

COMMENT OPEN



What we know about the new High Seas Treaty

Kristin Deasy¹✉

The new 'High Seas Treaty' adopted by the United Nations on June 19, 2023, leaves a lot open to question but does establish several historic benchmarks for protecting the high seas, setting the stage for further scientific exploration and paving the way for more effective marine conservation. This Comment describes what we know and do not know about the Treaty at this point. We know that the Treaty is about resources, equity, conservation, and diversity. What we are lacking are more specifics about how the Treaty would be implemented in practice. Such specifics are passed on to future working groups and a Conference of Parties.

npj Ocean Sustainability (2023)2:7; <https://doi.org/10.1038/s44183-023-00013-x>

INTRODUCTION

The new "High Seas Treaty" formally adopted by the United Nations earlier this month^{1,2} ushers in a watershed moment for global ocean management and marine conservation while attempting to set right critical inequality issues previously brushed aside by many such international agreements.

The importance of the ocean to human life cannot be understated. The ocean is intimately linked with the amount of CO₂ in the air³, making it a direct and important player in climate change. Meanwhile, potential discoveries of marine resources in the high seas—which refers to areas 200 nautical miles from shore—and their application in diverse areas make the new terrain covered by this new Treaty of immense and pressing significance.

WHAT WE KNOW: THE TREATY IS ABOUT RESOURCES

The fact that the deep sea contains resources may not be immediately apparent to those who picture it as a steep descent into darkness dotted with a few glowing anglerfish. The reality is far from it. Scientists estimate that 91% of ocean species are still unclassified⁴. Vast amounts have yet to be explored, with about 80% of the ocean floor still unmapped to modern standards⁵. Scientists are increasingly interested in exploring the potential genetic resources in the ocean, with possible applications from cancer to cosmetics. However, so far, such claims remain speculative. Genetic material with such promise has not been found in the deep sea, but scientists are eager to explore the possibility—a possibility the new Treaty discusses at length.

Jeffrey Marlow, Assistant Professor of Biology at Boston University and a co-lead of the Deep Ocean Stewardship Initiative's High Seas Treaty working group, explains that scientific research on the high seas is not limited to commercialized products or individual health. Marlow, who researches how microbes consume methane and their possible use in biofuels, says there is also great scientific interest in using resources found in the high seas to advance "planetary health".

"The bigger picture there," he explains, "is that microbial communities, in particular, do so much for regulating ecosystems in ways that we still do not understand," which, he later adds, "if we can find a way to bolster that through bioengineering, you know, that has enormous potential."

So far, he says only one single commercialized product has come directly from the high seas⁶—a face cream. Regardless, according to Marlow even one "remarkable biological compound"

can translate into billions of dollars in the pharmaceutical and cosmetic companies—industries that are watching these developments closely.

That is why nations decided to come together to prevent a "first comes, first serves" situation, because until this Treaty comes into force, that is the reality. This is because the high seas, which cover two-thirds of the ocean, remain virtually lawless until this new Treaty comes into effect. The last major ocean treaty, the United Nations Convention on the Law of the Sea (UNCLOS)^{2,7} enacted in 1982, does not include a comprehensive legal framework for biodiversity in the high seas, nor does it cover more recent activities, such as bioprospecting. The new Treaty lays out specific provisions, including a monitoring and evaluation process, for engaging in the scientific and commercial pursuit of marine genetic resources on the high seas, among other things.

THE TREATY IS ABOUT FAIRNESS

Should genetic resources or significant biological compounds be found in the deep sea, they could represent significant commercial profit. According to the new Treaty, such profit is to be shared equally between nations. For centuries, equity issues—particularly with respect to global economics—have been sidelined in international agreements, but this Treaty makes a clear effort to ensure that everyone benefits from a shared space, especially lower-income nations.

Harriet Harden-Davies, Director of the Nippon Foundation Ocean Voices Programme, has been working on the Treaty for nearly a decade. Having attended every single UN meeting on the Treaty and being a working group lead on behalf of the Deep Ocean Stewardship Initiative, she says that "no one country can conserve the high seas alone. We really need cooperation here. It is a vast space, it is a shared space. Countries need to work together, which means there is a common interest argument here for everyone to be able to participate in the global commons." By commons, she means the high seas and seabed area referred to as the "common heritage of humankind" as per UNCLOS. "We are talking about generating knowledge in the commons, sharing that knowledge with everyone and then using that knowledge cooperatively to conserve the commons."

For Harden-Davies, the "first and really important" way the Treaty is an innovative piece of international legislation is that it gives "voice to developing countries" by helping them build capacity. She identifies the latter as a major achievement because

¹npj Ocean Sustainability <https://www.nature.com/npj oceansustain/>. ✉email: Writing.with.Kristin@gmail.com

“it is the first time that there has been a space in ocean law and policy where countries are going to have a body to talk about this.”

