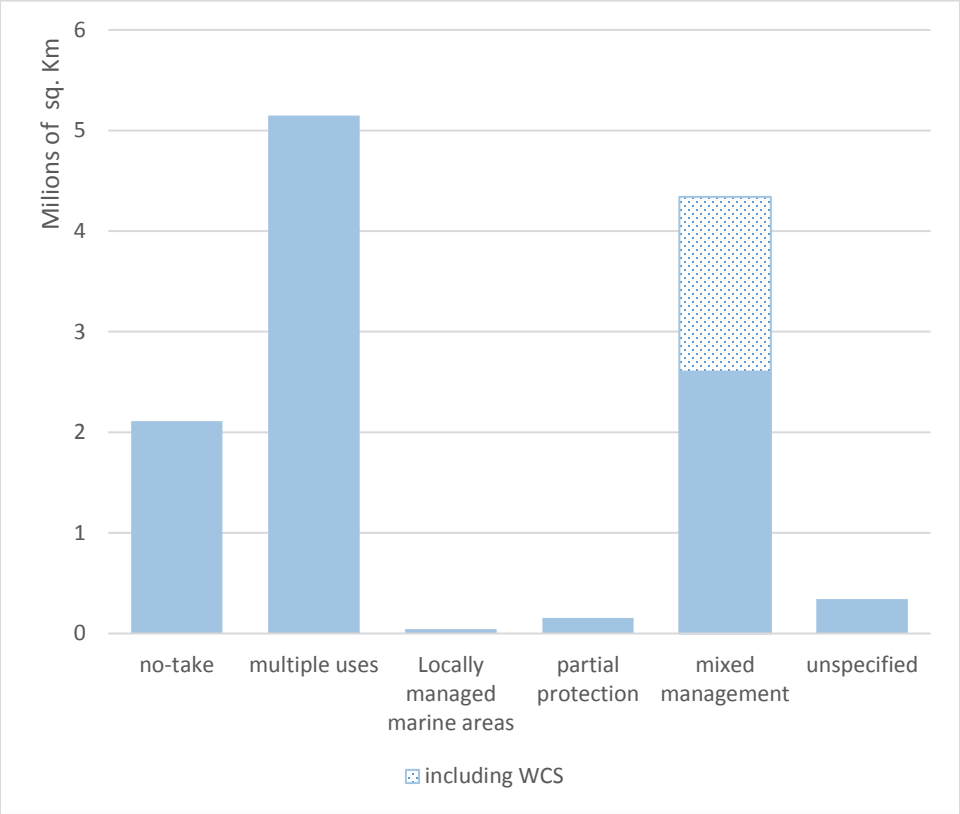

Figure 40: Area coverage by type of protected area.

6. Types of resources committed

This section provides an analysis of the resources committed in the VCs. At the present time, this analysis is still ongoing, due to the verification of the available data.

A total of 541 individual commitments include the provision of monetary resources. The total amount of money committed, using the best currently available data, is US$ 25,459,532,690 (e.g. approximately 25.5 billion). However, further research is needed to elaborate on this figure, and it should be interpreted with some caution. There were some errors encountered in how different entities have entered financial commitments, and the Secretariat is in the process of verifying the figures. Some figures were entered in currencies other than USD, some were entered incorrectly, or in the wrong fields. In addition, the commitments cover a wide variety of different types of financing, and some financial commitments are loans rather than outright funding. Much of the funding has already been committed to a specific purpose and/or recipient, while in other cases the funding may be designated for specific regions or purposes, but is still open for

application. In addition, some commitments are not new to the Oceans Conference, but have clearly been under development for several years.

Almost all of the commitments include in-kind funding as well as staff and technical expertise. Some commitments have attached monetary value to the in-kind funding, while others have not. If all of the in-kind funding were to be quantified, it would add up to an impressive number due a substantial global effort by numerous people in different organizations, agencies and volunteer groups.

The largest financial commitment was a commitment of $8,000,000,000 (in loans) by the European Investment Bank for supporting in particular SIDS to reduce their vulnerability to climate change and building a more resilient ocean economy. The second largest commitment was $3,700,000,000 to Mauritius by the Japan International Cooperation Agency to connect about 50% of the population to the sewerage network by 2030. Mauritius is also co-financing this project. And the third largest commitment was also by the European Investment Bank, and included $3,000,000,000 for supporting projects relating to the strengthening the resilience of marine and coastal ecosystems through reduction of pollution. This included a large portfolio of projects such as the Mediterranean Hot Spots Investment Programme.

A breakdown by ocean basin can be found in the following table. As can be seen in this table, the greatest amount of funding, over 18 billion, is global funding, followed by the Indian Ocean, North Pacific and South Pacific. Approximately 2.5 billion in funding is allocated for multiple ocean basins ranging from two ocean basins to all of them.

Region	**Funding**
Global	USD 18,123,990,771
North Atlantic	USD 197,310,250
Indian Ocean	USD 3,964,804,373
North Pacific	USD 385,055,440.4
South Atlantic	USD 56,712,319
South Pacific	USD 209,490,579
Southern Ocean	USD 10,589,394
Arctic Ocean	USD 522000
Multiple ocean basins	USD 2,511,057,564

Table 2: Funding by ocean basin

7. Links with other SDGs

SDG 14 is closely interlinked with other SDGs, including, among others, those relating to climate action, poverty, hunger, life on land, industry and innovation, clean water, gender equality, decent work and economic growth, and responsible consumption and production. Thus, many voluntary commitments not only help implement aspects of SDG 14, but other SDGs as well.

Entities registering voluntary commitments were asked to self-identify which other SDGs their activities helped implement. More than half of the respondents did so, and their answers provide an indication of how and to what degree actions that are being undertaken to implement SDG 14 also contribute to other SDGs. Collectively, the responses also indicate which other SDGs are most closely linked with oceans, while identifying some relatively neglected areas where further commitments would be welcomed.

The table and graph below summarize the results. SDG 13 on climate action was the goal (other than SDG 14) that most Ocean Conference voluntary commitments were seen to contribute to. This was followed by SDG 12 on responsible consumption and production, SDG 17 on partnerships for the goals and SDG 2 on zero hunger. The least cited SDG was SDG 10 on reduced inequalities, followed by SDG 7 on affordable and clean energy, SDG 4 on quality education and SDG 16 on peace, justice and strong institutions.

SDG	No. of times included in SDG 14 VCs	Rank
1: No poverty	186	5
2: Zero hunger	219	4
3: Good health & well-being	117	9
4: Quality education	95	13/14
5: Gender equality	115	10
6: Clean water & sanitation	174	8
7: Affordable & clean energy	72	15
8: Decent work & economic growth	182	6
9: Industry, innovation & infrastructure	105	12
10: Reduced inequalities	60	16
11: Sustainable cities & communities	114	11
12: Responsible consumption & production	294	2
13: Climate action	305	1
15: Life on land	177	7
16: Peace, justice & strong institutions	95	13/14
17: Partnerships for the goals	256	3

Table 3: Number of times each SDG is included in the Ocean Conference voluntary commitments. The four highest ranking SDGs are highlighted in yellow, while the four lowest ranking SDGs are highlighted in blue.

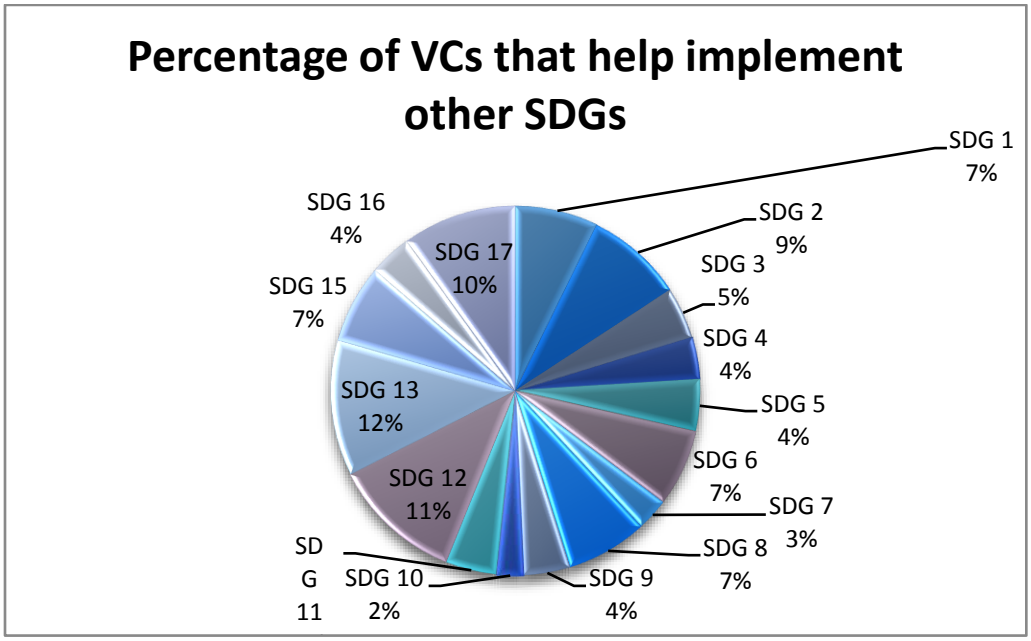

Figure 41: Percentage of SDG 14 voluntary commitments that also help implement other SDGs.

