

# Access, Conservation, and Sustainable Use of Marine Genetic Resources in Areas Beyond National Jurisdiction: Emerging Issues of Consensus and Contention

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## I. INTRODUCTION

Areas beyond national jurisdiction (“ABNJ”) comprise roughly 64% of the world’s oceans<sup>1</sup> and are divided by the United Nations Convention on the Law of the Sea (“UNCLOS”) into two distinct parts: the “high seas” and “the Area.” Under the UNCLOS, the high seas are “all parts of the sea that are not included in the exclusive economic zone, in the territorial sea or in the internal waters of a State, or in the archipelagic waters of an archipelagic State.”<sup>2</sup> The convention provides that all states may access the high seas and exercise a range of freedoms including navigation, overflight, laying of submarine cables and pipelines, fishing, marine scientific research, and constructing artificial islands and other installations permitted by international law.<sup>3</sup> In exercising these freedoms, states are obligated to give due regard to the interests of other states’ interests and to only use the high seas for peaceful purposes.<sup>4</sup> Under the UNCLOS, the Area includes “the seabed and ocean floor and subsoil thereof, beyond the limits of national jurisdiction.”<sup>5</sup> Resources in the Area are part of the common heritage

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1. *Areas Beyond National Jurisdiction*, GLOBAL OCEAN F., <https://globaloceanforum.com/areas-of-focus/areas-beyond-national-jurisdiction> (last visited Aug. 21, 2016).

2. U.N. Convention on the Law of the Sea art. 86, *opened for signature* Dec. 10, 1982, 1833 U.N.T.S. 397 (entered into force Nov. 16, 1994).

3. *Id.* art. 87(1).

4. *Id.* arts. 87(2), 88.

5. *Id.* art. 1(1).

of mankind (“CHM”)—i.e., these resources fall under an international public trust—and do not come within the sovereign jurisdiction of any state.<sup>6</sup> Notably, marine genetic resources (“MGRs”) with tremendous scientific, industrial and commercial potential have been found in both the high seas and the Area. The term “MGR” refers to biological resources, as opposed to mineral resources.

The ABNJ has in recent years captured the attention as well as the imagination of the international community. Once thought to be “featureless, unchanging and inexhaustible,” advances in technology have revealed that the ABNJ is in fact “complex, dynamic and finite.”<sup>7</sup> It hosts a range of biological and physiochemical features including submarine canyons, abyssal plains, seamounts, hydrothermal vents, cold seeps, cold water corals, and sponge reefs. The ABNJ’s unique ecosystems support a high level of biodiversity and also contribute to the chemical richness of surrounding waters. Due to the complex ocean environment, MGRs sourced from the ABNJ have unique characteristics and properties that will likely have tremendous impacts on, among other things, the pharmaceutical and food industries.<sup>8</sup>

Despite this huge potential, only a handful of countries have derived real benefits from MGRs. According to one study, just ten countries own 90% of the MGR-based patents deposited with the World Intellectual Property Organization (“WIPO”). Although these countries represent only about 20% of the world’s coastline, they have virtually unchallenged access to resources in the ABNJ due to their economic resources and advanced technologies.<sup>9</sup> Developing countries are thus effectively excluded due to financial and technological barriers in accessing and utilizing MGRs.

6. *Id.* arts. 136, 140. The UNCLOS defines “resources” as “all liquid, solid or gaseous mineral resources *in situ* in the Area at or beneath the seabed, including polymetallic nodules.” *Id.* art. 133(a).

7. UNITED NATIONS ENV’T PROGRAMME, ECOSYSTEMS AND BIODIVERSITY IN DEEP WATERS AND HIGH SEAS 8 (2006).

8. For example, deep-sea MGRs may have the potential to combat cancer and HIV/AIDS. Kirsten E. Zewers, *Bright Future for Marine Genetic Resources, Bleak Future for Settlement of Ownership Rights: Reflections on the United Nations Law of the Sea Consultative Process on Marine Genetic Resources*, 5 *LOY. U. CHI. INT’L L. REV.* 151 (2008).

9. Sophie Arnaud-Haond et al., *Marine Biodiversity and Gene Patents*, 331 *SCI.* 1521 (2011). These countries are United States, Germany, Japan, France, United Kingdom, Denmark, Belgium, Netherlands, Switzerland, and Norway.

