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The Role of a Scientific Committee in the High Seas Treaty

Key ways that a scientific body can support the conservation and management of the world's ocean

Overview

Covering about two-thirds of the world's ocean, the high seas hold some of the greatest reservoirs of biodiversity left on earth. But while these areas beyond national jurisdiction provide key habitat for whales, sharks, tunas, and other important species, only about 1 percent is protected.[1] Governance is limited to a patchwork of bodies that regulate activities such as fishing, mining, or shipping, but often lack the authority or management mechanism necessary to establish, implement, and monitor marine protected areas (MPAs) and other conservation measures.

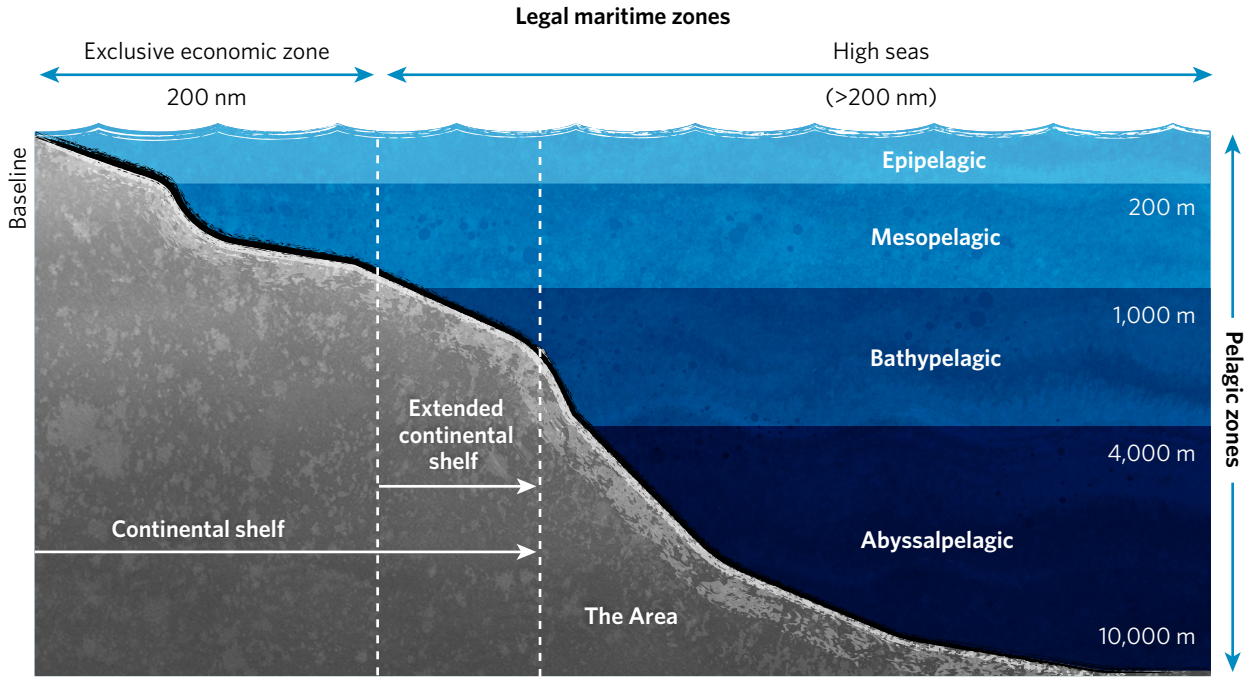
To fill this governance gap, the United Nations is negotiating a treaty to ensure that the rich biodiversity of the high seas is conserved through MPAs and that robust environmental impact assessments ensure that any use is sustainable. Given the vastness of the high seas and the importance of the different ecosystems they encompass, it is critical that conservation measures taken under the treaty be based on the best available science. The most effective way to accomplish this is to establish a scientific body to support the treaty.

Although many international marine governance organizations use scientific bodies to inform policymaking, the role of science in these organizations varies widely, ranging from collecting data to using it in policymaking and implementation.

Figure 1

Legal Maritime Zones and Pelagic Zones

Nations' exclusive economic zones (EEZs), the areas over which they have jurisdiction, stretch 200 nautical miles (nm) from their shores. Areas beyond national jurisdiction consist of the high seas, which can be divided by depth into different pelagic regions, as well as the seafloor beyond the legal continental shelf, known as the Area.