The results demonstrate the very close linkages between SDG 14 and SDG 13 on climate action, SDG 12 on responsible consumption and production and SDG 2 on zero hunger. The results also provide an indication that partnerships are seen as an important way for implementing commitments. On the other hand, the results indicate that more attention might be needed on understanding how activities related to improving ocean health might also address the social and economic goals of reducing inequality. Affordable and clean energy is a priority for many countries, particularly for SIDS, where fuel is generally imported and energy costs are high, and this goal might benefit from further action and investment under SDG 14. Similarly, both strong institutions and quality education are important for the long-term sustainability of oceans, and should be prioritized further. However, because not all voluntary commitments registered linkages to other SDGs, it is likely that in some cases (see for example discussion on SDG 4 on quality education below) the linkages are more extensive than might be apparent from this analysis.

The following provides a brief discussion of the voluntary commitments relating to each SDG.

SDG 1: No poverty - A total of 186 voluntary commitments address poverty alleviation. Many of them relate to the ability of the ocean to support livelihoods, generate employment and income, and provide for economic growth, including through the development of a blue economy. Some examples include a commitment to enhance the livelihoods and quality of life of small-scale fishermen living below the poverty line (Government of India); a commitment to end extreme poverty and to foster income growth in the context of SDG 14 (The World Bank Group); a commitment to enhance human and institutional capacities of artisanal fishers in Somalia and Yemen (Indian Ocean Rim Association); and a commitment to address local capacity needs, local health issues, overfishing, rights-based issues, coastal threats and poverty reduction through locally managed marine areas (Fiji Locally Managed Marine Area Network).

SDG 2: Zero hunger - A total of 219 commitments state that they also implement SDG 2 through reduction of hunger and increasing food security. Most of these commitments relate to sustainable fisheries, including improving governance and management, promoting community-based fisheries management, improving market access for small-scale fisheries, and combating IUU fishing. Some commitments also approach food security from the perspective of blue growth and blue economy, providing for habitat protection and supporting aquaculture. It should be noted that while only a portion of the commitments relating to fisheries (including commitments relating to targets 14.4 and 14.b) explicitly state that they are also implementing SDG 2, most would likely still contribute towards enhancing food security in some way. Some examples include commitments to improve institutional and policy environment for sustainable management and utilization of fisheries resources in Africa (African Union Commission); the FAO Blue Growth Initiative to enhance the capacity of oceans to support livelihoods and communities, providing nutritious food and potential for prosperity (FAO); and a commitment to develop and manage the fisheries potential of the Asian region by rational utilization of the fisheries resources for providing food security, safety and poverty alleviation (Southeast Asian Fisheries Development Center).

SDG 3: Good health and well-being - The marine environment is a major contributor to human health and well-being, and this relationship is acknowledged in the 117 commitments that indicated they were also implementing SDG 3. In addition, it is likely that most commitments relating to the reduction of pollution (SDG 14.1) also contribute towards this goal, whether they have explicitly indicated so or not. In addition, some commitments addressing the threat of invasive species would also promote good health in cases where invasive species carry diseases that might impact human health, or where they have the potential to significantly change the ecosystem. Some examples include various commitments to prevent pollution from waste mismanagement and handling (Government of Maldives); commitments to cease discharges of wastewater into the sea (Government of Cyprus); a commitment to protect the environment from harmful aquatic invasive species and pathogens introduced via ships' ballast water or on ships' hulls

(Institute of Marine Engineering, Science and Technology); and a commitment towards implementation of public initiatives and policies that value the relationship between oceans and human health and contribute to the well-being and health of an active society (Government of Portugal).

SDG 4: Quality education – A total of 95 voluntary commitments explicitly indicated that they were also advancing SDG 4 on quality education. However, it is likely that the total of commitments contributing to this SDG is much higher, as 200 commitments contain components that relate either in part of entirely to education and training. They range from awareness-raising on specific ocean-related issues to technical training, research and education. For example, the Alligator Head Foundation has committed to strengthening research, training and education linkages to protect Jamaica's marine environment. Targeting local fishermen and communities, the initiative adopts an interdisciplinary approach, coupled with the use of art, music and media aiming to foster collective action. The Ocean Voyages Institute has committed to continuing the education of youth and people throughout the world on the issue of plastics in the global ocean, aiming towards changes in behavior in terms of refusing throw-away plastics, reducing use of plastics of all types, recycling plastics and removing plastics from the natural environment. The World Maritime University has committed to be a world centre of excellence in postgraduate maritime and oceans education, professional training and research, while building global capacity and promoting sustainable development.

SDG 5: Gender equality - A total of 115 commitments have stated their aim to promote gender equality. They include a wide range of commitments relating to marine conservation, fisheries, education and ocean-based economic development. Some examples include an initiative by Diverse Voices and Action (DIVA) for Equality, which aims to make clearer the links between urgent action on ocean, air and land as the commons, and with feminists, women and girls of diversities and all ages in urban poor, rural and remote areas of Fiji and the Pacific. Another project is called Women Leading Ocean Action, and is organized by UN-Women to promote the participation of women in ocean management. A third commitment aims to promote gender equality in sustainable fisheries management and development in Fiji (Women in Fisheries Network, Fiji).

SDG 6: Clean water and sanitation – The goal of clean water and sanitation is addressed through many initiatives relating to reducing pollution, in particular those providing for treatment of wastewater and other discharges (many commitments under SDG 14.1), as well as commitments relating to water quality and fresh water, including watershed management. A total of 174 voluntary commitments indicate that they were contributing to SDG 6, but in actuality it is likely that the number is higher given the large number of commitments relating to SDG 14.1. Some examples include a group of Swedish investors within the framework of Swedish Investors for Sustainable Development, who have committed to enhancing implementation of aspects of Goal 6, following the principle of source to sea. The group will study and address the fresh water risks in their portfolios

and stimulate action towards best practices. Another example is an UNDP project to enhance the socio-ecological landscape resilience in Pakistan's Indus Delta, which will promote ecological conservation and sustainable livelihood opportunities, and is implemented by multi-stakeholder partnerships involving local communities through integrated seascape approaches.

SDG 7: Affordable and clean energy – 72 voluntary commitments implement SDG 7 through components related to transition to clean and renewable energy. Some of these commitments relate to specific technologies, while others include renewable energy as part of broader efforts towards sustainable development, resilience-building, blue economy transition or research and innovation. Examples include commitments related to ocean energy, floating solar energy at sea (Swimsol GmbH), renewable energy microgrids for SIDS to help them towards energy independence (Government of Italy), renewable energy and water treatment (government of Italy), removing barriers to floating offshore wind energy (Principle Power, Inc.). In addition, overarching approaches to clean energy transition will be facilitated by commitments such as the establishment of the Pacific Centre for Renewable Energy and Energy Efficiency (PCREEE) in Tonga, which aims to provide improved access to modern, affordable and reliable energy services and energy security for the Pacific Island States and Territories (PICTs). A similar project aims to support the Caribbean (CARICOM) countries in the use of Renewable Energies and Energy Efficiency through the Establishment of the Caribbean Centre for Renewable Energy and Energy Efficiency (CCREEE) in Barbados. The aim of this Centre is to improve access to sustainable energy services for households, public institutions, businesses and industry in the Caribbean countries and territories (financed by Government of Austria).

SDG 8: Decent work and economic growth – A total of 182 voluntary commitments indicated that they were advancing SDG 8. These included commitments related to economic development, sustainable development, blue economy and blue growth, which included many commitments undertaken in support of SDG 14.7. In addition to these commitments, others sought to achieve decent working conditions in the shipping and fishing industries. The latter included a commitment by the International Labour Organization (ILO) to promote the effective implementation of the Maritime Labour Convention, 2006, as amended (MLC, 2006), in order to improve seafarers living and working condition and ensuring a level playing field for shipowners.

