



# The Because the Ocean Initiative

## Responsibly Addressing the Ocean in the Context of Climate Ambition

Submission to the Ocean Dialogue at the 52<sup>nd</sup> Session of SBSTA (June 2020)

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In accordance with COP25 Decision 1 Chile Madrid Time for Action, the Secretariat of the Because the Ocean initiative submits the following input to the Ocean Dialogue to be held during SBSTA52 in June 2020.

This submission provides an overview of ways in which ocean measures can be taken up in NDCs and other climate mitigation and adaptation strategies. **Specific recommendations are provided on pages 4-5** covering: mitigation (protection of “blue carbon” ecosystems, and promoting ocean-based renewable energy); adaptation (with a focus on marine protected areas); and hybrid solutions for both mitigation and adaptation (sustainable fisheries and aquaculture, and greening of the shipping industry).

It concludes by proposing to launch an **annual Expert Ocean Dialogue**, or a **Glasgow (informal) Ocean Work Programme** at COP 26, with suggestions for what this might entail.

Prepared with support from the Prince Albert II of Monaco Foundation, this submission reflects views of the secretariat of the Because the Ocean initiative, and does not necessarily represent the views of parties that have endorsed the Because the Ocean Declarations.

### Background

The Because the Ocean initiative is focused exclusively on the climate/ocean nexus, and since its launch in Paris on the eve of COP 21 its declarations have been endorsed by 39 governments. With an eye towards the Blue COP in 2019, the Secretariat of the initiative organized a series of five

workshops to invite a wide range of views from governments and non-governmental stakeholders on how best to harness the power of the ocean and its ecosystems to protect the climate and increase the resilience of coastal communities. These workshops were held in Washington DC, USA (September 2016); Bonn, Germany (November 2017); Santiago, Chile (October 2018); Madrid, Spain (April 2019); and Suva, Fiji (May 2019).

The result of this consultation was compiled in the report “Ocean for Climate: Ocean-related Measures in Climate Strategies (Nationally Determined Contributions, National Adaptation Plans, Adaptation Communications and National Policy Frameworks).” The report contains a menu of ocean-related measures for climate strategies; there is no one-size-fits-all solution applicable to every country. The full report is attached to this submission for consideration by Parties, and can be found online at [https://www.becausetheocean.org/wp-content/uploads/2019/10/Ocean\\_for\\_Climate\\_Because\\_the\\_Ocean.pdf](https://www.becausetheocean.org/wp-content/uploads/2019/10/Ocean_for_Climate_Because_the_Ocean.pdf). Hard copies of the booklet are also available upon request at [info@becausetheocean.org](mailto:info@becausetheocean.org)

## Responsibly Addressing the Ocean in the Context of Climate Ambition

For the purposes of this dialogue, the following points are emphasized:

1. The health and ultimately the very survival of the ocean and those who depend on it requires limiting global temperature rise to 1.5°C. In addition to impacts from warming, CO<sub>2</sub> emissions are causing ocean acidification, altering the chemical balance of seawater that marine life depends upon for survival. Safeguarding both the climate and ocean can only be achieved through rapid phase out of fossil fuels and the urgent reduction of other greenhouse gas emissions. Complementary action is urgently needed to protect the marine environment, and to enhance its ability to sequester CO<sub>2</sub>. Including ocean protection measures in NDCs or other climate strategies must not be seen as a means to offset emissions reduction obligations in other sectors.

But different ocean protection measures – both activities occurring within the ocean, and protection of varying ecosystem functions provided by the ocean - can play a role in mitigation, adaptation and fostering resilience. For example, Parties can: accelerate the development of clean energy production (blue energy) and propulsion (green shipping); increase the protection of blue carbon ecosystems (as understood in the IPCC SROCC when referring to coastal ecosystems<sup>1</sup>) and “climate smart” marine protected areas; and anticipate and prepare for climate impacts on fisheries and coastal communities.

2. Coastal and marine ecosystems often serve as the first line of defence in protecting low-lying communities from the impacts of climate change, including storm surges, king tides and extreme weather events. Protection, enhancement and regeneration of three key coastal ecosystems in particular – mangroves, tidal marshes, and seagrass meadows, collectively often referred to as “blue carbon,” – provide mitigation, resilience, biodiversity and

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<sup>1</sup> **Blue carbon:** All biologically-driven carbon fluxes and storage in marine systems that are amenable to management can be considered as blue carbon. Coastal blue carbon focuses on rooted vegetation in the coastal zone, such as tidal marshes, mangroves and seagrasses. These ecosystems have high carbon burial rates on a per unit area basis and accumulate carbon in their soils and sediments. They provide many non-climatic benefits and can contribute to ecosystem-based adaptation. **There is current debate regarding the application of the blue carbon concept to other coastal and non-coastal processes and ecosystems, including the open ocean.** See also Carbon cycle, Coast, Ecosystem service and Sequestration (from SROCC glossary).

