The Conservation of Biodiversity and Genetic Resources of the Deep Sea
Is There a Legal Gap?

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1. The presentation will focus on biodiversity and genetic resources in the deep sea beyond the limits of jurisdiction. Within national jurisdiction, there is no legal gap, as coastal states enjoy jurisdiction and sovereign rights for the conservation and sustainable use of biological resources. In areas beyond national jurisdiction, certain existing legal principles and rules relating to the protection of the marine environment, the conservation and sustainable use of biodiversity, and international fisheries are applicable to the conservation of biodiversity and genetic resources. These include principles and rules in both the United Nations Convention on the Law of the Sea (UNCLOS) and the Convention on Biological Diversity (CBD), as well as a number of other instruments. However, the existing rules do not precisely cover all the current issues.

2. UNCLOS establishes the legal framework for all activities in the oceans. As stated in its preamble, UNCLOS sets out a legal order for the seas and oceans to facilitate international communication and promote peaceful uses of the seas and oceans, equitable and efficient utilization of their resources, conservation of their living resources and study, protection and preservation of the marine environment. Although UNCLOS does not specifically address issues relating to biodiversity, as the Convention applies to all activities in the oceans, its jurisdictional framework and general principles also apply to the conservation and sustainable use of biodiversity, including in areas beyond national jurisdiction. UNCLOS is supplemented by a number of other specialised instruments relating to environmental protection, concluded both before and after its adoption. These include the two implementing agreements relating to deep seabed mining and straddling fish stocks and highly migratory fish stocks.

3. The Convention on Biological Diversity complements UNCLOS in relation to the conservation and sustainable use of marine biodiversity. Its three objectives are: 1) the conservation of biological diversity, 2) the sustainable use of its components, and 3) the fair and equitable sharing of the benefits arising out of the utilization of genetic resources. The latter objective includes appropriate access to genetic resources, appropriate transfer of relevant technologies, taking into account all rights over those resources and to technologies, and appropriate funding. While in areas within national jurisdiction the CBD applies both to components of biological diversity and to processes and activities carried out under the jurisdiction or control of states, in areas beyond national jurisdiction, it applies only to processes and activities carried out under the authority of states. The CBD does not apply to specific components of marine biodiversity beyond national jurisdiction, because states parties individually do not have the jurisdiction over these components. Nevertheless, in accordance with article 5, states parties are required to cooperate directly, or through competent international organizations, for the conservation and sustainable use of biodiversity beyond national jurisdiction. In carrying out activities beyond national jurisdiction that have, or are likely to have, a significant adverse impact on the conservation and sustainable use of biodiversity, states parties must take into account the provisions of the Convention and the policy decisions taken by its Conference of the Parties.

4. Other applicable instruments include: the political commitments undertaken in the Rio Declaration and Agenda 21, and the Johannesburg Plan of Implementation; as well as the legal obligations in: the various regional seas agreements; the UN Fish Stocks Agreement and some other fisheries agreements; the International Whaling Convention; the Convention

on Migratory Species and associated instruments; the Convention on International Trade in Endangered Species (CITES); several FAO instruments dealing with international fisheries; and several IMO instruments dealing with environmental aspects of international shipping and dumping at sea. The work of the International Seabed Authority (ISA) is also relevant.

5. The legal framework in UNCLOS is both spatial and functional, and the jurisdiction of states depends on the activities undertaken and the area in which they are conducted. The law of the sea divides ocean space into several zones both vertically and horizontally. Vertically, the sea is divided into the ocean floor or seabed and the superjacent water column. Horizontally, the ocean is divided into several zones beginning at the coastal baselines and extending through the territorial sea for up to 12 nautical miles, the exclusive economic zone for up to 200 miles, and to the outer limit of the continental shelf where the shelf continues beyond the 200 mile zone. The water column beyond the 200-mile EEZ is termed the high seas. The freedom of the high seas means that no state may claim sovereignty, but all states are free to engage in lawful activities such as navigation and fishing. All activities on the high seas are subject to certain conditions and detailed regulations, including the responsibility to preserve and protect the marine environment, marine life, and rare and fragile ecosystems. There is no overarching legal regime for the high seas, only sectoral controls for various activities.

6. However, there is a special international legal regime for the seabed beyond the EEZ and the outer continental shelf. Beyond national jurisdiction, the seabed is referred to as the Area and activities therein relating to mineral resources are administered by the ISA. Under UNCLOS, the Area and its resources are declared to be the common heritage of mankind. Access to mineral resources is controlled by the ISA and the benefits of mineral exploitation are to be shared by all mankind, taking into account the special interests and needs of developing states (article 140). The ISA also has a mandate to protect the marine environment and its flora and fauna from mineral activities and to conduct and promote marine scientific research.