SDG 9: Industry, innovation and infrastructure - A total of 105 commitments indicated they were implementing SDG 9. These included commitments related to innovation, including as part of blue economy transition. They also included the approximately 80 commitments related to the development of sustainable shipping and related infrastructure. Examples include initiatives to the reduce the environmental impact of shipping (Maritime and Port Authority of Singapore through Maritime Singapore Green Initiative); reducing the risk of collision between ships and cetaceans (Pelagos Sanctuary in the Mediterranean and International Fund for Animal Welfare); improving

infrastructure through more sustainable and cleaner ports (Ministry of Shipping of Government of India through Project Green Ports); creation of knowledge centres for consultation by all involved in supply chain operations (World Ports Sustainability Program); collection of marine debris by ships (Autonomous Refuse Collection and Shipping system by Smart Cities Industries); low carbon sustainable sea transportation through use of traditionally-designed sailing canoes (Okeanos Foundation); and promotion of environmentally-friendly coastal shipping powered wholly or partially by batteries, LNG or other eco-friendly fuels (Norwegian Shipowners Association through the Green Coastal Shipping Programme).

SDG 10: Reduced inequalities – Sixty voluntary commitments contain components related to reducing inequality and have indicated that they are implementing SDG 10. These commitments include reducing inequalities between countries through provision of scientific data and capacity building (Commonwealth Marine Economies Programme and research and capacity development programmes by United Nations University); and furthering social responsibility in global fisheries and aquaculture, including protection of human rights, dignity, access to resources, and equitable opportunities to benefit (Conservation International). In addition, a number of commitments include aspects of social inclusion. Some examples include a commitment by Monitoramento Mirim Costeiro (Brazil) to foster involvement of children in monitoring and care of coastal areas, promotion of gender equality in sustainable fisheries management and development in Fiji (Women in Fisheries Network), and enhancing human and institutional capacities for sustainable fisheries in Somalia and Yemen, including through access to microfinance and banking services for artisanal fishers (Indian Ocean Rim Association).

SDG 11: Sustainable cities and communities – This SDG is supported by ocean voluntary commitments related to climate resilience, improved waste disposal, livability, safeguarding cultural and natural heritage, disaster risk reduction, and access to clean shorelines and coasts. A total of 114 voluntary commitments indicated that they were implementing SDG 11, and many others, for example commitments related to reduction of pollution (SDG 14.1 – 548 commitments) will likely enhance livability of cities and communities whether they have explicitly noted this or not. Examples include a variety of activities, such as rehabilitation of coastal coral reefs through coral propagation and transplantation (UNDP); a subregional initiative on community resilience to climate change in the Bay of Bengal (Concern Worldwide); industry commitment to engage in improving weather climate knowledge in support of sustainable development and disaster reduction (World Ocean Council); and support to community-based resource management in Solomon Islands to develop appropriate solutions for issues facing coastal communities (Government of Solomon Islands).

SDG 12: Responsible consumption and production –With 294 voluntary commitments indicating that they were contributing to SDG 12, it is clear that responsible consumption and production is strongly linked to ocean health. Many commitments relate to

sustainable fisheries and aquaculture (for example, through initiatives such as the Brazilian Alliance for Sustainable Seafood and FAO provision of technical assistance on issues related to market access and trade related aspects); strengthening institutional capacity for fisheries governance (African Union Commission); seafood certification; and research towards more sustainable aquaculture (University of North Texas research on probiotics). Other relevant commitments include those that aim to reduce plastic pollution and marine litter at the source (a total of 180 commitments, though not all indicated a linkage to SDG 12). Examples include bans on plastic bottles and microbeads (e.g. government of Ireland, Flanders and Aruba; Four Seasons Resorts in Seychelles and Mauritius). Sustainable tourism could also be considered under this category, and include a total of 187 commitments. Examples include Aloha Aina Associates in Hawaii, a commitment by Government of Fiji to ensure that tourism development in Fiji is pursued within a sustainable framework; and commitment by the government of Maldives for tourism and related business operations to protect marine ecosystems and the health, economy and social well-being of the people of the Republic of Maldives.

SDG 13: Climate action - This SDG is closely tied to SDG 14, with climate explicitly a component of 305 commitments. While this is true of all commitments related to ocean acidification (SDB 14. 3 – 240 commitments), it also applies to commitments that aim to build resilience of coastal communities and ecosystems, and provide for climate adaptation and mitigation. Some examples of these types of commitments include a commitment by the European Development Bank to devote 25% of its overall lending to climate action, both mitigation and adaptation; the Blue Guardians Partnership, which is partnership between SIDS governments, private sector, civil society and intergovernmental bodies to contribute to the climate change priorities of island nations; a commitment by the World Meteorological Organization to optimize the use of the available Hydro-Meteorological infrastructure and knowledge to support decision making for climate adaptation and mitigation policies in African, Caribbean and Pacific Group of States; and a commitment to prepare communities and infrastructure to sea level rise in California through advance planning (Ocean Protection Council on behalf of the State of California).

SDG 15: Life on land – A total of 177 voluntary commitments explicitly stated that they are also contributing to SDG 15. This demonstrates the close relationship between land and sea, with actions on land influencing the sea downstream. The voluntary commitments in this category include those that relate to land-based sources of marine pollution, including improving sewage treatment and agricultural practices, as well as prevention of the discharge of plastics and other litter into the marine environment. It also includes management and protection and restoration of coastal environments, for example through blue carbon activities such as mangrove planting, watershed management and restoration and protected areas that extend from the land to the sea (e.g. Ridge to Reef type systems). Some examples include a project by the Government of Niue to apply the Ridge to Reef concept to biodiversity conservation and for enhancement

of ecosystem services and cultural heritage; and a local level Ridge to Reef initiative in Belitung Island, Indonesia, that encompasses forest ecosystems, rivers, mangroves and other coastal and marine ecosystems (Kelompok Peduli Lingkungan Belitung).

SDG 16: Peace, justice and strong institutions – Ninety-five voluntary commitments reported that they explicitly contribute towards achievement of SDG 16. These commitments address diverse aspects of peace, justice and strong institutions. Maritime security, surveillance and combatting illegal fishing were featured in these commitments. In addition, human rights, social justice and safeguarding rights of the most vulnerable were important components of many commitments contributing to this goal. Finally, strengthening institutions for management and conservation of marine and coastal areas, including marine spatial planning and implementation of marine protected areas were also featured. Some examples include the Oceania Human Rights Commission & Court Project, which is an initiative in the islands of the Pacific to create a regional human rights mechanism to provide an avenue for advocacy for people of the Pacific (University of Hawai'i Hawai'i Center for Human Rights Research & Action); a commitment by the International Labour Organization towards eliminating exploitative labour conditions for fishers and seafarers; a proposal to create a Blue Carbon Code of Conduct (GRID-Arendal); initiatives to stop fish bombing (Institute for the Law of the Sea and International Marine Environmental Law, and a separate commitment by State Government of Sabah Anti Fish Bombing Committee); OECDs work towards combatting IUU fishing; and Curacao's commitment, with Waitt Institute, to develop and codify a sustainable ocean policy by December 2018.

SDG 17: Partnerships for the goals – A total of 256 voluntary commitments explicitly stated that they contribute towards SDG 17 through the creation of partnerships. While there are fifty commitments registered as partnerships, a very large number of all of the 1406 commitments, if not most, rely on the need to bring together different stakeholders and entities to succeed. The partnerships that contribute to SDG 17 are as diverse as the voluntary commitments themselves. Some examples include a partnership of state organizations, a regional university, and the Sea Memories Collective to facilitate the co-design of a new governance system for Babitonga Bay ecosystem in Brazil; a commitment to develop a SIDS-SIDS partnership for sustainable blue economies (SIDS DOCK, PCREEE, CCREEE, ECREEE, UNIDO); the Pacific Partnership on Ocean Acidification; and a commitment to combat eutrophication and climate change in the Baltic Sea Region through carbon sequestration and nutrient cycling (Foundation for a Living Baltic Sea/Baltic Sea Action Group (BSAG)).

8. Relation to the Call for Action

This section discusses linkages between voluntary commitments and the Call for Action, including the degree to which the Call for Action has either guided or been taken into account in the commitments. Because most voluntary commitments predate the Call for Action, it has mainly been taken up in a few of the later VCs. It is likely that future VCs will increasingly be influenced by the Call for Action.

By affirming their strong commitment to conserve and sustainably use oceans, seas and marine resources for sustainable development, the Oceans Conference participants adopted the Call for Action as a decisive way to move forward in implementing SDG 14. The Call for Action highlights the integrated nature of SDGs and targets, and thus the need for integration and an interdisciplinary approach in implementation. Integration of SDG 14 and its targets into national development plans and strategies, and the involvement of all stakeholders, including local communities, indigenous peoples, women and youth are also emphasized. The Call for Action brings additional focus to the impacts of climate change and the connection between SDG 14 and the Paris Agreement, a topic that is not as strongly reflected in the SDG 14 targets.