Finally, there is the issue of funding. By establishing a joint trust fund, the Treaty seeks to establish a mechanism that would fairly distribute profits gathered on the high seas and provide technology, capacity building, and training to lower-income nations so they can also participate in scientific missions and development. There is still quite a lot of work to be done on defining and organizing those funding channels.

Marlow explains that “once this treaty goes into effect, any kind of profit that is extracted from the biodiversity of the high seas will be subject to a profit-sharing regime to be determined, but those benefits will hopefully be shared in a more equitable way than they have been in the past.”

This is important because wealthy nations are overrepresented in the high seas, as the area requires immense amounts of energy and resources to access—97% of industrial fishing vessels in the high seas flagged to higher-income nations⁸. This is a sore spot for lower-income nations because wealthier nations now catch the fish that would normally migrate to their waters before they can reach them. “I hope that people will understand that it would be best to close the high seas to all fishing,” advocates biologist Daniel Pauly, professor at the University of British Columbia (UBC) who has been tracking the shrinking fish population for decades⁹. Founder and Principal Investigator of UBC’s research initiative Sea Around Us, Pauly argues this is because “tuna and other ‘highly migratory fish’ occurring in the high seas move back and forth between the high seas and the Exclusive Economic Zone (EEZ) of maritime countries, and thus could be caught within these EEZs.” Closing the high seas to fishing “would enable more equity between countries, as these fish are presently caught mainly in the high seas by the subsidized fleets of a handful of wealthier countries.”

The latter words point to the work of bio-economist Rashid Sumaila, Canada’s Research Chair in Interdisciplinary Ocean and Fisheries Economics at the Institute for the Oceans and Fisheries and the School of Public Policy and Global Affairs at UBC. Sumaila was recently awarded the Tyler Prize for Environmental Achievement together with Pauly for their joint contributions to end overfishing¹⁰. In a landmark study, Sumaila demonstrated how small coastal communities, largely in the Global South, are disadvantaged by the high seas exploits of weather nations and recommended that the high seas be closed to fishing to achieve significant economic and equity-related benefits¹¹.

While this Treaty does not address fishing issues, it establishes a protocol for sharing economic benefits tied to the discovery of marine genetic resources. However, one way to potentially close the high seas to fishing is to establish it as one giant marine protected area (MPA).

THE TREATY IS ABOUT CONSERVATION

In a historic win for ocean conservation, the Treaty creates a process for establishing MPAs outside of national jurisdiction. According to Marlow, who is also the founder of the nonprofit science education outreach program Ad Astra Academy, “there will now be a way to develop the ‘national parks’ of the high seas—these areas that we find so engaging and amazing that we cannot contemplate harming them in any way will now have a pathway to be conserved.”

Sumaila welcomes the Treaty as “a great first step in a long journey to protect, conserve, and sustainably use the global ocean for the benefit of both current and future generations.” He argues that “to win this struggle, we need all hands to be on deck—civil society, NGOs [non-governmental organizations], academics, journalists, the youth—to push governments and businesses to

meet their obligations under the Treaty. Without ‘We the People’ pushing for it, the Treaty will be toothless and meaningless.”

Indeed, questions remain as to how MPAs would be protected from commercial fishing—the Treaty seeks to include all stakeholders in such a process, which could potentially be unwieldy.

THE TREATY IS ABOUT DIVERSITY

It is worth noting the language in the Treaty when it comes to creating various committees and working groups: repeatedly, it requires that these groups be diverse in gender and ethnicity. It also includes lines that especially address Indigenous voices and those of small island and archipelago communities.

Marlow highlights that “ever since the Challenger Expedition 150 years ago¹², which was kind of the canonical start of deep-sea research, it [deep-sea research] has been done by western countries, often men.” However, the Treaty’s clauses now reflect “the idea that this global commons only being explored and queried by a tiny subset of the population is not sustainable, and not a great way to be engaging with the ocean.”

Nevertheless, it is important to keep in mind that while the Treaty makes a clear effort at inclusion, such language is relatively meaningless without the people willing to put it into effect.

WHAT WE DO NOT KNOW

We do not know if or when the Treaty will come into force. The Treaty has yet to be ratified and thus has yet to come into force. Ratification can be a long process—it took 12 years for UNCLOS to be ratified⁷. At least 60 states need to ratify, approve, accept, or access the Treaty for it to come into force, according to the draft agreement (Article 61)².

Another thing we do not know are the specifics of the Treaty, which is extremely broad. Marlow describes it as “providing the framework for future versions of ourselves to develop strong conservation approaches,” admitting “there are not a lot of specifics in the treaty.” As various committees and working groups, together with a Conference of the Parties, are established and start making decisions, more details will emerge.