7. The first unresolved issue relating to marine biodiversity is a consequence of the division between the high seas/water column and the seabed and ocean floor beyond the EEZ. When UNCLOS was being negotiated, the clear vertical division seemed reasonable because very little was known about marine life on and over the deep seabed. However, since the late 1970s, scientists have discovered many previously unknown organisms, particularly on the deep seabed, and it is common knowledge that areas previously thought to be devoid of life contain an abundance of organisms of immense scientific interest and potential commercial value. Furthermore, it is now known that a symbiotic relationship exists between free swimming organisms and those attached to the seabed and that the mineral resources and the biological resources are physically connected. While it is clear that this complex web of life on and near the seabed has to be protected, it is not clear which legal regime applies or whether a new regime should be devised to include marine life in both the water column and the ocean floor. In other words, should the biodiversity of the deep sea in the water column and on the seabed be protected separately or under a single regime? In addition, how should the protection of this biodiversity from all other threats relate legally and institutionally to the protection of biodiversity by the ISA from harm caused by mining activities?

8. The second and third unresolved issues concern the adequacy of legal protection for marine biodiversity generally and for genetic resources in particular. The instruments listed above relate to the preservation of biodiversity and biological resources in general. There is no legal instrument specifically regulating the conservation and sustainable use of marine genetic resources beyond national jurisdiction. Therefore, the second issue is whether there is a legal gap or whether principles in existing instruments adequately address all the issues relating to marine biodiversity, while the third is whether special protection is required for marine genetic resources. Taking the general question first, it is suggested that while there are a number of instruments containing provisions applicable to deep sea biodiversity: 1)

there is no instrument wholly devoted to the subject; 2) certain issues have not been addressed in any instrument; and 3) there is insufficient coherence and coordination among the various instruments, as they are independent, dealing with specific sectors or specific species, and are administered by different organisations. Consequently, for legal certainty and comprehensive coverage, the conservation and sustainable use (if any) of marine biodiversity in areas beyond national jurisdiction should be governed by a framework agreement on marine biodiversity that would set out all the relevant principles and rules, referring to the existing instruments and organisations where appropriate. Such an agreement could be in the form of an implementing agreement to UNCLOS.

9. New rules governing issues not yet adequately covered should be included. The main issues not adequately covered are the protection of the marine environment during marine scientific research, and the conservation and sustainable use of marine genetic resources. Conservation is essential, for if biological resources are damaged or destroyed, there may not be anything to study, to use, or to share. However, a regime for access and benefit sharing is also necessary, in the interests of equity, as this is a prime concern for developing countries. While the instruments relating to the conservation of biodiversity generally would protect marine genetic resources to a certain extent, more specific legally binding rules regarding marine scientific research relating to marine biological resources may be necessary and would seem to be required under article 240 (d) in Part XIII of UNCLOS.

10. There is a marked divergence of opinion among states concerning the legal regime governing marine scientific research and “bioprospecting” for marine genetic resources: some consider that these activities are covered by the freedom of the seas, while others believe that genetic resources are the common heritage of mankind, analogous to mineral resources in Part XI of UNCLOS. Still others reject both theories, focusing on the need to address all issues in a comprehensive implementing agreement to UNCLOS. To address the first contention, it has to be pointed out that the freedom of the seas refers to the freedom of all states to participate in activities on the oceans on the basis of equality. It does not mean that states, entities or individuals are free to do whatever they please. The basic ethos of the Convention is that all activities on the oceans are to be regulated, to ensure that they do not interfere with each other and that they take into account the needs and interests of mankind as a whole and the special needs and interests of developing states. It would be strange therefore, if marine scientific research and the conservation and sustainable use of marine biodiversity were the only activities not to be regulated in some detail.

11. For these purposes, a comprehensive implementing agreement to UNCLOS on the conservation and sustainable use of biodiversity would seem to be both necessary and desirable. Within the spirit, if not the letter of the Convention, it would also seem that marine genetic resources should be the common heritage of mankind, that marine scientific research in the deep sea should be regulated to protect the physical environment and the biological resources, and that both the process and the outcomes of such research should be shared in accordance with Parts XIII and XIV of UNCLOS, as well as the basic principles and purposes of the Convention as set out in its preamble.