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Initial Views of Global Organizations on Marine Area-Based Conservation Measures and the Convention on Biological Diversity's Post-2020 Framework

This submission is in response to CBD Notification 2018-063, and specifically focuses on marine area-based conservation measures and Aichi Target 11. Our groups represent a range of global organizations which have contributed to the implementation of this target. Positions on any one topic outlined here represent areas of convergence and individual groups may have additional views on specific parts of this document and may comment further in separate submissions.

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SUMMARY OF RECOMMENDATIONS

With respect to the scale and scope of actions necessary to make progress toward the 2050 Vision as part of the Post-2020 Global Biodiversity Framework, CBD Parties should:

> **Recommendation #1**: Protect at least 30% of the planet's key coastal and marine areas by 2030, through effectively and equitably managed, ecologically representative and well-connected systems of fully or highly protected marine protected areas (MPAs)*, as well as other effective area-based conservation measures (OECMs) which ensure at least equivalent conservation outcomes and promote thriving wildlife and ecosystems, building on Aichi Target 11.
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> **Recommendation #2**: Sustainably manage the coastal and marine areas outside of those covered by fully or highly protected marine protected areas (MPAs), as well as other effective area-based conservation measures (OECMs) which ensure at least equivalent conservation outcomes, thus adding up to 100% of the ocean sustainably managed to prevent significant adverse impacts on the coastal and marine ecosystems.
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> **Recommendation #3**: Ensure that MPAs and OECMs are well-managed, effective, offering positive and sustained long-term outcomes for the in situ conservation of biodiversity and that OECMs attributed to Aichi Target 11 or the new post-2020 marine spatial target follow all relevant guidelines and offer conservation outcomes at least equal to those of fully or highly protected MPAs.

With respect to the possible structure for the post-2020 biodiversity framework, CBD Parties should:

> **Recommendation #4**: Develop a thematic oceans goal, including sub-targets, to encapsulate marine objectives and priorities - currently spread among several Aichi targets - to facilitate alignment with and implementation of Sustainable Development Goal 14 ("Conserve and sustainably use the oceans, seas and marine resources for sustainable development").

* An MPA is "fully protected" if no extractive or destructive activities are allowed and other impacts are minimized to the extent possible and it is "highly protected" if only light extractive activities and impacts are permitted.[1]

INTRODUCTION: THE OCEAN IN CRISIS AND THE NEED FOR HIGH AMBITION

The ocean is home to a rich variety of marine life and its ecosystems, some of which provide essential functions that directly benefits humankind including production of half of the oxygen we breathe,[2] sequestration of carbon, and the provision of pharmaceutical compounds, coastal defenses, food and jobs for billions of people.[3]

The ocean and its precious resources are increasingly under threat from unsustainable human activities, such as over-fishing, habitat destruction, oil and gas extraction, and other potential future exploitation. According to the UN Food and Agriculture Organization (FAO), the percentage of stocks fished at unsustainable[4] levels has tripled from 1974 to 2015.[5] This is further compounded by the far-reaching effects of climate change and ocean acidification, including rising sea surface temperatures, widespread destruction of coral reefs, loss of productive coastal habitats to sea level rise and pH decreases, decreased ocean productivity and decreasing dissolved O_2, shifts in species distribution, changes in ocean chemistry, and other effects. Noise, chemical, and plastic pollution further threaten to overwhelm sensitive ecosystems and species.

Together, these impacts have potentially catastrophic and in some cases irreversible negative impacts on vulnerable fisheries, key habitats, and the people who depend on them.[6] At the 15th meeting of the Conference of the Parties in Beijing, CBD Parties have an opportunity to secure a strong new global biodiversity framework that sets clear and ambitious long-term goals and targets that can reverse the species extinction crisis and build resilience of ecosystems to adapt to a changing climate. Setting a new ambitious marine spatial target that offers meaningful conservation outcomes is one important contribution to ensuring our planet's long-term health for future generations. A range of other solutions should accompany the Post-2020 Biodiversity Framework and our individual groups may submit input on this separately.