## II. TOWARD AN INTERNATIONAL LEGALLY BINDING INSTRUMENT FOR THE CONSERVATION AND SUSTAINABLE USE OF MARINE BIODIVERSITY IN THE ABNJ

The growing global interest in the ABNJ comes hand in hand with risk. Due to the lack of a comprehensive regulatory regime, the ABNJ is already beginning to face numerous anthropogenic pressures including overfishing, marine pollution, loss of biodiversity, irresponsible conduct of marine scientific research (introduction of light and sound, removal of substrates, sedimentation, etc.), and climate change (ocean acidification and ocean warming). If this situation continues unchecked, the ABNJ (and the MGRs found within it) may be negatively affected even before the ABNJ is fully understood by mankind. This risk has created a strong impetus for stakeholders to begin negotiations for an international legally binding instrument (“ILBI”) for the conservation and sustainable use of marine biodiversity of the ABNJ.

From March 28 to April 8, 2016, representatives from over two hundred countries, intergovernmental organizations, nongovernmental organizations, and other stakeholder entities gathered at the United Nations (“UN”) Headquarters in New York for the first session of the Preparatory Committee (“PrepCom1”) on the elements of a draft text of the ILBI. The proposed ILBI is meant to implement provisions of the UNCLOS, much like other mechanisms such as the 1995 Fish Stocks Agreement and the Agreement Relating to the Implementation of Part XI of the Convention.

PrepCom1, led by Chair Eden Charles of Trinidad and Tobago, began unpacking the four key components of the proposed ILBI. As identified in 2011 by a working group formed by the UN General Assembly, and later confirmed in its Resolution 69/292, these elements include: (1) MGRs, (2) area-based management tools, (3) environmental impact assessments, and (4) capacity building and transfer of marine technology.

However, it quickly became apparent from both the plenary and informal working group discussions at PrepCom1 that these four components were far from clear-cut, resulting in consensus on some issues and sharp contention on others. In this regard, MGRs emerged as the most controversial component of the 2011 package, as addressing them would require a delicate balancing act between legitimate commercial interests on one hand, and the principles of conservation, sustainable use, and access and benefit sharing on the other.

### III. THE MGR COMPONENT OF THE ILBI: ISSUES OF CONSENSUS AND CONTENTION

#### A. Need for Definitions

All PrepCom1 stakeholders agreed that MGRs, as well as the issues surrounding them, are highly scientific and technical in nature. Key terms such as “genetic resources,” “genetic material,” “biological resources,” “fisheries resources,” “marine resources,” and “bio-prospecting” have yet to be defined for the specific context of the ABNJ. Consequently, these terms must be clarified in order to provide a common understanding of issues and to provide certainty to the rights and obligations included in any future ILBI.

In this regard, stakeholders note that existing international environmental instruments may present a viable way forward. Articles 1 and 133 of the UNCLOS, Article 2 of the Convention on Biological Diversity, Article 2 of the Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization to the Convention on Biological Diversity (“Nagoya Protocol”), and Article 2 of the International Treaty on Plant and Genetic Resources for Food and Agriculture all include definitions that can be adapted for the context of the ABNJ and ultimately guide the drafting of definitions for the proposed ILBI.

The need for common definitions is urgent, particularly since that need is linked to the possible scope of the future ILBI. Some parties to the UNCLOS (“States Parties”) were especially concerned about how broadly the term “marine genetic resources” would be construed, and whether it would extend to fisheries resources in the high seas. Japan, Iceland, and others believe that fish should be excluded from the definition as this resource was already covered by other instruments and is already regulated by Regional Fisheries Management Organizations.

#### B. Access and Benefit Sharing (“ABS”)

From the perspective of developing countries, the asymmetry in financial and technological capability to access and exploit MGRs creates obvious equity concerns. This is why the Group of 77 and China, the Pacific Small Island Developing States, the Caribbean Community, and the Africa Group all advocate the broad application of the CHM regime under the UNCLOS. They argue that since MGRs are a common resource, all countries should share in their actual and potential monetary and non-monetary benefits. At

PrepComI, they emphasized the moral aspect of applying the CHM regime, saying that it would reinforce the balance between the high seas freedoms and the duty to preserve and protect the marine environment, and that it would place greater importance on community solidarity and intergenerational equity.

The challenges to using the CHM regime under the UNCLOS are, from a textual legal standpoint, significant. First, MGRs are not specifically contemplated under the UNCLOS. The CHM concept only pertains to non-living resources, *in situ* in the seabed and not in the water column. At PrepComI, the United States and other nations expressed their belief that the clear parameters in the UNCLOS mean that the default regime of freedom of the high seas should apply. MGRs that do not come within the definition of CHM resources should be available for appropriation on a first-come, first-served basis, and that any other interpretation would upset the hard-fought balance of the convention. However, the Africa Group, supported by Chile, pointed out that because the narrow definition of CHM resources under the UNCLOS was shaped by the limited scientific knowledge available at the time of the convention's drafting, this should not preclude the extension of the definition to MGRs.

