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Executive Secretary  
UNFCCC  
Bonn  
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**RE: COP26 and the Ocean-Climate Nexus**

Dear Executive Secretary,

In the context of your preparations for UNFCCC's COP26 in Glasgow this year, I am addressing this letter to you to summarise the concerns and contributions of the global community that is working to reverse the ongoing decline in the Ocean's health. As you are aware, the decline is primarily attributable to burgeoning levels of anthropogenic greenhouse gas emissions, thereby tying the health of the Ocean directly to the outcomes of COP26.

In the sourcing of relevant content for this letter, I have consulted widely within the aforementioned community and promised them that this would be an open letter. I'm sure you will not mind that, in the service of transparency and inclusivity, I will be posting it on the UN Ocean Conference website, on my Twitter account, and across other mediums.

As this is an open letter, for the benefit of other readers I'm emphasising that much effort is now made within the UN system to ensure synergy between the forthcoming global conferences addressing Climate Change, Biodiversity Loss and the well-being of the Ocean. All are agreed that the days are gone when any one of these existential challenges can be meaningfully negotiated without bringing the other two to the table.

The hope of all those consulted is that the Ocean's critical role in Climate Change mitigation and adaptation will be integral to COP26 considerations, and that the conference's outcomes will include greatly enhanced commitments and resources to meet the challenges presented within the Ocean-Climate nexus. The challenges are summarised in the following points.

- (i) The Ocean is the great regulator of Climate, through the water cycle, oceanic circulation and the oceanic biological pump. It absorbs around 23% of annual emissions into the atmosphere of anthropogenic carbon dioxide (CO<sub>2</sub>). It has also absorbed more than 90% of the excess heat caused by anthropogenic greenhouse gases (GHG), with the top few metres of the Ocean storing as much heat as the planet's entire atmosphere. It must be understood by all that the constancy of these contributions and capacities has its limits. Over 80% of the Ocean area experienced at least one marine heatwave in 2020, and Ocean warming is now being observed at depths of 1000 metres. Many thresholds and tipping points are becoming apparent, with concurrent negative impacts on marine biodiversity and ecosystem services. As has been stated above, anthropogenic GHG emissions are the chief cause of the Ocean's accelerating and deleterious rates of deoxygenation, warming and acidification.

- (ii) Due to excess CO<sub>2</sub> emissions, the Ocean is acidifying at the fastest rate in the history of the planet. It will be extremely difficult, if not impossible, for many Ocean ecosystems and species to adapt to such a rapid change. Coupled with Ocean warming, escalating acidification is bringing the survival of coral reefs into question. The IPCC has reported that 99% of coral will be lost when global temperatures go through the dreaded line of 2°C, which is deeply concerning at a time when the WMO reports we are currently on a path to over 3°C by the end of this century. As bunkers of marine biodiversity, coral reefs are essential elements of the Ocean's health, and the latter is vital to the health of Planet Earth. Since it is apparent that human security is closely related to the fate of coral, the relationship should be clearly addressed at COP26.
- (iii) As well as acidification, the Ocean is increasingly experiencing deoxygenation, changes to circulation of currents, dramatic melting of sea ice, marine life moving away from the tropics, and through warming of sea surface temperatures, increased frequency and intensity of tropical cyclones, and rising sea levels. The IPCC's Special Report on the Ocean and Cryosphere states that sea level rise is accelerating at an unprecedented rate and that sea level rise of two metres by 2100 cannot be ruled out. Marine ecosystems such as mangroves, seagrass meadows and saltmarshes are in terms of area covered, ten times more effective at sequestering carbon dioxide than terrestrial forests. In spite of their massive sequestration benefits to us, human activity is destroying these coastal habitats at an alarming rate; so that protection of these blue carbon assets must be top of mind for both Climate and Ocean action. What the Ocean gives, it can take away; and with this in mind, COP26 is called upon to demand preservation and restoration of the Ocean's blue carbon assets.
- (iv) Many human activities on and in the Ocean have a direct effect on Climate Change, for example bunker-fuelled propulsion of global shipping fleets, the use of destructive fishing gear, as well as emerging seabed mining techniques. A recent study published in the scientific journal Nature, proposes that the prevalent fishing method of "bottom trawling" of the seafloor releases more carbon dioxide than the global civil aviation industry. It is important to note that over-fishing and marine pollution have knock-on negative consequences for the functioning of the oceanic biological pump and thereby the sequestration of carbon. Along with coastal wetlands, the carbon sequestration properties of marine animals are being steadily diminished by human activities and habitat destruction. The High Level Panel for a Sustainable Ocean Economy has demonstrated that Ocean-based mitigation options could reduce GHG emissions by nearly 4 billion tonnes of CO<sub>2</sub> per annum in 2030 and by more than 11 billion tonnes per annum in 2050, relative to projected business-as-usual emissions. Reductions of this magnitude are larger than the emissions from all current coal-fired power plants worldwide. The basic fact is that we need to keep carbon in place in the way Nature intended it to be, wherever that might be; and that while our understanding of the Ocean's properties is still limited, we know it is the planet's largest carbon sink, so that closely protecting the special places within it has become urgent work at hand. These considerations give further reason for COP26 to call for greater respect and recognition to protection and restoration of the Ocean's ecosystem services.
- (v) Biodiversity is critical to the implementation of Climate Crisis solutions. Reducing carbon emissions is essential, but we still need to draw down the excess carbon in the atmosphere and the Ocean. The best way of doing that is through Nature; but as things stand today, there isn't enough wild Nature left to do the job. The science is clear, we need to protect and rewild a large portion of the planet. Fully protected areas deliver immense benefits to ecosystem restoration and human well-being, including food

