

COMMENT OPEN



The new UN high seas marine biodiversity Agreement may also facilitate climate action: a cautiously optimistic view

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Recently adopted UN high seas Agreement elaborates an overarching legal framework for the conservation and sustainable use of marine biodiversity of the areas beyond national jurisdiction. A remarkable advancement of this Agreement is a clear recognition of the need to address the impacts of climate change on marine ecosystems and biodiversity. This comment presents a cautiously optimistic view that the new legal instrument may pave the foundation for global and regional climate action for protecting marine biodiversity in a changing climate. Climate action can be integrated into area-based measures for the conservation of marine ecosystems, including the establishment of high seas marine protected areas. The Agreement also created a legal obligation to consider climate change in the process of environmental impact assessment of activities on the high seas. Therefore, this Agreement is a unique addition and reform to the international law of the sea. However, the success of the Agreement will largely depend on the widespread ratification of states and effective implementation at the regional level.

npj Climate Action (2024)3:8; <https://doi.org/10.1038/s44168-023-00088-9>

INTRODUCTION

The Intergovernmental Panel on Climate Change (IPCC) completed its sixth assessment cycle. The ocean and its biodiversity, being hugely important to the Earth and human systems, are featured in the Sixth Assessment through the Special Report on the Ocean and Cryosphere in a Changing Climate¹ in addition to the ocean-related assessments in IPCC's Working Groups^{2,3} and Synthesis Reports⁴. While these reports conclude that climate change has already caused substantial damages and increasingly irreversible losses to marine ecosystems that will continue with unabated climate change, they also highlight the importance of biodiversity conservation for climate mitigation and adaptation. Meanwhile, state parties adopted a landmark treaty for the "conservation and sustainable use of marine biodiversity of the areas beyond national jurisdiction" on June 19, 2023 (hereafter BBNJ Agreement)⁵. This is a major international legislative development for the protection of the high seas' marine biodiversity. This comment highlights the prospects for climate action under the new BBNJ Agreement.

Through this historic international treaty, nearly two decades of complicated negotiation at the United Nations finally concluded with a positive outcome. Like other contemporary environmental negotiations, the negotiation of the BBNJ Agreement witnessed highly polarised views from the developed and developing world. While developed countries' priority was robust conservation and protection measures without jeopardising their commercial interest, developing countries took a firm position for benefit sharing from marine genetic resources exploitation, financial assistance, and technology transfer. Small island developing countries played the vanguard role for including climate action elements in the Agreement. The parties' opposing views and priorities made the negotiation extraordinarily long and complex. This also indicates the potential complexity in the future implementation of the Agreement.

CLIMATE AND MARINE BIODIVERSITY ARE INTERCONNECTED

The health of marine ecosystems and biodiversity is decreasing due to various human drivers, including over-exploitation, climate change, habitat loss, pollution and invasive species⁶. The high seas are not an exception. Particularly, CO₂ emissions from human activities are causing ocean warming, deoxygenation, acidification, driving shifts in species distributions, body sizes, timing of biological events, trophic interactions and ecosystem functions¹. More frequent and intense marine heatwaves are attributable to climate change and are causing local losses of species and mass mortality events⁴. These climate-induced impacts add to and exacerbate other human pressures on marine ecosystems, leading to devastating consequences on all aspects of well-being and sustainable development of ocean-dependent communities, particularly those regions and people with considerable development constraints^{1,2,4}. Marine biodiversity contributes substantially to carbon sequestration and storage and is important for climate adaptation. Thus, the climate vulnerability of ocean ecosystems and human systems are interconnected, while climate actions and biodiversity conservation are also interdependent.

LEGAL STATUS AND THE BACKGROUND OF THE BBNJ AGREEMENT

The BBNJ Agreement is an agreement under the United Nations Convention on the Law of the Sea, 1982 (hereafter UNCLOS)⁷. Both UNCLOS and the BBNJ Agreement are legally binding instruments, meaning the parties are obligated to follow and implement the provisions of these legal instruments. Although UNCLOS elaborates provisions for the management of non-living resources of the seabed areas beyond national jurisdiction through the International Seabed Authority, it provides high seas freedom of fishing to all countries with some very broad general obligations for conservation of marine living resources⁷. This differential treatment of living and non-living resources and the lack of a legal framework for conserving the high seas' marine biodiversity became a serious concern.

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Against this backdrop, the BBNJ Agreement creates a legal mandate for conserving marine biodiversity on the high seas. As noted earlier, developed and developing countries have different priorities and agendas. This ultimately led to a highly complex international legal instrument elaborating provisions for benefit sharing from marine genetic resources, marine biodiversity conservation measures, establishing marine-protected areas, environmental impact assessment, marine technology transfer and capacity-building⁵. It also includes a multifaceted institutional structure for implementation of the Agreement⁵.

BBNJ AGREEMENT AND CLIMATE ACTION FOR THE HIGH SEAS

The impacts of climate change on marine biodiversity were not on the agenda of the lawmakers during the development of the UNCLOS in the 1970s and early 1980s. A remarkable advancement of the BBNJ Agreement is a clear recognition of “the need to address, in a coherent and cooperative manner, biological diversity loss and degradation of ecosystems of the ocean, due, in particular, to climate change impacts on marine ecosystems, such as warming and ocean deoxygenation, as well as ocean acidification...” (preamble of the BBNJ Agreement)⁵.