The Call for Action was mentioned specifically in three voluntary commitments. These included commitments by UNCTAD, FAO and UN Environment on sustainable trade in fisheries, a commitment by the Government of Algeria on fostering ocean-related education in Algeria, and a commitment by the AfroAtlantic Theologies & Treaties Institute on indigenous spiritual practices and oceans. While referencing the Oceans Conference, a fourth commitment, by the Peace Boat Ocean and Climate Youth Ambassador Programme aims to develop a “Youth Call for Action”.

The commitment by UNCTAD, FAO and UN Environment emphasizes that a holistic approach is necessary in order to advance sustainability and development, and that addressing harmful subsidies is not a standalone issue. The commitment states that the “Call for Action of the UN Ocean Conference will set a new direction in the implementation of SDG 14, incorporating new voluntary commitments and allowing for the development of new multistakeholder partnerships.”

The commitment by the government of Algeria states that “In line with paragraph 13-e of the ‘Final Draft Call for Action’, calling to support plans to foster ocean-related education, for example as part of education curricula, to promote ocean literacy and a culture of conservation, restoration and sustainable use of our ocean, the Ministry of National Education of Algeria commits to introduce such learning sequences in the three stages of the Algerian education system (primary, secondary and tertiary).”

The AfroAtlantic Theologies & Treaties Institute [ATI] in collaboration with the Drammeh Institute has submitted a voluntary commitment called the Sacred Waters of the

AfroAtlantic Treaty. As part of this commitment, the ATI plans to convene practitioners of indigenous African religions along the Atlantic Ocean perimeter, with environmental activists, educators and local government "to explore how indigenous spiritual practices and expertise of the oceans, lakes and other blue carbon life sources contribute, to water and food security, marine conservation, ocean literacy, and heritage tourism per the, Our Ocean, Our Future: Call for Action, by calling for a voluntary treatise process".

The Call for Action calls on all stakeholders to conserve and sustainably use the oceans, seas, and marine resources for sustainable development by taking, inter alia, a set of actions on an urgent basis. These actions are consistent with SDG 14 and its targets, but in many cases offer more detailed suggestions, particularly on implementation. When analyzed against the content of the voluntary commitments (see table below), it appears that most of these specific actions are included in the VCs. While some are very well included, others are less so. For example, only one VC each referenced fisheries subsidies in the World Trade Organization and participation in Preparatory Committee established by General Assembly Resolution 69/292 on the development of an international legally binding instrument under the United Nations Convention on the Law of the Sea on the conservation and sustainable use of marine biological diversity of areas beyond national jurisdiction.

Actions from "Call for Action"	Inclusion in Voluntary Commitments
13(a) Approach the implementation of Goal 14 in **an integrated and coordinated way** and promote policies and actions that take into account **the critical interlinkages among the targets of Goal 14, the potential synergies between Goal 14 and the other goals, particularly those with ocean-related targets, as well as other processes that support the implementation of Goal 14**.	**Included**: A majority of VCs indicate linkages with multiple SDG 14 targets and other SDGs.
(b) Strengthen **cooperation, policy coherence and coordination amongst institutions** at all levels, including between and amongst international organisations, regional and sub-regional organisations and institutions, arrangements and programmes.	**Included**: Many VCs incorporate cooperation between agencies and institutions, as well as formal partnerships.
(c) Strengthen and promote **effective and transparent multi-stakeholder partnerships, including public-private partnerships,** by enhancing engagement of governments with global, regional and sub-regional bodies and programmes, the scientific community, the private sector, donor community, non-governmental organisations,	**Included**: Fifty of the VCs were officially registered as partnerships, while many others contained elements of partnerships. There are examples of public-private partnerships on topics such as sustainable fisheries and banning

community groups, academic institutions, and other relevant actors.	of single-use plastics. Donor community participation remains relatively modest.
(d) Develop comprehensive strategies to **raise awareness of the natural and cultural significance of the ocean, as well as of its state and role, and of the need to further improve the knowledge of the ocean**, including its importance for sustainable development and how it is impacted by anthropogenic activities.	**Included**: Approximately 240 commitments include some aspects of awareness-raising about the importance of the ocean.
(e) Support plans to **foster ocean-related education**, for example as part of education curricula, to **promote ocean literacy and a culture of conservation, restoration and sustainable use of our ocean**.	**Included**: Approximately 200 VCs include aspects of education in them. 16 VCs explicitly include ocean literacy, including the UNESCO initiative titled "Ocean Literacy for all: a global strategy to raise the awareness for conservation, restoration, and sustainable use of our ocean."
(f) Dedicate greater **resources to marine scientific research, such as inter-disciplinary research and sustained ocean and coastal observation, as well as the collection and sharing of data and knowledge, including traditional knowledge,** in order to increase our **knowledge of the ocean**, to better understand the relationship between **climate** and the health and productivity of the ocean, to strengthen the development of coordinated **early warning systems** on extreme weather events and phenomena, and to promote decision-making based on the **best available science**, to encourage **scientific and technological innovation**, as well as to enhance the **contribution of marine biodiversity to the development of developing countries, in particular SIDS and LDCs**.	**Included**: Many VCs under SDG 14.a relate to marine scientific research. 17 VCs specifically aim for interdisciplinary research; 9 mention ocean observation as a goal; at least 10 relate directly to data sharing; at least 11 include early warning systems of various types; 9 note the use of "best available science"; and 5 incorporate use of traditional knowledge.
(g) Accelerate actions to **prevent and significantly reduce marine pollution** of all kinds, particularly from **land-based activities**, including **marine debris**, **plastics and microplastics**, **nutrient pollution**, **untreated wastewater, solid waste discharges, hazardous substances, pollution from ships**, and **abandoned, lost or otherwise discarded fishing gear**, as well as to address, as appropriate, the adverse impacts of other human-related activities on the ocean and on marine life, such as **ship strikes**, **underwater noise** and **invasive alien species**.	**Included**: VCs registered under SDG 14.1 incorporate all aspects of pollution detailed here, in particular pollution from land-based sources including nutrients, wastewater and plastics. Discarded fishing gear is tackled by at least 4 initiatives, including the Global Ghost Gear Initiative. 7 VCs explicitly address ship strikes; 21 include some aspects of underwater noise; and 22 include invasive species.
(h) Promote **waste prevention and minimization**, develop **sustainable consumption and production** patterns, adopt **the 3Rs- reduce, reuse and recycle**- including through incentivising market-based solutions to reduce waste and its generation, improving mechanisms for environmentally-sound waste management, disposal and recycling, and developing alternatives such as reusable or recyclable products, or products biodegradable under natural conditions.	**Included**: Responsible consumption and production was one of the aims of the 294 VCs that registered their contribution towards SDG 12. Recycling was part of 23 VCs; reusing part of 15.

(i) Implement long-term and robust strategies to **reduce the use of plastics and microplastics**, particularly **plastic bags and single use plastics**, including by partnering with stakeholders at relevant levels to address their production, marketing and use.	**Included**: Reduction of use of plastics and ban of plastic bags/bottles is a common VC under SDG 14.1.
(j) Support the use of effective and appropriate **area-based management tools, including marine protected areas and other integrated, cross-sectoral approaches, including marine spatial planning and integrated coastal zone management**, based on best available science, as well as **stakeholder engagement** and applying the **precautionary and ecosystem approaches**, consistent with **international law** and in accordance with **national legislation**, to enhance ocean resilience and better conserve and sustainably use marine biodiversity.	**Included**: Area-based management tools, including all the ones detailed here, are well incorporated into VCs, particularly in the context of SDG 14.5 and 14.2. The precautionary approach was part of 7 VCs while the ecosystem approach was part of 28 VCs.
(k) Develop and implement **effective adaptation and mitigation measures** that contribute to increasing and supporting **resilience to ocean and coastal acidification, sea-level rise, and increase in ocean temperatures,** and to **addressing the other harmful impacts of climate change on the ocean as well as coastal and blue carbon ecosystems** such as mangroves, tidal marshes, seagrass, and coral reefs, and wider interconnected ecosystems impacting on our ocean, and ensure the implementation of relevant obligations and commitments.	**Included**: Adaptation and mitigation featured commonly in VCs, particularly those under SDG 14.2 and those that stated that they also contributed to SDG 13. Blue carbon was explicitly part of 14 VCs.
(l) Enhance **sustainable fisheries management**, including to **restore fish stocks in the shortest time feasible** at least to levels that can produce maximum sustainable yield as determined by their biological characteristics, through the implementation of **science-based management measures, monitoring, control and enforcement, supporting the consumption of fish sourced from sustainably managed fisheries, and through precautionary and ecosystem approaches** as appropriate, as well as **strengthening cooperation and coordination**, including through, as appropriate, **regional fisheries management organisations, bodies and arrangements**.	**Included**: The VCs registered under SDG 14.4 include, at least to some degree, all of the measures detailed here.
(m) **End destructive fishing practices and illegal, unreported and unregulated fishing**, addressing their root causes and holding actors and beneficiaries accountable by taking appropriate actions, so as to deprive them of benefits of such activities, and effectively implementing flag State obligations as well as relevant port State obligations.	**Included**: Ending destructive fishing practices featured explicitly in 18 VCs. Ending IUU fishing featured explicitly in 32 VCs.
(n) Accelerate further work and strengthen cooperation and coordination on the **development of interoperable catch documentation schemes and traceability of fish products**.	**Included**: 5 VCs explicitly include catch documentation schemes, while traceability was included in 16 VCs.
(o) **Strengthen capacity building and technical assistance provided to small-scale and artisanal fishers in developing countries**, to enable and enhance their access to marine resources and markets and improve the socio-economic	**Included:** Capacity building for artisanal fishers was incorporated in many of the commitments under SDG 14.b