provisioning. The blue carbon ecosystems within marine protected areas (MPAs) provide a massively powerful tool in carbon sequestration. And through blue carbon ecosystems, we see the inseparable linkage between the Ocean's health, Climate Change and Biodiversity and why the UN processes on these matters must be closely interwoven. Scores of countries have now gathered behind the 30 x 30 banner, calling for 30% of the planet's land and 30% of its Ocean to be protected by 2030. 30 x 30 establishes a clear connection between UNFCCC's COP26, CBD's COP15, and the Ocean's well-being. The Post-2020 Global Biodiversity Framework to be adopted at the forthcoming CBD COP15 is expected to include a 30 x 30 target; meanwhile it is expected that when the BBNJ conference process is concluded, its agreement will include strong provisions for the establishment of an effectively managed and connected system of ecologically representative marine protected areas. In acknowledgement of the positive mitigation and adaptation contributions MPAs bring to the Climate Crisis, and since all three conferences largely have the same Parties, a COP26 endorsement of expanded and strengthened MPAs, along with an encouraging message for the adoption of the 30 x 30 target at the CBD COP15, would be a very desirable outcome from COP26.

- (vi) Better safeguarding of the Ocean's health calls for greater efforts to minimize the negative effects of land-based human activities, in particular through "source-to-sea" discharges and emissions. The IPCC Report on the Ocean and Cryosphere specifically highlights fragmented governance systems as a key challenge to addressing Climate Changes risks, and it is clear that adopting a source-to-sea approach ameliorates this fragmentation. Plastic waste, industrial effluents, excess nutrients from agriculture, fertilizer and pesticide run-offs, and sewage carried to the sea in rivers and drainage systems degrade coastal ecosystems, further compromising the Ocean's Climate services. The source-to-sea approach to management links governance, operations, practices and finance across marine, coastal, freshwater and terrestrial systems and stimulates cooperation between upstream and downstream actors. Endorsement by COP26 of the source-to-sea ethos would represent a significant boost for improvements in the Ocean-Climate nexus.
- (vii) In negotiating and setting the international, regional and local agendas to combat Climate Change, science has repeatedly shown the need for much greater attention to Ocean issues, c.f. the IPCC Special Report on the Ocean & Cryosphere in a Changing Climate, and the IPBES Global Assessment Report on Biodiversity and Ecosystem Services. These findings lead us to the logic of closer integration of Ocean issues in UNFCCC programmes. COP25's request that the SBSTA Chair convene a dialogue on the Ocean and Climate Change and the subsequent convening on 2-3 December 2020 of the dialogue, proved to be a very positive step in advancing understanding. It is generally accepted that the dialogue should continue, with the expectation of the SBSTA Chair's summary report on the December meeting being formally shared with all Parties at COP26 and the wish that the conference requests SBSTA's Ocean and Climate Change Dialogue to be continued on a regular basis.
- (viii) It is no news to you that the window of opportunity to limit global warming to 1.5°C will not be open for much longer and that adequate finance will be required to keep it open. Because the Ocean already makes such a huge contribution to mitigation of the Climate Crisis and would be able to contribute to a much greater degree if the right investment decisions were to be made, it is vital that we see an exponential increase in the share of "Climate Finance" going towards the Sustainable Blue Economy over the next decade. For example, the World Ocean Initiative has highlighted marine energy's enormous potential as a solution to Climate Change, reporting that energy derived from tides,