This comment highlights some provisions of the BBNJ Agreement for the conservation of marine biodiversity that may also have an added benefit for climate change adaptation and mitigation. As per the UNCLOS, all nations have the freedom of fishing and some other activities on the high seas. This made coordinated conservation measures very difficult despite a general obligation to protect high-sea marine living resources under articles 117 to 120 of the UNCLOS⁷. The BBNJ Agreement, in Parts III and IV, created a legal framework facilitating the conservation of high seas biodiversity through various “measures such as area-based management tools, including marine-protected areas,” as well as a legal framework for environmental impact assessment of planned activities⁵. It also requires state parties to consider the cumulative impacts on marine biodiversity including “the consequences of climate change, ocean acidification and related impacts” (Article 1)⁵. Similarly, the Agreement declares building “ecosystems resilience, including to adverse effects of climate change and ocean acidification” as well as maintaining and restoring “ecosystem integrity, including the carbon cycling services that underpin the ocean’s role in climate” as a general approach for the conservation of marine biodiversity of the high seas (Article 7)⁵. No previous global ocean-related legal instrument so explicitly refers to climate change in the context of ocean governance.

WAY FORWARD

The BBNJ Agreement elaborates provisions for area-based conservation measures, including establishing and managing marine-protected areas. The general objective of these measures will be protecting, preserving, restoring, and maintaining marine biodiversity and ecosystems as well as strengthening “resilience to stressors, including those related to climate change, ocean acidification and marine pollution” (Article 17)⁵. Therefore, this created a legal mandate for taking climate change mitigation and adaptation measures for marine biodiversity, including establishing high-sea marine-protected areas. Marine-protected areas have many benefits for climate change mitigation and adaptation and are also impacted by climate change^{8,9}. This new Agreement creates a legal framework for establishing high seas marine-protected areas which connecting with the marine-protected areas within national jurisdictions may effectively create some networks of marine-protected areas in many regions of the world. These networks of marine-protected areas may play an important role in climate change adaptation and mitigation.

Another important provision of the Agreement is the legal framework for environmental impact assessment, defined as “a process to identify and evaluate the potential impacts of an activity to inform decision-making” (Article 1 and Part IV)⁵. Considering the general objectives of the Agreement regarding climate change, it is presumable that climate change-related impacts should be included in the assessment of all major planned activities on the high seas.

This new Agreement removed some complex legal barriers to comprehensive conservation measures and created legal avenues for global, regional, and sub-regional cooperation initiatives for ecosystems and biodiversity of the high seas. It also, in a sense, creates a legal mandate for regional organisations, particularly the regional seas and fisheries management organisations, to take further climate change mitigation and adaptation initiatives. A challenging task will be much-needed coordination amongst ocean, climate and biodiversity legal and governance regimes in incorporating climate mitigation and adaptation targets in managing the high seas. Also, most regional seas and fisheries management organisations need to act more proactively and rapidly to integrate climate change perspectives on marine biodiversity in their deliberation¹⁰ relative to the speed of changes in ocean ecosystems and transboundary resources¹¹. A recent resolution of the Indian Ocean Tuna Commission is a positive example¹². The BBNJ Agreement expressly encourages state parties to cooperate through regional and specialised organisations.

In combination with the SDG 14, which established a major policy framework for ocean-based climate action and implementation of the law of the sea, this new Agreement has the potential to rejuvenate the conservation of marine ecosystems around the world with added climate change adaptation and mitigation benefits.

CHALLENGES FOR IMPLEMENTATION

The BBNJ Agreement laid the foundation for coordinated action for conserving the high seas marine biodiversity by establishing legal mandates and obligations. However, the success of the Agreement will be contingent upon proactive initiatives for implementation. International environmental law suffers from the chronic problem of non-implementation at regional and national levels, and many international legal instruments are generally treated as toothless. Ocean-based climate action using the legal mandate under this Agreement will also involve the interaction of global, regional and national legal regimes as well as a collective interaction of ocean, climate and biodiversity legal and institutional regimes. The high seas are not under the jurisdiction of any state. Therefore, regional initiatives with global support will be pivotal for adequately implementing the BBNJ Agreement for accelerating ocean-based climate action.

Another major challenge for the implementation of the Agreement will be ensuring technological and financial assistance for ocean-dependent developing countries. The marine technology transfer framework of the UNCLOS has largely failed and, in fact, is one of the most ignored parts of the Convention. If the relevant provisions of the BBNJ Agreement face the same fate, implementing the Agreement will be very difficult. Without ensuring technical and financial investment, climate action in vast ocean regions of Africa, Asia, and the South Pacific will be highly challenging.

Finally, the BBNJ Agreement needs ratification of at least 60 parties to come into effect, and it needs a broad participation of states to be effective. The clock of climate action is very rapidly ticking to prevent a catastrophic tipping point. Speedy implementation of the BBNJ Agreement is a need of the hour¹³. We can cautiously be optimistic that most parties will join the Agreement considering the broad support for the treaty achieved through the

two decades of painstaking negotiation. If it takes many years to come into effect, the Agreement's main purpose will be defeated. Therefore, an urgent initiative to bring this treaty into effect is necessary.

DATA AVAILABILITY

No new data were generated for this comment. References cited can be accessed from the relevant publishers.

Received: 22 July 2023; Accepted: 23 November 2023;

Published online: 25 January 2024

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ACKNOWLEDGEMENTS

W.W.L.C. acknowledges funding support from SSHRC through the Solving-FCB Partnership. Open access funding is supported by SSHRC through the Solving-FCB Partnership.

AUTHOR CONTRIBUTIONS

M.S.K. conceptualised and led the writing and revision of the comment. W.W.L.C. contributed to conceptualisation, writing, and revision.

COMPETING INTERESTS

The authors declare no competing interests.

ADDITIONAL INFORMATION

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