Function and effectiveness of scientific bodies

Since the U.N.'s creation, its charter has expressed the need for qualified knowledge to be used in the international policymaking process.[2] Scientific bodies support the work of international ocean governance organizations through a variety of functions and structures. Some scientific bodies have a broad mandate to provide general scientific reports or review the state of the environment. For example, the Joint Group of Experts on the Scientific Aspects of Marine Environmental Protection (GESAMP) supports 10 U.N. organizations. It provides regional and thematic assessments and scientific studies of the marine environment; guidance on developing, monitoring and assessing marine environmental impact assessments; advice on specific topics; and identification of new threats to the marine environment.[3] GESAMP's work is carried out by working groups, the membership of which is drawn from a network of experts.[4]

Other scientific bodies have a more focused scope, providing targeted advice on specific management measures or policy proposals. The Scientific Committee of the Commission for the Conservation of Antarctic Marine Living Resources (SC-CCAMLR), for example, advises the Commission on harvesting levels and other management issues in the Antarctic, contributing to the management measures adopted by the commission managing the fishing and other activities in that region.[5] The SC-CCAMLR meets annually and comprises the Commission's member States. It has several working groups that provide advice on key issues.

Table 1

Examples of Scientific Bodies

Full name	Mandate	Membership	Decision-making	Output	Report to
The Convention on Biological Diversity's (CBD's) Subsidiary Body on Scientific, Technical and Technological Advice (SBSTTA)	Providing recommendations to the CBD Conference of the Parties on the technical aspects of the implementation of the Convention	All Parties may participate (but the SBSTTA Bureau has limited membership)	Decisions taken by a majority	Scientific and technical assessments, including proposed conclusions and recommendations	CBD COP
Joint Group of Experts on the Scientific Aspects of Marine Environmental Protection	Advise the UN system on the scientific aspects of marine environmental protection	15-20 independent scientific experts	N/A	Reports and studies on key topics related to the marine environment	UN sponsoring organizations*
International Council for the Exploration of the Sea	Advance and share scientific understanding of marine ecosystems and use this knowledge to generate advice for marine conservation, management, and sustainability goals	Open to qualified experts nominated by their national delegate	Publishes advice after peer review and approval of the advisory committee	Advice (in response to a client's request for advice)	Client (including North East Atlantic Fisheries Commission and OSPAR)
Scientific Committee of the Commission for the Conservation of Antarctic Marine Living Resources (CCAMLR)	Provide best available scientific information on harvesting levels and other management issues to CCAMLR	Open to all Members of CCAMLR	Advice and recommendations based on consensus; when unable to reach consensus, all views are reported	Provides information, recommendations, and advice on harvesting levels and other management issues	CCAMLR
Scientific Committee of the South East Atlantic Fisheries Organization (SEAFO)	To provide the Commission with scientific advice and recommendations for formulating conservation and management measures for fishery resources and to promote cooperation in scientific research	One representative from each SEAFO Member State	Reports and recommendations based on consensus; when unable to reach consensus, the report reflects majority and minority views	Reports and recommendations regarding conservation and mangement measures and research	SEAFO Commission

* In addition to the United Nations itself, the organizations are: International Maritime Organization, Food and Agriculture Organization of the United Nations, Intergovernmental Oceanographic Commission of UNESCO, World Meteorological Organization, International Atomic Energy Agency, U.N. Environment Programme, U.N. Industrial Development Organization, U.N. Development Programme, International Seabed Authority

Scientific bodies support the broader work of these organizations and ultimately report to a high-level decision-making body, such as a Commission or a Conference of the Parties. They generally provide advice and recommendations and therefore inform rather than make policy and management decisions. Most scientific bodies have been established to serve a specific organization, but some—such as the International Council for the Exploration of the Sea—operate independently and give advice to a variety of clients.

To carry out their broad work for ocean governance organizations, many scientific bodies establish subcommittees or working groups (often ad hoc) to make recommendations on specific issues. The Convention on Biological Diversity's Subsidiary Body on Scientific, Technical and Technological Advice, for example, uses ad hoc groups of experts to provide guidance on more technical issues.