waves, salinity and temperature differences requires no fuel, produces no emissions, and has the potential to power the world twice over. A transformative scaling up of public and private financing of Ocean-based economic activities, especially in response to the needs and potential of developing countries, will accelerate our advance to a net zero carbon world by 2050. COP26 presents the best opportunity for the world to move the Climate Finance needle decisively in the direction of strengthening the Ocean's contribution to Climate Change mitigation and adaptation.

- (ix) Nature-based solutions are a critical element in building the resilience of ecosystems, societies, and economies to respond to Climate Change, estimated as having the capacity to provide a third of our mitigation needs. Since financing for Nature-based solutions remains comparatively low, we are called upon to urgently change the paradigm by accounting the value of blue natural assets, identifying investment needs, and providing the necessary incentives, investment mechanisms and finance. I do not need to emphasize to you that successful conclusion of Article 6 negotiations at COP26 is much to be desired, given the positive implications of a new international carbon market, especially for Nature-based solutions in developing countries. Noting that the inclusion of Nature-based solutions is a priority of the COP 26 Presidency, we have every hope that COP26 will represent a great leap forward in the cause of Nature-based solutions.
- (x) Bringing Ocean issues to the centre of UNFCCC deliberations would create much greater impetus for countries to include Ocean-related measures in their Climate strategies, including in their Nationally Determined Contributions, National Adaptation Plans, Adaptation Communications and National Policy Frameworks. With Ocean and coastal ecosystems (mangroves, seagrasses and salt marshes) serving as the planet's largest carbon sink, it is disappointing they have been so infrequently mentioned in NDC targets. There are many opportunities for countries to upgrade their NDCs, such as by protection and restoration of blue carbon ecosystems through "Climate-smart" marine protected areas, greening of shipping, decarbonising fisheries, and committing to offshore renewable energy. An outcome of COP26 should include clear encouragement to Parties to include Ocean-based Climate action in their Climate strategies, and the global stocktake taking place after COP26 as part of the second ambition cycle of the Paris Agreement, could very usefully serve to identify Ocean-related gaps and opportunities.

There are of course many other reasons for the decline of the Ocean's well-being, particularly harmful fishing practices, habitat destruction and rampant pollution, and these three travesties are being proactively addressed by a widespread global community from governments, science, academia, NGOs, philanthropies and the agencies of the UN system. Insofar as they are included in their competencies, these three areas of detrimental human practice are a large part of preparations for the CBD COP in Kunming, the UN Food System Summit in New York, UNEA5 in Nairobi, and of course the UN Ocean Conference in Lisbon next year. With the UN having universally agreed to them, we should also be dedicated to the successful implementation of the UN Decade of Ocean Science for Sustainable Development and the UN Decade of Ecosystem Restoration. And so, we have established this interconnected web of international endeavour to do the right thing by people and planet, within which, it should be emphasised, our reliance on successful outcomes from COP26 cannot be overstated.

Solutions to the great 21<sup>st</sup> century challenges of Climate Change and Biodiversity Loss will become clearer if we view them through the Ocean's blue lens. I am confident we can patiently cut through complexity if we coordinate closely with each other in global

governance frameworks. On the road to the UN Ocean Conference in Lisbon next year, there is no more important restorative moment than COP26 in Glasgow this November. I expect to be joined in November on the banks of the Clyde by many representatives of the global Ocean community actively promoting the existential issues of the Ocean-Climate nexus.

Please take for granted my support for all your efforts and those of your teams at UNFCCC to ensure COP26 delivers on its promise.

Sincerely,

A handwritten signature in black ink, appearing to read 'Peter Thomson', written in a cursive style.

Peter Thomson  
UNSG's Special Envoy for the Ocean