THE SCALE AND SCOPE OF ACTIONS NEEDED IN THE MARINE REALM TO MAKE PROGRESS TOWARD THE 2050 VISION

Recommendation #1: Establishing effective protection of at least 30% of coastal and marine areas by 2030.

Aichi Target 11[7] has become the global benchmark for the percentage of land and water that should be protected, in part calling for 10% of coastal and marine areas to be conserved and outlining essential qualitative elements to be met.

While it has arguably been one of the most effectively implemented targets - with different analyses suggesting that between 4.8%[8] and 7.45%[9] of the ocean is covered by MPAs at various stages of implementation[10] - much more is needed in terms of ensuring that MPAs go beyond "paper parks" in the ocean. Effective and equitable management, ecological representativeness, connectivity of MPAs, and the integration of MPAs into the wider seascape are critical to achieving meaningful and enduring conservation of marine biodiversity.

Given what is at stake, it is critical that a new spatial marine target reflects best-available science, traditional knowledge, and the precautionary principle in line with *Resolution 50 on Increasing Marine Protected Area Coverage for Effective Marine Biodiversity Conservation*, adopted at the 2016 IUCN World

Conservation Congress.[11] The resolution stresses that effectively managed MPAs, as provided for in IUCN's Protected Area Management Categories and Governance types,[12] including highly protected reserves, are important tools that help conserve the critical habitats, ecosystem services and biodiversity that support human life. The Resolution further "ENCOURAGES IUCN State and Government Agency Members to designate and implement at least 30% of each marine habitat in a network of highly protected MPAs and other effective area-based conservation measures, with the ultimate aim of creating a fully sustainable ocean, at least 30% of which has no extractive activities, subject to the rights of indigenous peoples and local communities."[13]

Protecting at least 30% of the planet's coastal and marine areas is the minimum that many scientists say is needed to maintain a healthy and sustainably managed ocean. A 2016 study[14] from O'Leary et al. concluded that "The UN's 10% target appears insufficient to protect biodiversity, preserve ecosystem services, and achieve socioeconomic priorities." It analysed 144 studies and found that more than half concluded that over 30% of the ocean must be set aside (average of 37% and median of 35% protected) to safeguard biodiversity, ensure population connectivity, avoid collapse of fisheries and maximize fisheries yield, and guard against climate change.

Additionally, the post-2020 marine objectives must also include qualitative elements, among others, by prioritizing ecologically representative areas that are especially critical for biodiversity and ecosystem services. In 2018, the International Union for Conservation of Nature (IUCN) compiled a synthesis[15] of quantitative and qualitative elements that are needed to achieve conservation goals and to aid governments, agencies, community-based organizations, donors, and MPA managers in the development and implementation of networks of effective MPAs. According to the IUCN, the ecological and socio-economic benefits of MPAs increase with the level of protection and effective management, as well as a reduction in intensity of use and exploitation.[16]

Recommendation #2: Sustainably managing all marine and coastal areas outside MPAs and OECMs by 2030.

While a target of at least 30% coverage through fully or highly protected MPAs, or OECMs offering at least equivalent conservation outcomes, is critically important, this alone will not achieve the 2050 Vision. A target to ensure that the remaining parts of the marine environment are sustainably managed is essential to avoid a scenario in which the health of coastal and marine areas outside MPAs and OECMs continues to deteriorate. Thus, a complimentary target should be adopted requiring all human activities outside MPAs and OECMs to be assessed and managed to prevent significant adverse effects on the marine environment, adding up to 100%.

Recommendation #3: Ensuring quality and effectiveness of MPAs and OECMs that contribute toward the post-2020 spatial marine target.

