

PERMANENT OBSERVER MISSION  
of the INTERNATIONAL UNION  
FOR CONSERVATION OF NATURE  
AND NATURAL RESOURCES  
to the UNITED NATIONS

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**Discussion Panel Presentation 3(c)(ii)(a)**

**Ensuring Conservation and Sustainable Use of  
Marine Genetic Resources:  
Current and Future Challenges**

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## Ensuring Conservation and Sustainable Use of Marine Genetic Resources Current and Future Challenges

The conservation and sustainable and equitable use of marine genetic resources faces challenges today that were not foreseeable at the time that the United Nations Convention on the Law of the Sea (UNCLOS) was adopted. New technologies allow exploration and exploitation of once-inaccessible deep ocean resources and facilitate DNA analysis of the rich array of microbes that was then unknown in the water column.

Though the current challenge is to ensure that any use of genetic material from marine living resources is sustainable and equitable, future pressures will arise both from growing human activities and from climate change. To provide ocean life with the resilience to survive and adapt, a precautionary approach requires consideration and assessment of the potential effects of all significant human activities in the oceans.

It may be helpful to consider examples of current practices from marine areas within national jurisdiction. Some national authorities regulate access to biological resources through a permitting system, sometimes distinguishing between collection for commercial and for non-commercial purposes. The goals of such regulations are to promote conservation and ecologically sustainable use of the resources, provide certainty of access and minimize administrative costs to potential users; they ensure that the social, economic and environmental benefits of such resources accrue to the society as a whole.

The United Nations Convention on the Law of the Sea provides guidance. Article 117 provides that states have a duty to adopt with respect to their nationals measures for the conservation of the living resources of the high seas. States are to cooperate to conserve and manage the living resources of the high seas. Under Part XII of UNCLOS states have the obligation to protect and preserve the marine environment.

We can look to examples from national practice to identify some common-sense practices that will assist states in the conservation and sustainable use of marine genetic resources consistent with the obligation to conserve and manage these resources while protecting and preserving the marine environment. For example, States may wish to consider requiring their nationals and residents, or owners or operators of their flag vessels, to provide advance notification of expeditions or operations to collect marine genetic resources in areas beyond national jurisdiction and brief reports on the results and findings of these expeditions. States could consider a common minimum set of data to be included in these notifications and reports, elaborating on UNCLOS provisions on

With respect to advance notification, required information could include name and contact information of the operator; details of the proposed itinerary or route; information as known on resources and quantity planned for collection; a brief description of any likely impact of the collection of this quantity of the materials from a proposed area; the purpose of the collection, including whether for commercial or non-commercial purposes; information on the labeling of collected materials and disposition of ownership of samples, including any proposed transmission to third parties; details of any proposals to benefit biodiversity conservation in the area of collection; plans to share data and make scientific information publicly available; and, if commercial use is foreseen, plans to share benefits with others, as appropriate.

With respect to prior assessment of possible environmental impacts, the Antarctic Treaty and its Protocol on Environmental Protection could serve as a model. States could require a national procedure of their nationals or vessels, with assessments widely and publicly available when more serious potential impacts are identified. This, too, could build on UNCLOS provisions.

Looking at the Antarctic Treaty and its Protocol, with respect to the exchange of information on scientific investigations and results, there is an obligation on the part of each state party to provide advance notification to other parties of expeditions on the part of its ships or nationals and of expeditions organized in or proceeding from its territory. Scientific observations and results are to be made freely available to others.

In addition, the 1991 Protocol to the Antarctic Treaty includes a requirement for prior assessment of possible environmental impacts of proposed activities, possible in accordance with Protocol provision