adaptation co-benefits. According to the IPCC, an estimated 0.5% of current total emissions from all sources could be removed by coastal ecosystems. If we are to achieve net-zero emissions by 2050, protecting and restoring natural habitats will be a necessary complement to ending our use of fossil fuels. With regard to mitigation, it should be noted that seagrass, mangroves and saltmarshes are the only marine ecosystems recognised by IPCC methodologies for their quantifiable mitigation value, and that per unit area coastal marine habitats have a more efficient sequestration capacity than terrestrial habitats.

3. Countries bordering the ocean derive many benefits from its proximity: tourism, fishing and shipping to name a few. But for those living on or near the ocean, climate change is increasingly understood to be an existential threat. For low-lying coastal nations whose cultures, traditions, spirituality and livelihoods are inextricably linked to the sea, implementing ecosystem-based solutions to boost resilience provides opportunities to work with the ocean rather than simply fighting against it. Already today, with only 1°C of global temperature rise, many countries and communities are facing difficult choices about how to manage changing coastlines – along with the infrastructure, housing, etc. located there.

In the Mediterranean region, for example, extreme weather patterns are triggering debates about whether it is wise to continue to rebuild costly coastal infrastructure repeatedly damaged by the increasing number of storms of unprecedented severity, or whether to instead restore the coastline to something resembling its original natural state.

Coastal communities must be supported and empowered, including with the necessary financial resources, to make sound choices. Ultimately, a healthy ecosystem is more likely to be a resilient ecosystem.

4. Planting trees to promote climate resilience has garnered a great deal of attention in recent months, particularly with the launch of the World Economic Forum initiative to plant a trillion trees. Attention to nature-based solutions will continue to grow in 2020. The UK COP26 Presidency has announced that “nature” will be one of its five thematic focuses.<sup>2</sup> In addition the World Conservation Congress of the International Union for the Conservation of Nature (IUCN) will take place in Marseille, France starting on the closing day of SBSTA52, followed by the 15th Conference of the Parties to the Convention on Biological Diversity (CBD) in Kunming, China in October, 2020. In Davos, many were quick to point out that even the most ambitious tree-planting programme will do little to slow global warming in the absence of a rapid decline in fossil-fuel use, and the same could be said of course in relation to coastal ecosystem restoration.

There is nonetheless value in such programmes as long as they are additional to the rapid phase out of fossil fuels, and coastal ecosystems (mangroves, salt marshes, seagrasses, kelp beds and macroalgae) have some comparative advantages over purely terrestrial forests in this regard. Whereas in purely terrestrial forests most of the carbon is stored in above-ground biomass, in coastal ecosystems the largest carbon stores are found in soils as below-ground biomass and organic particles that accumulate from the water column.<sup>3</sup> Here, carbon stores are protected from remineralization and export and may remain so for millennia if no

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<sup>2</sup> Together with adaptation and resilience, energy transition, clean road transport, and finance.

<sup>3</sup> Fourqurean et al. 2012; Serrano et al. 2019

disturbance occurs.<sup>4</sup> Thanks to the accumulation of below-ground biomass (i.e. roots and rhizomes) and their capacity to favour particle sedimentation,<sup>5</sup> coastal ecosystems favour soil vertical accretion which likely enhances their capacity to act as long-term carbon sinks as, unlike terrestrial soils, their sediments would not get carbon saturated.<sup>6</sup>

Even actions such as protecting and restoring kelp and eelgrass —ecosystems with root systems that may not be ideal for carbon sequestration — can still improve water quality locally and provide refuge for marine species from acidified and other stressful conditions elsewhere. In some cases, these habitats have been shown to ameliorate and buffer against impacts of acidification in nearshore coastal waters, improving the growth and survival of species that are sensitive to ocean acidification.

In addition, as blue carbon ecosystems are submerged or partially submerged, they are not vulnerable to fires in the same way as terrestrial carbon sinks, which is a major cause of the release of stored carbon as CO<sub>2</sub>.<sup>7</sup> However, coastal ecosystems may become a source of CO<sub>2</sub> if they are degraded or transformed for other uses, as the loss of the canopy renders soil carbon stores vulnerable to erosion and remineralization.<sup>8</sup>

In the event of a forest fire, the CO<sub>2</sub> sequestration of terrestrial forests literally goes up in smoke. But in the event of extreme climate events such as hurricanes or other sources of mortality affecting coastal forests, carbon locked in the soil remains even if the CO<sub>2</sub> in the aerial biomass is lost. While there is still a risk of carbon being released due to soil erosion, coastal forests are relatively resilient. Thus protecting, restoring and expanding blue forests represents a significant complement to the protection of green forests in the context of climate mitigation.