Marine Protected Areas

A growing body of knowledge about biodiversity must support existing MPA designations and inform the identification of new MPAs as part of the new post-2020 framework. According to Edgar (2014), MPAs that have the greatest impact share a number of characteristics: (1) fully protected with no extractive activities permitted, (2) well-enforced, (3) older than 10 years, and (4) larger than 100 square kilometers (38 square miles).[17] Effective MPAs are well-resourced in terms of staff capacity and budget and include all stakeholders in design and decision-making.[18] MPAs should be considered as one element in a holistic

approach to ocean conservation, which also includes integrated assessment and management of human activities in the ocean to prevent significant adverse effects on the marine environment and allow for restoration.

If Parties to CBD work to designate representative, ecologically coherent, and well-managed networks of fully or highly protected MPAs, they may see benefits similar to those already observed around the world, including:

- **Connectivity**. The health of marine life depends on how well populations and critical ocean ecosystems are biologically and ecologically connected, among other factors. As individuals within a species move to other areas and reproduce, they maintain and expand population connectivity. MPAs that are contiguous or incorporate different and representative ecosystems—for example, an area that protects essential fish habitat such as mangrove-sea grass-reefs as well as open ocean—can maintain the interaction among marine communities.[19] Large MPAs that encompass multiple habitats, or networks of MPAs that protect migratory pathways and key habitats, can better ensure the connectivity of populations, which can then help build resilience in a changing environment[20] – due to various habitat complexities.

- **Benefits to migratory species.** Fully or highly protected areas used by migratory species for reproduction or as nurseries could prove highly effective for conservation.[21] Species can exhibit increased vulnerability when they form groups to reproduce,[22] feed, or migrate.[23] Protecting these habitats through large-scale MPAs can reduce threats linked to specific areas in the same way that small protected areas are used to protect key foraging habitats for some species of migratory birds or nesting beaches for marine turtles.[24]

- **Climate resilience and adaptation**. Mounting scientific research indicates that fully or highly protected marine areas promote the preservation of functional ecosystems that can help build resilience to CO2 and climate-related disturbances including ocean acidification, sea level rise, increased storm intensity, shifts in species distribution, and decreased productivity and oxygen availability.[25] Safeguarding mangrove forests and coral reefs in coastal areas, for example, can provide buffers against storms, while protected mangrove forests, wetlands, saltmarsh, and seagrass aid in long-term carbon storage and sequestration.[26] By protecting and enhancing biodiversity in the ocean, MPAs can lead to more resilient ecosystems and in turn help secure the well-being of communities that depend on healthy oceans.

- **Enhancing fisheries.** Fisheries benefit from the creation of MPAs. Thriving populations of fish within fully or strongly protected areas are more likely to supply adult and larval fish to the surrounding ocean.[27] The spillover of animal life from the MPA then sustains or increases the catch of nearby fisheries.[28] This is also true of sustainable artisanal fisheries located next to fully protected zones within a country's exclusive economic zone (EEZ). Effectively placed MPAs have been shown to increase fish biomass and productivity and offer a path to recovery for predatory species such as tunas and sharks.[29] Protecting key spawning or nursery areas used by vulnerable species can also be very effective.[30] Over time, fully protected areas result in more and bigger fish and greater biodiversity.[31] These benefits accrue in different climates and have been observed in tropical and temperate regions.[32]

- **Economic benefits**. There is a strong economic case for representative, ecologically coherent and well-managed networks of MPAs as they can contribute economically to a variety of sectors, including

tourism.[33] A cost-benefit analysis of MPAs showed economic rates of return between 9% and 24% with an estimated net benefit (once known costs are taken into account) from increased ecosystem goods and services ranges from US$490 billion to US$920 billion.[34] A case study shows that in Palau divers pay higher prices to swim in protected areas due to abundance of larger species, and the economic value of two sample species – napoleon wrasse and bumphead parrotfish – is estimated to be 100 to 1,000 times more than their market value if caught.[35] In another example, since 2005 US$10 million has been invested in research in Hawaii's Papahānaumokuākea Marine National Monument.[36]

Additional sources of information which may complement existing MPA designations and inform the identification of new MPAs include Ecologically or Biologically Significant Marine Areas (EBSAs), Important Marine Mammal Areas (IMMAs), and Key Biodiversity Areas (KBAs) including Important Bird and Biodiversity Areas (IBAs), among others.