situation of fishers and fish workers within the context of sustainable fisheries management.	
(p) Act decisively to **prohibit certain forms of fisheries subsidies** which contribute to overcapacity and overfishing, eliminate subsidies that contribute to illegal, unreported and unregulated fishing and refrain from introducing new such subsidies, including through accelerating work to complete negotiations at the World Trade Organization on this issue, recognising that appropriate and effective special and differential treatment for developing and least developed countries should be an integral part of those negotiations.	**Included**: While activities to reduce subsidies were included in the 96 VCs under SDG 14.6, the WTO was explicitly mentioned in only one VC.
(q) Support the promotion and strengthening of **sustainable ocean-based economies**, which inter alia build on sustainable activities such as fisheries, tourism, aquaculture, maritime transportation, renewable energies, marine biotechnology, and sea water desalination, as means to achieve the economic, social and environmental dimensions of sustainable development, in particular for SIDS and LDCs.	**Included**: Activities towards sustainable ocean-based economies were common in VCs, particularly those registered under SDG 14.7.
(r) Increase efforts to **mobilise the means necessary for the development of sustainable ocean-related activities and the implementation of Goal 14**, particularly in developing countries, in line with the 2030 Agenda, Addis Ababa Action Agenda and other relevant outcomes.	**Included**: While a large number of financial commitments were made (see section on financial analysis), the Addis Ababa Action Agenda was not mentioned in the VCs.
(s) Actively engage in discussions and the exchange of views in **the Preparatory Committee established by General Assembly Resolution 69/292 on the development of an international legally binding instrument under the United Nations Convention on the Law of the Sea on the conservation and sustainable use of marine biological diversity of areas beyond national jurisdiction**, so that the General Assembly can, before the end of its seventy-second session, taking into account the report of the Preparatory Committee to the General Assembly, decide on the convening and on the starting date of an intergovernmental conference.	**Partially included**: Only 1 VC referenced the PrepCom established by UNGA Resolution 69/292. A total of 10 VCs incorporate actions that at least partially relate to areas beyond national jurisdiction, including through providing better information about the deep sea.

Table 4: Inclusion of actions from the "Call for Action" in Oceans Conference voluntary commitments.

9. Analysis of gaps

A number of gaps have emerged during the analysis of voluntary commitments. They include gaps in participation, gaps in relation to targets, geographical gaps, and gaps in relation to how the VCs address the broader landscape of sustainable development.

a. Gaps in participation:

The three entities making the fewest contributions were philanthropic organizations (18 commitments, 1% of total), scientific community (23 commitments, 2% of total) and academia (46 commitments or 3% of total). Because many commitments either don't materialize or don't succeed because of a lack of funding, further engagement of philanthropic organizations could be particularly important. For example, small grants that would be open for those facing financial difficulties in completing a specific commitment or to those wishing to expand on existing commitments or undertake new commitments, particularly in underrepresented regions, countries, targets and priority thematic topics could be extremely useful. In addition, there is a need to further involve the scientific community, which does not generally participate in, or necessarily know about, UN-led endeavours, but is an important provider of data and information both for assessment and for implementing various VCs.

Gaps in targets:

The three SDG 14 targets that received the least commitments were target 14.6 (prohibiting certain forms of fisheries subsidies) at 95 (3%) commitments; target 14.3 (minimizing and addressing impacts of ocean acidification) at 239 (6%) commitments and target 14.b (providing access to small-scale and artisanal fishers to marine resources and markets) at 243 (6%) commitments. Not all targets necessarily need to have the same number of commitments, as some are much broader in scope than others. Therefore it is also important to look thematically at the targets to assess whether certain key issues or actions are missing. Of the three lowest targets, it does seem that more attention would need to be paid to both the politically sensitive topic of fisheries subsidies and the issues impacting small scale and artisanal fishers. In addition, the topic of ocean acidification is an important priority with many open scientific questions that deserve additional urgency. The implementation of SDG 14.3 might benefit from additional connections between the scientific community investigating this topic and policy-makers and managers dealing with marine policy and sustainable development.

A fuller analysis of how specific targets cover priority issues could be undertaken through thematic communities of practice (see section 11). However, it does seem that certain topics, such as marine biotechnology did not receive many commitments, and may have the potential to become a promising sector of the blue economy in the future. Other new

and innovative ocean technologies and engineering solutions, as well as renewable energy might also benefit from further commitments.

Geographical gaps:

While there were no glaring geographical gaps, some adjustments might be necessary. For example, it is important to ensure that efforts to increase scientific knowledge, capacity building and technology transfer (target 14.a) focus on those regions and countries that need it most. This is also the case for capacity building relating to ocean acidification research (target 14.3). In both cases, the North Atlantic received more commitments than other regions, and additional focus on all regions with developing countries should be a vital component of implementation.

Gaps in broader sustainable development aspects of SDG 14 targets:

According to the analysis of the relationship between SDG 14 voluntary commitments and other SDGs (section 7), the least cited SDG was SDG 10 on reduced inequalities, followed by SDG 7 on affordable and clean energy, SDG 4 on quality education and 16 on peace, justice and strong institutions. The lack of attention paid to inequality is concerning given that many ocean conservation efforts have failed in the past due to inadequate attention paid to social aspects. The equitable sharing of both costs and benefits of conservation is important for long- term success of any ocean conservation and management project. Similarly, strong institutions are key to successful ocean governance, and this aspect might be prioritized further. Renewable and clean energy is important for energy independence and resilience of countries in the age of climate change. This is particularly true of SIDS and LDCs, and is an issue that should be made a priority.

10. Other relevant information for future consideration

One aspect of the Ocean Conference voluntary commitments that may require further analysis is their relationship to other similar commitments. For example, the Our Ocean Conference hosted in October 2017 by the European Union on Malta generated 437 tangible and measurable commitments, which included EUR 7.2 billion in financial pledges and 2.5 million square kilometres of additional Marine Protected Areas[2]. The Our Ocean Conferences in 2014, 2015 and 2016 also generated voluntary commitments. These commitments are highly relevant to SDG 14 and its targets, as they address topics such as marine pollution, marine protected areas, maritime security, sustainable fisheries

[2] http://ourocean2017.org/sites/default/files/ooc-2017-list-of-commitments_en.pdf

and climate change. The degree of overlap between these commitments and the Ocean Conference voluntary commitments is unknown, but it does seem that the Our Ocean Conference garnered at least some commitments that are additional to those of the Oceans Conference, and that will assist achievement of SDG 14 and its targets.

Similarly the Nationally Determined Contributions (NDCs) related to the Paris Agreement contain commitments of relevance to oceans, particularly on conservation and sustainable use of blue carbon ecosystems. The Aichi Biodiversity Targets relating to oceans and coasts, and the associated National Biodiversity Strategies and Action Plans, similarly may contain actions that will also assist in implementing SDG 14. Thus, there is likely room for a study that looks in detail into the collective impact of all ocean relevant commitments, and considers whether they could be tracked coherently and holistically across various platforms.

11. Recommendations on how to best support and monitor implementation

Supporting and monitoring implementation is an important component of the eventual successful fulfillment of VCs both individually and collectively. The importance of effective follow-up was also stressed by member States and stakeholders at the Ocean Conference, and was seen as critical for ensuring that SDG 14 implementation obligations are met. This section will discuss a range of strategies for supporting follow up and monitoring. Section a. will discuss available options towards this end, including lessons learned in the context of other voluntary commitments related to environment, development, biodiversity and climate change. Section b. will discuss how identifying “clusters” of VCs might help provide for dialogue and support amongst those making commitments.