It should also be noted, however, that measuring and attributing carbon stock changes in coastal ecosystems as a result of anthropogenic action is not as advanced as for terrestrial forests and ecosystems which have been studied for decades.

## Recommendations

As noted by HSH Prince Albert II of Monaco in the Foreword to the attached “Ocean for Climate” report, “The ocean has a major influence on climate change. It plays an essential role in climate regulation by absorbing more than 25% of CO<sub>2</sub> emissions and more than 90% of the excess heat due to global warming. Therefore, there can be no action to fight climate change and limit its impacts without looking at the ocean as a whole; its functioning in the climate system; the health of its ecosystems; its relationship to coastal communities; and all the economic activities that take place in and around it.”

The report divides its recommendations into three areas:

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<sup>4</sup> Mateo et al.1997

<sup>5</sup> Duarte et al.2013

<sup>6</sup> McLoed et al. 2011

<sup>7</sup> Canadell and Raupach, 2008

<sup>8</sup> Lovelock et al. 2017

**Mitigation:** Ocean-based measures or activities which serve to reduce emissions or sequester CO<sub>2</sub>. This section is focused on: measures to **protect, enhance and restore blue carbon ecosystems** (both those recognised by the IPCC for their quantifiable mitigation value, and additional ecosystems with broader potential); and policies to promote **ocean-based renewables** such as offshore wind, tidal, and wave energy. The report acknowledges the complexity of measuring the sequestration potential of additional blue carbon ecosystems beyond mangroves, seagrass and saltmarsh, and their links to anthropogenic action but calls for more scientific research in this area.

**Adaptation:** This section focuses on **Marine Protected Areas (MPAs), parks, reserves and sanctuaries as adaptation tools** designed to improve the long-term conservation of marine ecosystems and their biodiversity. Such measures can also deliver co-benefits to climate mitigation where they protect or enhance blue carbon systems. The report also emphasizes the importance of reducing pollution and other stressors that damage the health of marine and coastal ecosystems.

The report also highlights the need for coastal managers to have **good quality, local scientific data in order to plan effectively**. Such data is not only technical in nature; the science should also take account of **social issues** such as options for relocation of coastal communities, and the human and environmental consequences of doing so, including for the receiving communities.

**Other measures:** According to the IPCC, climate resilience depends on combining mitigation and adaptation measures. Since mitigation reduces the rate as well as the magnitude of warming, it also increases the time available for adaptation, potentially by several decades. Measures in this section of the report focus on **sustainable fisheries and aquaculture**, as well as the **greening of the shipping industry**.

## Possible Options Going Forward

The climate and the ocean are two sides of the same coin, and addressing the two in entirely separate silos risks losing sight of both threats and opportunities. Continued attention on the ocean within the context of the UNFCCC is therefore recommended.

One option could be the organisation of an **annual Expert Ocean Dialogue**, for example in the context of the Ocean Day of the Global Climate Action Agenda. Another option could be for COP26 to adopt a **“Glasgow (Informal) Ocean Work Programme.”** Regardless of the format that is ultimately agreed, the following remit should be considered:

1. Increase cooperation and linkages between the UNFCCC and other intergovernmental organizations and processes mandated to protect ocean biodiversity, or to regulate human activities at sea liable to have detrimental climate impacts (i.e. shipping, dredging, mining, coastal development, etc.);
2. Review action by Parties based on the recommendations contained in the IPCC Special Report on the Ocean and Cryosphere released in September 2019;
3. Monitor progress made in integrating ocean-related measures within climate strategies, including but not restricted to NDCs and NAPs;
4. As part of the global stock-take process, include ocean action as well as response of ocean indicators as part of the assessment of collective progress;
5. Recommend response strategies to ocean-based extreme weather events, sea level rise more generally, and their effects on coastal environments and communities;

6. Recommend and promote continued scientific research on the mitigation potential of protected blue carbon ecosystems, and the ways in which marine protected areas can be used for climate change mitigation and/or adaptation.
7. Receive inputs, proposals and requests from civil society organizations specialized in ocean management and conservation, including academia, sub-national authorities, and NGOs.
8. Provide support to developing countries for climate/ocean-related action, in the form of finance, capacity building and technology transfer.

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