Other Effective Area-Based Conservation Measures

The term OECM first appeared in Aichi Target 11 in 2010. The OECM definition was adopted at COP14 in 2018 and states "a geographically defined area other than a Protected Area, which is governed and managed in ways that achieve positive and sustained long-term outcomes for the in situ conservation of biodiversity,[37] with associated ecosystem functions and services and where applicable, cultural, spiritual, socio–economic, and other locally relevant values."[38]

OECMs can play a complimentary role in conserving essential biodiversity and ecosystem services. While governments have been the primary actors in establishing and managing protected areas, OECMs offer an opportunity for other stakeholders - including civil society, the private sector, indigenous peoples, and local communities - to play a greater role in the establishment and management of such key areas for the purposes of conservation.

As CBD Parties proceed in identifying OECMs and attributing them toward the current 10% target under Aichi Target 11 and the post-2020 target to be adopted at COP15, the voluntary guidance and technical advice on OECMs adopted at COP14, as well as the final version of the *(Draft) IUCN Guidelines for Recognising and Reporting Other Effective Area-Based Conservation Measures*,[39] must be applied. The application of such guidance can help ensure that area-based conservation measures that do not offer long-term in situ conservation of biodiversity are not mistakenly attributed toward the CBD marine target under the category of OECMs. Such measures may best be attributed to other targets such as Aichi Target 6 or its potential future iteration.

For example, the draft IUCN guidelines on OECMs explain:

> "…many fisheries closures apply to specific geographic areas and therefore are area-based measures, but may only be closed to the fishing of specific depleted commercial fish species, the use of certain habitat-damaging or non-selective gear types, or at certain times of year when vulnerable species are present at a vulnerable life stage (e.g., spawning aggregations). They may continue to allow fishery and non-fishery activities (e.g., seismic testing, oil drilling), as long as such activities do not compromise the purposes for which they have been established. As such, they may be effective tools in helping to ensure that fisheries are managed sustainably (the objective of Aichi Target 6), without necessarily achieving the in-situ conservation of biodiversity (the objective of Aichi Target 11)."[40]

The Post-2020 Biodiversity Framework must ensure that if and when a new ambitious spatial marine target is adopted – and this paper calls for at least 30% of the coastal and marine areas to be protected by 2030 – that any MPAs or OECMs which count toward this target must meet the above-outlined characteristics and guidelines.

STRUCTURE OF MARINE ELEMENTS FOR THE POST-2020 BIODIVERSITY FRAMEWORK

Recommendation #4: Developing a thematic oceans goal to encapsulate marine objectives and priorities that are currently spread among several Aichi targets.

Presently, various elements, each of which contribute to ensuring a healthy, productive, and resilient ocean, are separated between different Aichi targets. For example, Aichi Target 3 addresses eliminating harmful fisheries subsidies, Aichi Target 6 covers sustainable fishing, Aichi Target 10 addresses coral reefs, and Aichi Target 11 focuses on area-based conservation measures. For the new Post-2020 Biodiversity Framework, we recommend a thematic approach that would aggregate coastal and marine-related content under one oceans goal, an "umbrella" under which more detailed targets can be included.

This approach could help streamline monitoring and reporting, align with the Sustainable Development Goal 14 ("Conserve and sustainably use the oceans, seas and marine resources for sustainable development"), focus Parties on a whole of ocean approach covering 100% of the marine areas, and further ensure all elements work together to secure a healthy ocean.

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[1] Lubchenco et al., "Marine Protected Areas: A Framework for Clarity and Transparency to Accelerate Global Progress in Protecting the Ocean." As of December 2018, experts – led by Dr. Jane Lubchenco – have agreed on a single framework to simplify and clarify (1) the level of protection afforded by an MPA, (2) the likely outcomes associated with each level of protection, and (3) key steps in the process of creating an MPA. This framework recognizes four categories of protection: fully, highly, lightly, and minimally. The final framework is still in the drafting stages and will be made available soon. Please see this related webinar titled "Sharpening Our Focus on MPAs for 2020 and Beyond": https://www.openchannels.org/webinars/2018/sharpening-our-focus-mpas-2020-and-beyond.