Second, the exact nature and extent of the MGR benefits to be shared remains unclear. A number of States Parties believe that an ABS mechanism should cover both monetary and non-monetary benefits, as this would be consistent with the basic principles of equity. Monetary ABS might include sharing profits from the development of commercially viable products from harvested genetic material, and the establishment of a trust fund for sharing monetary benefits. Non-monetary ABS might include information sharing through the establishment of a centralized repository for data sharing and sample sharing, access to technology, technology transfer, and the establishment of gene banks for facilitating *ex situ* access to MGRs. While existing instruments such as the UNCLOS and the Nagoya Protocol do list possible benefits, these listed benefits do not specifically apply to MGRs in the ABNJ. Moreover, these benefit sharing provisions in existing instruments are for the most part untested and unimplemented, making the issue of their adaptation to the ABNJ context even more complicated.

Some States Parties at PrepComI expressed their belief that the high administrative and financial burdens of research and devel-

opment, coupled with possible “freeloader resentment,”<sup>10</sup> means that the imposition of an ABS mechanism would also discourage further research on potential MGR applications and development of related products. In relation to this, some States Parties also expressed concern over the possible clash between intellectual property rights and the ABS concept. It was thus suggested that negotiations for a future ILBI should consider factors such as the countries’ different scientific capabilities and constraints, the need for defining fair parameters for patent exceptions, the need for mandatory disclosure requirements, and the need to coordinate with the World Trade Organization and the WIPO.

### C. Institutional Mechanism

The growing interest in the ABNJ as well as the resulting increase in its exposure to anthropogenic pressures has warranted a discussion on the establishment of an institutional mechanism to manage access and benefit sharing, as well as the conservation and sustainable use of MGRs. While there was consensus on this point at PrepCom1, there was some disagreement as to the form, scope, and mandate of such an institution.

Some States Parties suggested taking a pragmatic approach by simply expanding the mandate of existing institutions so as to cover MGRs. In particular, the International Seabed Authority (“ISA”), an entity currently operating under the UNCLOS, was seen as having a viable institutional mechanism. The ISA is already tasked with, among other things: the management and control of the Area; the adoption of rules, regulations and procedures for the protection and preservation of the marine environment; the promotion of marine scientific research in the Area; the collection and dissemination of the results of such research and analysis; the facilitation of transfer of technology; and the management of an economic assistance fund for states affected by activities in the Area.

Russia and other States Parties were of the opinion that such an expansion in the ISA mandate would violate the UNCLOS. Thus, there was a move to establish a completely new institution that would be primarily charged with managing monetary and non-

10. While affluent states have the means to contribute significant resources to research and development, they may be unwilling to make such a contribution in light of the fact that less-affluent nations may contribute fewer resources while reaping the same benefits.

monetary benefit sharing among States Parties, as well as formulating comprehensive ecosystem-based rules and regulations for the conservation of the marine environment in the ABNJ. Other proposals included: making this new institution the central repository of MGR samples and establishing a clearinghouse for data; empowering it to develop codes of conduct for exploration in the ABNJ and exploitation of MGRs; tasking it with the duty to monitor and ensure accountability and compliance with the ABS regime; and safeguarding existing rights of states over the outer continental shelf. At the end of the day, the States Parties agreed to temper these proposals with a pragmatic approach and instead consider questions of cost, efficiency, and the extent of institutional intervention.

#### IV. CONCLUSION

At the close of PrepCom1, Chair Eden Charles outlined the roadmap to PrepCom2, which will be held from August 26 to September 9, 2016. He said that the discussions during PrepCom1 indicated a need for informal discussion in working groups, in addition to the 2011 package topics, a range of crosscutting issues such as scope of the ILBI and existing rights of States Parties. He also proposed reconvening the plenary in order to “park” issues where consensus has already been recognized or where there has been wide acceptance of a particular position.

The conclusion of PrepCom1 and the busy lineup of meetings in recent months indicate that progress is being made toward the adoption of an ILBI by 2018. All stakeholders have embraced the agenda and are openly discussing potentially controversial issues, asking the difficult questions, and addressing concerns relating to equity, security, and sustainability.