Most scientific bodies strive to give recommendations or advice based upon scientific consensus, but some allow for differing views to be presented to the decision-making body. The Scientific Committee of the South East Atlantic Fisheries Organization, for example, reports its majority and minority views when a consensus cannot be reached.[6]

Key elements for effectiveness

Conserving and managing ocean resources effectively requires integrating scientific advice into policy decisions. Indeed, a 2010 report on implementation of the U.N. Fish Stocks Agreement noted that the continued decline of high seas fish stocks was due to the failure of regional fisheries management organizations to follow scientific advice to reduce catches.[7]

A few key elements can help ensure that the advice and recommendations of scientific bodies effectively support the needs and objectives of international ocean governance organizations:

- **Separation of science from politics.** The scientific body should make recommendations based on scientific evidence—not political considerations. It is important that scientists and the advice they provide are viewed as trustworthy and accurate.[8] Also critical to credibility is the perception that the science and scientists are independent and free from bias.
- **Clear terms of reference.** It is critical that the scientific body be given a clear mandate for the scope of its work and the type of output required. This clarity ensures that scientific advice is tailored to the questions that need to be addressed and will better enable policymakers to incorporate scientific advice into their decisions.[9]
- **Transparency.** Transparency is a central tenant of good governance. Transparency in the scientific and decision-making process increases the legitimacy and utility of any scientific advice.
- **Consensus when possible, alternatives when not.** Most scientific bodies strive to make recommendations by consensus. Being able to speak as a united voice increases the confidence in their advice and the likelihood that policymakers will incorporate their recommendations when making decisions.[10] At the same time, it can be challenging for a scientific body to make a unanimous recommendation, especially for data-poor subjects (such as the high seas). Policymakers should make decisions using the precautionary principle, which obliges States to act more cautiously when information is uncertain and notes that the absence of scientific information cannot be used as a justification for failing to take conservation measures.
- **Timeliness.** Providing timely scientific advice to policymakers will enable them to more swiftly respond to the needs of an increasingly threatened ocean.

Conclusion

The scientific bodies included in this brief are only a handful of the scores that provide advice on issues related to international ocean governance. When creating a scientific body to support the high seas treaty, U.N. negotiators should consider the scientific, technical, and technological functions that must be carried out under a new agreement, in addition to the elements for effectiveness described above.

Endnotes

1 Atlas of Marine Protection, "Interactive Map," accessed Feb. 19, 2019, http://www.mpatlas.org/map/mpas/.

2 Walther Lichem, "The United Nations and Sciences," *UN Chronicle*, https://unchronicle.un.org/article/united-nations-and-sciences.

3 Joint Group of Experts on the Scientific Aspects of Marine Environmental Protection (GESAMP), "Our Work: Work Programme," accessed Nov. 13, 2018, http://www.gesamp.org/work/programme.

4 GESAMP, "Our Work: Working Groups," http://www.gesamp.org/work/groups.

5 Commission for the Conservation of Antarctic Marine Living Resources, "Scientific Committee," accessed Nov. 13, 2018, https://www.ccamlr.org/en/science/scientific-committee.

6 South East Atlantic Fisheries Organisation, "Rules of Procedure for the Scientific Committee of the South East Atlantic Fisheries Organization (SEAFO)" (2018), http://www.seafo.org/Science/SC-Documents.

7 David Balton, "Report of the Resumed Review Conference on the Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of 10 December 1982 Relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks" (2010), http://www.un.org/depts/los/convention_agreements/reviewconf/review_conference_report.pdf.

8 William C. Clark, Ronald B. Mitchell, and David W. Cash, "Evaluating the Influence of Global Environmental Assessments" in *Global Environmental Assessments: Information and Influence*, ed. Ronald B. Mitchell et al. (MIT Press, 2006), 13.

9 Andrew A. Rosenberg, Union of Concerned Scientists, "Science Advice for High Seas Management," presentation in New York Sept. 7, 2018.

10 David W. Midson, "Legal Frameworks and the Use of Science in Regional Fisheries Management Organisations" (Ph.D. diss., University of Tasmania, 2017), https://eprints.utas.edu.au/23869/1/Midson_whole_thesis.pdf.

For further information, please visit:

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