[2] U.S. National Oceanic and Atmospheric Administration, "Marine Organisms Produce Over Half of the Oxygen That Land Animals Need to Breathe." https://oceanexplorer.noaa.gov/facts/oceanproduction.html.

[3] The World Bank, "Brief: Oceans, Fisheries and Coastal Economies." Sep. 25, 2018. http://www.worldbank.org/en/topic/environment/brief/oceans.

[4] FAO News, "Is the Planet Approaching 'Peak Fish'? Not So Fast, Study Says." Jul 9, 2018. http://www.fao.org/news/story/en/item/1144274/icode/. (33.1% of major commercial fish species are being fished at biologically unsustainable levels, as compared to just 40 years ago when just 10% were being fished unsustainably.)

[5] U.N. Food and Agriculture Organization, "The State of World Fisheries and Aquaculture 2018." 2018. http://www.fao.org/documents/card/en/c/I9540EN.

[6] Ove Hoegh-Guldberg et al., "Coral Reefs Under Rapid Climate Change and Ocean Acidification," *Science* 318, no. 5857 (2007): 1737-42, http://science.sciencemag.org/content/318/5857/1737; Ove Hoegh-Guldberg and John F. Bruno, "The Impact of Climate Change on the World's Marine Ecosystems," *Science* 328, no. 5985 (2010): 1523-28, http://science.sciencemag.org/content/328/5985/1523.

[7] Id.

[8] The MPA Atlas, a project of the Marine Conservation Institute which seeks to clarify and visualize the level of protection and implementation of the world's MPAs, finds that only approximately 4.8% of the global ocean is protected in MPAs (as of December 12, 2018). http://www.mpatlas.org/.
[9] Protected Planet is the most up to date and complete source of information on protected areas, updated monthly with submissions from governments, non-governmental organizations, landowners and communities. It is managed by the United Nations Environment World Conservation Monitoring Centre (UNEP-WCMC) with support from IUCN and its World Commission on Protected Areas (WCPA). Protected Planet finds that 7.44% of the ocean is covered by protected areas (as of December 12, 2018). https://www.protectedplanet.net/marine.
[10] Enric Sala et al., "Assessing Real Progress Towards Effective Ocean Protection," *Marine Policy* 91 (2018): 11-13, https://www.researchgate.net/publication/324868428_Assessing_real_progress_towards_effective_ocean_protection. Updated with MPAtlas-vetted WDPA data, Nov. 2018 courtesy B. Pike & R. Moffitt.
[11] International Union for Conservation of Nature World Conservation Congress, WCC-2016-Res-050-EN, "Increasing marine protected area coverage for effective marine biodiversity Conservation." 2016. https://portals.iucn.org/library/sites/library/files/resrecfiles/WCC_2016_RES_050_EN.pdf.
[12] International Union for Conservation of Nature, "Protected Area Categories." https://www.iucn.org/theme/protected-areas/about/protected-area-categories.
[13] International Union for Conservation of Nature World Conservation Congress, WCC-2016-Res-050-EN, "Increasing marine protected area coverage for effective marine biodiversity Conservation." 2016. https://portals.iucn.org/library/sites/library/files/resrecfiles/WCC_2016_RES_050_EN.pdf.
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[15] International Union for Conservation of Nature World Commission on Protected Areas, "Applying IUCN's Global Conservation Standards to Marine Protected Areas (MPA)." 2018. Version 1.0. Gland, Switzerland. https://www.iucn.org/sites/dev/files/content/documents/applying_mpa_global_standards_final_version_050418.pdf.
[16] Id.
[17] Graham J. Edgar et al., "Global Conservation Outcomes Depend on Marine Protected Areas with Five Key Features," *Nature* 506, no. 7487 (2014): 216-20, https://www.nature.com/articles/nature13022.
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