Options for modalities to support and monitor implementation

The Ocean Conference Voluntary Commitments are a key legacy of that conference and a means for implementing SDG 14 through an inclusive approach involving multiple stakeholders. They also provide an opportunity for all stakeholders to come together around a common goal: the achievement of SDG 14 and in the process a healthy, diverse and more resilient global ocean that supports lives and livelihoods.

The in-depth analysis of the voluntary commitments presented here demonstrates that there is great diversity in their focus, scope and ambition. The individuals and institutions involved, the deliverables, levels of funding and geographical distribution are highly variable. This is positive in the sense that in their heterogeneous scope, the voluntary

commitments have become inclusive of efforts on all scales and by all actors, which is consistent with an ethos of the ocean as a common concern of all of humanity. On the other hand, the diverse nature of the commitments presents certain challenges for follow-up and monitoring.

These challenges include the following:

- Ensuring that commitments made are implemented in an effective and timely manner in order to advance the collective achievement of SDG 14.
- Providing for innovation, communication, encouragement and support in the implementation of commitments.
- Ensuring that the implementation of commitments does not have negative impacts on other initiatives and stakeholders, for example those most vulnerable.
- Keeping up the momentum on implementation of the commitments, as well as on the achievement of SDG 14.
- Increasing participation through new voluntary commitments, particularly from groups that have been thus far underrepresented or pertaining to issues where there are gaps.

Thus, follow up is important to assess and monitor progress, but also to encourage and assist where possible. An approach that combines accountability with an open discussion of potential problems and an effort to help those falling behind to get back on track has been found to help implementation of, for example, the Montreal Protocol and the Convention on Biological Diversity National Biodiversity Strategies and Action Plans.

A number of questions still remain, for example about who should monitor and follow up, how would monitoring be undertaken in practice, and how can implementation best be supported while maintaining a positive momentum and excitement about collective achievement of SDG 14.

There are some lessons to be drawn from the implementation of previous voluntary commitments, for example the Johannesburg partnerships for sustainable development, known as “Type II partnerships” (2002) and the Rio+20 (2012) voluntary commitments). The box below offers lessons from implementation of the Johannesburg type II partnerships, as compiled by the Institute for Sustainable Development and International Relations (IDDRI*).*

Lessons learned from Johannesburg type II partnerships

Effective monitoring require the following:

- Developing a solid framework for regularly reviewing commitments, ensuring they keep their promises and continue to be relevant, in a transparent and accessible way (e.g. a registry or a web-based platform);
- Ensuring that the means for such a follow-up process are defined;
- Making sure that the commitments are funded when they are posted on the registry;
- Creating the conditions for dynamic exchanges on the platform to keep the commitments alive;
- Maintaining regular "in-person" meetings to allow experience sharing through workshops, the presentation of challenges and opportunities encountered by the different actors to help them to move forward (including raising additional funding), to enable new initiatives to emerge and to promote some outstanding projects.

Modified from Ramstein, C. (2012), Rio+20 Voluntary Commitments: delivering promises on sustainable development?, Working Paper N°23/12, IDDRI, Paris, France, 28 p

The following text looks at the above lessons in the context of the Ocean Conference voluntary commitments.

Framework for reviewing commitments

A registry of voluntary commitments is already in place and has been populated with commitments and associated information and statistics. The registry is user-friendly and contains a search function. A mechanism to incorporate updates and progress reports by those who have made commitments will help keep the registry dynamic and transparent, and such a mechanism has already been incorporated. In this context, tracking progress will be made easier if reporting can be quantified in some manner, for example if reporting is made against deliverables and timelines. Some degree of quantification will also make it easier not only to track how individual commitments are progressing, but also to track collective progress towards specific SDG 14 targets. Easy to read graphics and visuals could help users understand progress made, milestones reached and deliverables achieved for each target. This will also provide a degree of transparency and openness about commitments and their implementation.

The registry and associated web pages might also incorporate other content, such as sharing of best practices between those who have made commitments, relevant literature, and an opportunity to highlight specific commitments in depth as they reach milestones or produce deliverables. Interviews and video content could also be incorporated. All of this is likely to take considerable Secretariat time and effort, which would include not only the technical work, but also promoting the registry and its contents in order to gather additional commitments, and communicating with those who have registered commitments.

Methods for monitoring and follow-up

Once a solid framework for reviewing commitments is in place, effective monitoring is likely to require data and information of several types. These include:

- **Information about the status and trends of each target** as it relates to the environmental, social and economic aspects of that target. This would include information about the health of the ocean and drivers of change, trends in human uses of the ocean, status of protection and management of the ocean, and human well-being, livelihoods and equity as it relates to the ocean. Use of indicators might help assessment and reporting, and many ocean-related indicators, such as the Ocean Health Index, are already available. Other ocean-related indicators are in use, for example, to measure progress towards the Aichi Biodiversity Targets and some have been adopted to measure progress towards SDG 14.
- **Information about the implementation of individual voluntary commitments**, through progress reports provided against milestones and deliverables.
- **Aggregated information about progress towards each of the SDG 14 targets** and/or thematic clusters (see section b), as well as SDG 14 overall.

In all cases, data and information should be provided in a public and transparent manner that provides for bottom-up accountability. This will also enable public monitoring by civil society and others, and ensure that the registry becomes a trusted source of information about the commitments.

Information about the status and trends of ocean health, including environmental, social and economic aspects, could be made available through a common portal or clearinghouse, and might involve pulling together information that is already available online through different sources, as well as additional information targeted specifically towards SDG 14. The initiative could be undertaken by academia, or by a partnership consisting of research and academic institutions and other stakeholders. One ambitious example is the Climate Watch online platform that is designed to empower policymakers,

researchers and other stakeholders with the climate data, visualizations and resources they need to gather insights on national and global progress on climate change (https://www.climatewatchdata.org/). Another example is the UNDP Ocean Action Hub (http://www.oceanactionhub.org/), which currently provides some SDG 14 specific data and information. A case study below discusses measuring progress towards the CBD Aichi Biodiversity Targets.

Case study 1: Measuring progress towards the Aichi Biodiversity targets

The Aichi Biodiversity targets, adopted in 2010 by the Parties to the Convention on Biological Diversity (CBD), contain three targets that are particularly relevant for SDG 14. They are:

- **Target 6** - By 2020 all fish and invertebrate stocks and aquatic plants are managed and harvested sustainably, legally and applying ecosystem based approaches, so that overfishing is avoided, recovery plans and measures are in place for all depleted species, fisheries have no significant adverse impacts on threatened species and vulnerable ecosystems and the impacts of fisheries on stocks, species and ecosystems are within safe ecological limits.
- **Target 8** - By 2020, pollution, including from excess nutrients, has been brought to levels that are not detrimental to ecosystem function and biodiversity.
- **Target 10** - By 2015, the multiple anthropogenic pressures on coral reefs, and other vulnerable ecosystems impacted by climate change or ocean acidification are minimized, so as to maintain their integrity and functioning.
- **Target 11** - By 2020, at least 17 per cent of terrestrial and inland water, and 10 per cent of coastal and marine areas, especially areas of particular importance for biodiversity and ecosystem services, are conserved through effectively and equitably managed, ecologically representative and well connected systems of protected areas and other effective area-based conservation measures, and integrated into the wider landscapes and seascapes.

The Aichi Biodiversity targets are to be implemented by countries, including through development of national and regional targets, and integrating targets into National Biodiversity Strategies and Action Plans.

