Marine Genetic Resources in Areas beyond National Jurisdiction and Intellectual Property Rights

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Marine life is most rich in diversity, with virtually all the phyla currently known represented in the marine environment. The Census of Marine Life has shown that many new marine species are yet to be discovered, as the ratio of new discoveries in the deep ocean is 1:1 for each of the samples taken.

The relationship between biodiversity and ecosystem functioning has been debated for many years. Today we know that the former positively affects the latter. In the deep ocean, biodiversity ensures the delivery of ecosystem services that are crucial for sustaining global processes such as nutrient cycling and climate regulation.

Life in the deep ocean has been the subject of sustained scientific, economic and policy interest, especially in the past three decades. From a scientific standpoint, life in extreme marine environments has represented a source of new discoveries of metabolic processes and immunological and other information of interest to medical science. From an economic perspective, such discoveries represent the starting point for developing new applications in the field of health and for improving the efficiency of industrial

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1 See the DIVERSITAS programme website, at <www.diversitas-international.org>.
2 Census of Marine Life, see <www.coml.org>.
processes. Recently, it has been suggested that, because of their health applications, deep seabed genetic resources can assist in achieving such Millennium Development Goals as reducing child mortality and combating HIV/AIDS, malaria and other diseases, and ensuring environmental sustainability. Moreover, future discoveries based on deep seabed genetic resources could lead to commercial applications which, in the context of an equitable framework for access to and benefit sharing (ABS) of genetic resources, could contribute to another Millennium Development Goal: namely, to eradicate extreme poverty and hunger.

Issues surrounding marine genetic resource and, more generally, biodiversity in areas beyond national jurisdiction include:

– impacts of human activities, including fishing and scientific research;
– impacts of climate change;
– regulating access to and the sharing of the benefits arising from the utilisation of these resources;
– basic legal principles guiding human activities in these environments;
– schemes for organising and funding further marine scientific research;
– questions related to intellectual property.

Policy- and decision-makers have responded in various ways to the calls of governments, the civil society and scientists related to the lack of clarity as to the legal and policy aspects of the regulation of biodiversity in areas beyond national jurisdiction, including deep seabed genetic resources. Predictably, the international debate on intellectual property rights (IPR) in relation