Next, we need to unravel what this means for the fishing industry, which is mentioned very little in the Treaty despite being a major power player in ocean issues. This may be because commercial fishing is a major sticking point between nations as disparate national economic interests butt heads with environmental concerns and geopolitical tensions.

Marlow called the fishing issue “a non-starter from the very beginning.” It is illustrative to note that the Treaty does not explicitly prohibit commercial fishing in any future MPAs in the high seas and includes language that allows for their “sustainable use” consistent with agreed conservation objectives (e.g., Article 17.4 (e), Article 19.4 of the draft agreement)².

Kristina Gjerde, Senior High Seas Advisor for the International Union for Conservation of Nature’s Ocean Team, has been following the Treaty for years. When asked about the relationship between the fishing industry and MPAs under the Treaty, she answers, “it is complicated.” According to Gjerde, under the Treaty, if a nation starts the application process to establish an MPA in the high seas, it “will need to convince [the regional fisheries management organizations] that the area is best protected by prohibiting all fishing in that region,” adding there might be “pushback” from some members of these organizations.

“Then it is going to be sort of a question of convincing them to save face by actually, you know, agreeing that they are better off part of this agreement than being pushed back and embarrassed by objecting. I will not say it is a flaw in the process, it is a difficulty in the process, but nobody was willing to give up on their ability to control fisheries.”

IN BALANCE

At the end of the day, the new High Seas Treaty is rather like “taking one’s vitamins”. It is not exciting, it is not dramatic, it is not a specific medicine. As such, it lacks all the “drama” of being applied to an acute case—a massive, urgent problem on the high seas that needs treatment now. Nonetheless, as a “preventative medicine”, it is significant, marking a first critical step in the journey toward meaningful, shared ocean management.

Received: 19 March 2023; Accepted: 25 May 2023;
Published online: 30 June 2023

REFERENCES

1. *Demonstrating ‘the Power of Multilateralism’, Intergovernmental Conference Adopts Historic New Maritime Biodiversity Treaty*, (United Nations, 2023). <https://press.un.org/en/2023/sea2181.doc.htm>.
2. *Draft Agreement 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* (United Nations, 2023).
3. Watson, A. et al. Revised estimates of ocean-atmosphere CO₂ flux are consistent with ocean carbon inventory. *Nat. Commun.* **11**, 4422 (2020).
4. Mora, C. et al. How many species are there on Earth and in the ocean? *PLoS Biol.* **9**, e1001127 (2011).
5. National Oceanic and Atmospheric Administration, *How much of the ocean have we explored?* (National Oceanic and Atmospheric Administration, 2023). <https://oceanservice.noaa.gov/facts/exploration.html>.
6. Marlow, J. *The Inside Story of the U.N. High Seas Treaty* (The New Yorker, 2023).
7. *United Nations Convention on the Law of the Sea* (United Nations, 1982) https://www.un.org/depts/los/convention_agreements/texts/unclos/unclos_e.pdf.
8. McCauley, D. J. et al. Wealthy countries dominate industrial fishing. *Sci. Adv.* **4**, eaau2161 (2018).
9. Pauly, D. et al. Fishing down marine food webs. *Science* **279**, 860–863 (1998).
10. *The Tyler Prize 2023 Awarded to Two Ocean Heroes: Dr. Rashid Sumaila & Dr. Daniel Pauly* (The Tyler Prize For Environmental Achievement, 2023) <https://over.fish/tyler-prize-2023>.
11. Sumaila, R. et al. Winners and losers in a world where the high seas is closed to fishing. *Sci. Rep.* **5**, 8481 (2015).
12. Thomson, W. The challenger expedition. *Nature* **7**, 385–388 (1873).

COMPETING INTERESTS

The author declares no competing financial or non-financial interests. Moreover, for full transparency, it should be stated that ReAgency is a patron of Kristin’s independent journalism. This relationship allows her full autonomy as an investigator and researcher. ReAgency, a science marketing agency, also provides services to the Tyler Prize for Environmental Achievement.

ADDITIONAL INFORMATION

Correspondence and requests for materials should be addressed to Kristin Deasy.

Reprints and permission information is available at <http://www.nature.com/reprints>

Publisher’s note Springer Nature remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.



Open Access This article is licensed under a Creative Commons Attribution 4.0 International License, which permits use, sharing, adaptation, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons license, and indicate if changes were made. The images or other third party material in this article are included in the article’s Creative Commons license, unless indicated otherwise in a credit line to the material. If material is not included in the article’s Creative Commons license and your intended use is not permitted by statutory regulation or exceeds the permitted use, you will need to obtain permission directly from the copyright holder. To view a copy of this license, visit <http://creativecommons.org/licenses/by/4.0/>.

© The Author(s) 2023