The CBD Parties have adopted, and recently updated, a set of generic and specific indicators that can be used to monitor progress. For example, for target 6 the generic and specific indicators include the following:

- **Trends in certified sustainable fisheries**: MSC certified catch
- **Trends in proportion of depleted, target and bycatch species with recovery plans**: Number of countries with regulations requiring recovery of depleted species; Proportion of depleted stocks with rebuilding plans in place
- **Trends in population and extinction risk in target and bycatch species:** Red List Index (harvested aquatic species); Number of countries with policies that make adequate provisions to minimize the impacts of fisheries on threatened species; Proportion of fisheries with regular monitoring and reporting of impacts on threatened species;

Proportion of threatened species for which mortality rate due to fisheries is decreasing; Number of countries with policies to secure that mortalities are accounted for and kept within safe biological limits; Trends in population of non-target species affected by fisheries; Red List Index (impacts of fisheries); Living Planet Index (trends in target and bycatch species)

- **Trends in fishing practices**: Global effort in bottom trawling; Progress by countries in the degree of implementation of international instruments aiming to combat illegal, unreported and unregulated fishing (indicator for SDG target 14.6); Amount (spatial extent, gear type, intensity) of fishing effort within vulnerable habitats; Number of countries with ecosystem impact monitoring and/or assessment programmes; Number of countries with legislation allowing for actions for the protection of vulnerable habitats (including VMEs), and addressing threats to ecosystem structure and function; Coverage of fisheries with management measures to effectively manage bycatch and reduce discards; Number and coverage of stocks with adaptive management systems / plans
- **Trends in proportion of fish stocks outside safe biological limits**: Proportion of fish stocks within biologically sustainable levels (indicator for SDG target 14.4);
- **Trends in catch per unit effort**: Estimated fisheries catch and fishing effort; Progress by countries in the degree of application of a legal/regulatory/policy/institutional framework which recognizes and protects access rights for small-scale fisheries (indicator for SDG target 14.b)

The list also highlights that there are a number of indicators that are shared between this Aichi target and SDG 14.4 and SDG 14.b. The data for each indicator is provided by a partner agency, for example the FAO, IUCN, WWF or a university. This work is assisted by the Biodiversity Indicators Partnership (BIP), which is a global initiative to promote the development and delivery of biodiversity indicators.

The Global Biodiversity Outlook, the flagship publication of the CBD, provides a periodic report that summarizes the latest data on the status and trends of biodiversity and draws conclusions relevant to the further implementation of the Convention. The fourth edition of the Global Biodiversity Outlook (GBO-4) provides a mid term assessment of progress towards the Aichi Biodiversity targets, and scientific analysis behind which is published in the CBD Technical Series (No. 78). The report provides summaries of progress towards the target, as seen below for target 6.

6.6 DASHBOARD – PROGRESS TOWARDS TARGET[4]

Element	Current Status	Comments	Confidence
All fish and invertebrate stocks and aquatic plants are managed and harvested sustainably, legally and applying ecosystem based approaches		Great regional variation, positive for some countries but data limited for many developing countries	High
Recovery plans and measures are in place for all depleted species		Variable progress in some regions	Medium
Fisheries have no significant adverse impacts on threatened species and vulnerable ecosystems		Some progress e.g. on long-lining used in tuna fisheries, but practices still impacting vulnerable ecosystems	Medium
The impacts of fisheries on stocks, species and ecosystems are within safe ecological limits, i.e. overfishing avoided		Overexploitation remains an issue globally, but with regional variation	Medium

Authors: Louise Teh, William Cheung, Villy Christensen, U. Rashid Sumaila, with contributions from Peter McIntyre and Miranda Jones.

Sources: CBD website: www.cbd.int and CBD Technical Series 78: https://www.cbd.int/doc/publications/cbd-ts-78-en.pdf

Individual commitments could be asked for a progress report prior to the expiry of the dates on their deliverables. Another option might be to ask for annual progress reports. As mentioned earlier, the individual voluntary commitments are very diverse. Thus it is also likely that individual progress reports, once submitted, contain diverse elements and ways of reporting, which in addition to progress summaries against deliverables could include narrative, lessons learned, photos and video. This diversity is not a problem on the level of individual commitments, as long as key progress elements are included, and in fact would provide an element of richness to the informational content of the reporting.

However, in aggregating progress reports and measuring progress towards achievement of SDG 14 and its targets, too much diversity can become problematic. Thus, reporting should include some key common elements or indicators that can be easily summarized in periodic global assessments. Establishing such common elements or indicators may also raise the level of collective ambition, as the reporting does not only focus on the individual commitment, but is clearly measuring the individual commitment as part of a collective goal.

To keep momentum, aggregated (thematic or overall) and individual progress reports could be presented at international ocean conferences, where sessions might be dedicated to this topic. This would not only provide motivation for reporting progress, but could also become an opportunity to collect further commitments.

Who should monitor?

There are many options as to which entities should follow up and monitor the implementation of the voluntary commitments. While the Secretariat (UN-DESA) has a primary role with communicating with those who have registered commitments, asking for updates and analyzing those updates, the data, once available, can also be used by others. NGOs, civil society and academia have often contributed to monitoring of various voluntary commitments, whether related to biodiversity or climate change. Bottom-up monitoring, peer exchanges and public participation can play an important role in encouraging progress and calling for accountability. There is not necessarily only one entity that undertakes monitoring, but instead many different actors can play a role. The case study below discusses how the Global Ocean Forum, an international organization, monitoring progress towards implementation of the Rio+10 oceans-related commitments.

Case study 2: Global Ocean Forum report cards on progress towards Rio+10 oceans-related targets

In the lead-up to Rio+20, the Global Ocean Forum researchers produced a report examining the question of "How well are we doing?" in the implementation of the UNCED and WSSD goals and targets related to oceans, coasts, and islands. Featured in the report were easy-to-understand report cards related to each of the major oceans goals and targets. The report cards not only provided scores on progress made, but also examined obstacles and provided recommendations for the future. This effort is one example of the type of monitoring that has been undertaken by international oceans organizations.

Report Card: Ecosystem-Based Integrated Ocean and Coastal Management (EBM/ICM)

Extent of Efforts				Extent of Progress				Timing – Goals Reached		
Low	Medium	High	Data Unavailable	Low	Medium	High	Data Unavailable	On Time	Some Delay	Significant Delay
	✓					✓			✓	

EXPLANATION:

The genius of Chapter 17 of Agenda 21 was the realization that the oceans can no longer be managed as they have been traditionally, sector-by-sector, use-by-use. Instead, as Agenda 21 put it, approaches that are "integrated in content, and precautionary and anticipatory in ambit" must be adopted. Since 1992, the paradigm of ecosystem-based integrated coastal and ocean management including through the Large Marine Ecosystem Approach,has been widely accepted and put into place in a growing number of countries.

In fact, since 1992, the infrastructure for integrated ecosystem-based governance has been built. Like a house, we have built the foundations and the frame, and now we have to fill it in further, expanding the scope.

Although there is data available on the LME approach, in general, the information in this area is unfortunately more anecdotal than systematic and empirical partly because no UN agency has clear responsibility for monitoring this important cross cutting area.

Nevertheless:

- Ecosystem-Based Management/Integrated Ocean and Coastal Management (EBM/ICM) are well known, and they are closely interrelated.
- There have been many new applications of EBM/ICM in the last decade, expanding efforts initially focused on coastal zones to the 200-mile Exclusive Economic Zones (EEZs), and to adjoining regional areas.
- A major challenge in the next phase is to further enhance the implementation of integrated oceans policy, including its institutional aspects, at both national and regional levels, consider appropriate applications in areas beyond national jurisdiction, and consider how integrated governance could, as well, be applied to the United Nations system to achieve greater effectiveness and coherence.
- In meeting the governance challenge, the LME approach has developed LME Commissions for the recovery, assessment, management and sustainability of LME goods and services, e.g. the Benguela Current Commission, the Interim Guinea Current LME Commission, and the planned YSLME Commission.

MAJOR OBSTACLES:

General Obstacles include:

- Insufficient data and information on marine ecosystem structure, function, and processes as well as lack of national capacity to develop a more comprehensive and technical EBM and ICM.
- Institutional and sectoral resistance and inertia and lack of appropriate decision frameworks to manage the complexity, uncertainty, and trade-offs inherent in EBM/ICM; sectoral institutions still dominate in national governments and in the UN system.
- The economic and social values of coastal areas and oceans are often not sufficiently documented and disseminated. The result of this is often a lack of political will at the national level as the benefits that would accrue to marine industries need to be demonstrated
- Limited funding for ecosystem science and management institutions is often the greatest challenge and appears to be a universal issue, particularly in light of the existing world economic situation.
- Lack of widespread adoption of integrated ecosystem assessments as a framework for implementing EBM/ICM. It is widely recognized that an integrated approach to the governance, ecosystem science and decision making is required to undertake complex management requirements of EBM/ICM.

At the National level, institutional inertia and competing bureaucratic competences are often the key obstacles as well as lack of resources within developing countries in particular. Support from the multilateral development agencies has been a key driver in many developing countries.

At the Regional level, there are also problems relating to allocation of political and legal competence to relevant institutions. Among the Regional Seas organisations, ICM/EBM has been slow to develop, although progress is being made.

At the international level, current controversies among the governments over appropriate responses to challenges to ABNJ are also an obstacle to the development of a comprehensive global response."

SOME BRIGHT SPOTS:

- Over 100 countries have established ICM programs (some of these need to be scaled up to encompass a nation's entire coastal zone)
- About 40 countries are developing or are implementing integrated national ocean policies covering their 200-mile EEZs; prominent examples include Australia, Brazil, Canada, China, France, India, Jamaica, Japan, Mexico, New Zealand, Norway, the Philippines, Portugal, Russian Federation, UK, US, and Vietnam;
- EBM/ICM has been applied in regional areas as well—especially in: the 20 Large Marine Ecosystem Programmes supported by the Global Environment Facility and implemented by 110 countries around the world, in the 18 Regional Seas Programmes, and in various regional groupings: The European Union, with its pioneering work on the European Integrated Maritime Policy; the East Asian Seas region through the work of PEMSEA (Partnerships in Environmental Management for the Seas of East Asia), the South Pacific Islands region through the Pacific Islands Regional Ocean Policy.

Encouraging and supporting implementation and fostering dialogue

While accountability and monitoring progress are important, providing encouragement and support for those who have made commitments is also vital for their eventual success. One way to undertake this is through creating dialogue between those who have made commitments, particularly commitments focusing on similar issues. This dialogue should take place in an environment where commitment makers can ask questions and receive advice if things are not working as expected, share lessons learned during implementation, provide encouragement and celebrate successes. Providing this type of environment would require both a platform for dialogue and a group of peers working on similar topics.

The platform for dialogue might be built around the online registry of commitments, and would require ability for users to chat, post questions and advice, updates, lessons learned and other relevant information. The posts could be grouped in a way that provides for easy searching around specific topics.

For the dialogues to become meaningful, the commitments could be grouped into clusters by thematic area and/or SDG 14 target. The resulting communities of practice could interact around common topics and provide progress reports through regular virtual meetings. Some structure to the work of the communities, as well as regular prompting (possibly by an established group leader or facilitator), would ensure that the dialogue stays active. This type of approach is already being planned as part of the commitment follow-up, and the next section provides suggestions about potential clusters of thematic areas.

In addition to the virtual dialogue, regular in-person meetings are important for sharing of initiatives and experiences and to foster an environment of working together for a common goal. Such meetings of communities of practice could be organized at the margins of workshops and conferences related to the SDGs and oceans. Regular conferences related to fisheries, ocean conservation, marine protected areas and sustainable development already take place regularly, and the communities of practice could be scheduled to get together during such events. These conferences and meetings are organized by diverse stakeholders (including UN entities, for example the Committee on Fisheries and the Informal Consultative Process on Oceans and the Law of the Sea; IGOs and NGOs, for example the International Marine Protected Areas Congress, the World Conservation Congress and the World Conference on Marine Biodiversity; and by academia, for example conferences on ocean acidification and ocean sciences). Organizing meetings of communities of practice, or dialogues about SDG 14 in general, in the context of such conferences could serve to increase stakeholder participation and ownership beyond those who usually attend United Nations meetings. Standalone

meetings of those who have made voluntary commitments, or of communities of practice, can also be organized, though these carry more of a financial burden.

Building and keeping momentum

It is important that momentum is not lost on the implementation of the commitments and on making progress towards achievement of SDG 14 and its targets. This requires both immediate and regular long-term follow-up, as well as strong leadership. The communities of practice (as outlined above) can keep dialogue alive and build momentum amongst specific thematic areas. In addition, a broader global discussion including all commitment makers and other stakeholders could be organized. International summits on sustainable development and the next Ocean Conference could be used as opportunities to provide for global dialogue, for building momentum and for registering additional commitments, particularly in areas where gaps currently exist. Presentation of both progress reports and reports on gap areas could be undertaken at these occasions.

12. Identifying clusters of Voluntary Commitments

For purposes of facilitating communication between those that have made commitments, as well as for improving monitoring and follow-up, it might be useful to identify clusters of VCs and to form communities of practice around these clusters. This section provides an overview of potential clusters based on issue, ecosystem, SDG 14 target and type of action.

1. Mangroves and related ecosystems: The importance of mangroves is reflected in the more than 90 voluntary commitments that relate to the restoration, rehabilitation, protection and management of mangroves and associated ecosystems. These voluntary commitments reflect the vital role that mangroves play in supporting livelihoods of coastal communities, sustainable fisheries, resilience to the impacts of climate change and sequestering atmospheric CO_2. Specific commitments relate to topics such as development of protected areas, reforestation, mapping, economic valuation, tourism, financing, mangrove livelihoods, climate adaptation and blue carbon. This cluster would cover aspects of several SDG14 targets, including 14.1, 14.2, 14.4, 14.5, 14.7 and 14.a.

2. Coral reefs: Over 90 voluntary commitments related to coral reefs, including activities aimed at their protection, management and restoration, as well as to maintaining tangible benefits to coastal communities from coral reef fisheries and tourism. The commitments

covered both local and global initiatives, including development of MPAs and locally managed marine areas, sustainable coral reef fisheries, tourism, public education and awareness, replanting corals, and protecting them from impacts of ocean acidification and other climate impacts. This cluster would cover aspects of several SDG14 targets, including 14.1, 14.2, 14.4, 14.5, 14.7 and 14.a.

3. Ocean acidification: Approximately 70 voluntary commitments relate to ocean acidification, either as their main component, or as part of a broader range of management and conservation actions. Specific activities include scientific research and research collaborations, building resilience against impacts of ocean acidification, and activities related to mitigation and carbon sequestration. This cluster would primarily cover SDG 14.3, but many commitments also relate to other targets such as 14.a and 14.2.

4. Area-based management (including MPAs, MMAs, LMEs, marine spatial planning etc.): More than 130 voluntary commitments relate to marine protected areas, and over 30 commitments include marine spatial planning. Large marine ecosystems (LMEs) feature in 20 commitments, while at least five include community-based marine management. Many of these commitments include increasing the area protected or sustainably managed. Some also relate to improved governance and management, financing, scientific research and capacity building. While this cluster primarily relates to SDG 14.5, it also covers aspects of other targets, including 14.2, 14.a, 14.4, 14.7 and 14.c.

5. Sustainable fisheries: Sustainable management of fisheries was one of the most common activities registered in the voluntary commitments. More than 430 commitments touch on fisheries either as a single goal or as part of a suite of activities aimed at improving environmental sustainability, livelihoods and economies. These activities include commitments to sustainable seafood, to implementation of the Port State Measures Agreement and Ecosystem Approach to Fisheries, strengthening of Regional Fisheries Management Organizations (RFMOs), and community empowerment and market access for small-scale fishers. Because of the large number of commitments, this cluster could be further broken down to offshore fisheries and small-scale fisheries. This cluster primarily covers targets 14.4, 14.b and 14.6, but also contains aspects of 14.7, 14.1, 14.5, and 14.c.

6. Pollution reduction: Over 540 voluntary commitments relate to the reduction of marine pollution, demonstrating the importance of this activity. Most commonly, they aim to reduce pollution from plastics through bans on plastic products, recycling and coastal cleanups. Commitments relating to nutrient management and controlling other sources of pollution were also common. Because of the large number of commitments, this cluster could be further broken down to marine litter; nutrients and other land-based sources; and sea-based pollution, which might include management of invasive species from ballast water and hull fouling. This cluster primarily relates to SDG 14.1, but also covers aspects of other targets.

7. Sustainable blue economy: Over 330 voluntary commitments relate to some aspects of sustainable ocean-based economic development, with the development of a comprehensive blue economy the aim of close to fifty commitments, and the related concept of blue growth included in over twenty commitments. Sustainable tourism, aquaculture, shipping, fisheries and renewable energy were common components of these commitments. Many commitments also focused on oceans as central to sustainable development globally, and particularly for Small Island developing States (SIDS) and coastal least developed countries (LDCs). This cluster primarily relates to SDG 14.7, but contains aspects of all other SDG 14 targets.

8. Scientific research, traditional knowledge, education and public awareness: Increasing scientific knowledge and related capacity building are a component of over 540 voluntary commitments. They included activities related to scientific research, developing capacity for research, training and professional development, access to data and transfer of marine technologies. At least six commitments will rely to some degree on traditional knowledge in their implementation. Education and awareness-raising were part of approximately 200 commitments. This cluster primarily relates to SDG 14.a, but as a cross-cutting topic is relevant to all other SDG 14 targets.

9. Implementation of international law as reflected in UNCLOS: More than 270 commitments relate to some aspects of implementing international law as reflected in UNCLOS, either as a standalone topic or as part of a diverse array of ocean management activities, and as a basis for cooperation among States and organizations and the sustainable development of ocean resources. Aspects of this commitment relate primarily to SDG 14.c, but are also cross-cutting to all other SDG 14 targets.

13. Conclusions

This document has provided a summary and an analysis of the Ocean Conference voluntary commitments. As new commitments are being continuously registered, it is expected that this analysis will also require a periodic update. In addition, the financial information related to the voluntary commitments requires further work, and will be updated as information becomes available.