

ICP-8 HIGHLIGHTS: MONDAY, 25 JUNE 2007

The eighth meeting of the United Nations Open-ended Informal Consultative Process on Oceans and the Law of the Sea (Consultative Process or ICP) opened on Monday, 25 June 2007, at UN headquarters in New York. Delegates convened in Plenary in the morning, addressing organizational matters and exchanging views on concerns and actions needed. In the afternoon, a discussion panel was held on understanding marine genetic resources (MGRs).

PLENARY

OPENING: Co-Chair Cristián Maquieira (Chile) highlighted the importance of ICP-8 for gaining knowledge on access, scientific complexity, and economic and legal issues related to MGRs. Stressing the complexity of the topic, he said that ICP-8 is a preliminary session to gather information in order to form the basis for future negotiation and discussion.

Co-Chair Lori Ridgeway (Canada) noted the need to find common understanding on trends and the way forward regarding MGRs. She said that MGR science and technology may be running ahead of policy development, and highlighted the need to, *inter alia*, bridge short and long-term actions, and identify MGRs' unique characteristics and associated risks.

Co-Chair Ridgeway introduced the meeting agenda, which was adopted without amendment (A/AC.259/L.8).

EXCHANGE OF VIEWS ON AREAS OF CONCERN AND ACTIONS NEEDED: Pakistan, for the G-77/CHINA, welcomed the consideration of MGRs at this meeting, asserted that MGRs are part of the common heritage of mankind, and recalled, with BRAZIL, that the distinction between pure and applied marine scientific research has not been universally accepted. Germany, for the EU, emphasized the need to discuss MGRs in and beyond areas of national jurisdiction separately. She underscored the need to conserve and protect MGRs in areas beyond national jurisdiction, and called for an integrated, cooperative and coordinated approach to managing the marine environment. Papua New Guinea, for the PACIFIC ISLANDS FORUM, welcomed ICP-8's focus on MGRs, highlighted the third round of negotiations to establish a South Pacific Regional Fisheries Management Organization, and emphasized the need for effective regulatory approaches for the conservation and sustainable use of marine biodiversity.

BRAZIL said ICP-8's discussion would contribute to the 2008 meeting of the *Ad Hoc* Open-ended Informal Working Group on marine biodiversity beyond areas of national jurisdiction, and added that

discussion of MGRs should focus on areas beyond national jurisdiction. PALAU highlighted that unique creatures dwell in extreme oceanic conditions, and cautioned that without precautionary, ecosystem-based management, these resources could become overexploited before longer-term benefits can be developed. He urged countries to heed the UN General Assembly's recent call to close bottom fisheries in vulnerable marine ecosystems, and to use this approach as a general model for managing ocean biodiversity.

The US reminded delegates that resources within national jurisdiction should also be considered, noting that such research is relatively cost-effective and much remains to be discovered. She asserted that findings relating to MGRs would not lead to a "gold rush" of profits, but would improve science and understanding of deep-sea biodiversity. She cautioned that a new international regime to protect MGRs in areas beyond national jurisdiction would inhibit research, preferring that scientists develop self-imposed codes of conduct. Stressing difficulties in distinguishing between scientific research and bioprospecting, JAPAN said that bioprospecting increases scientific knowledge and benefits mankind, and opposed unnecessary regulation of bioprospecting.

NEW ZEALAND highlighted the importance of ICP-8 to inform discussions in other fora such as the Convention on Biological Diversity (CBD) and the *Ad Hoc* Open-ended Informal Working Group on marine biodiversity beyond areas of national jurisdiction. AUSTRALIA said the CBD provides a framework for access and benefit-sharing that leaves the scope and mechanics of these systems to be determined nationally, emphasizing that countries are likely to implement the CBD in different ways. He encouraged an exchange of domestic experiences as a way to proceed beyond the access and benefit-sharing impasse.

VENEZUELA stated the need to better understand the technical, socioeconomic, legal and environmental aspects related to MGRs, particularly in areas beyond national jurisdiction. INDIA underscored that developing country participation depends on the scientific data available to them, and highlighted the importance of identifying risks to common heritage, agreeing on a legal basis for the conservation and management of biodiversity, and addressing benefit-sharing of MGRs beyond national jurisdiction. Noting a lack of sufficient knowledge on how MGRs interact with the marine environment, CHILE supported applying the precautionary principle and an ecosystem-wide focus, and taking into account socioeconomic aspects. CANADA called for: improving understanding of MGRs and their potential uses; balancing public and private benefits through partnerships; considering regulatory approaches that provide certainty, flexibility and benefit-sharing; and maximizing research and facilitating access without endangering MGRs.

SOUTH AFRICA underscored the distinction between regulation of research within the Area, which is the seabed and subsoil beyond national jurisdiction, and research beyond the Exclusive Economic Zone (EEZ), and stated that under UNCLOS, the Area and its resources are the common heritage of mankind, and activities in the Area should be carried out for the benefit of mankind as a whole. ARGENTINA said that ICP-8 should focus on developing specific standards for accessing MGRs in areas beyond national jurisdiction, which he said are the common heritage of mankind.

The RUSSIAN FEDERATION supported strengthening international integration in creating databases. The SIERRA CLUB called for multilateral action to address the threat posed to marine biodiversity by anthropogenic noise. GREENPEACE announced an upcoming scientific survey of deep ocean canyons in the Bering Sea, and highlighted that the current lack of knowledge of deep-sea ecosystems makes their protection all the more urgent. She called for a new implementing agreement under UNCLOS to apply an integrated, ecosystem-based, precautionary approach to preserving the marine environment, including developing a global network of marine protected areas.

DISCUSSION PANEL ON MARINE GENETIC RESOURCES UNDERSTANDING MARINE GENETIC RESOURCES, THEIR VULNERABILITY AND THE SERVICES THEY

PROVIDE: Presentations: Frank Oliver Glöckner, Max Planck Institute for Marine Microbiology, Germany, highlighted that marine microorganisms: play a central role in “global element cycling”; are both a driver and an indicator of global climate change; and will inevitably be used as genetic resources for new enzymes and reactions that can be used for pharmaceutical and industrial applications. He explained that their abundance and diversity are vast and discussed a large-scale marine genome sequencing project that has created a reservoir of functional genes. Glöckner noted that investigations of MGRs are hindered by high infrastructure costs and lack of a stable intellectual property rights framework. He also underscored the need for investment in bioinformatic and laboratory infrastructure in order to analyze the large quantities of data acquired from marine genome sequencing projects.

Curtis Suttle, University of British Columbia, Canada, discussed the ocean’s vast reservoir of unexplored genetic diversity, notably its microbial resources, which he said comprise 95% of the biomass in the ocean and drive global geochemical cycles. Suttle said that although microbes dominate the ocean, humanity still knows very little about their genetic diversity, the composition of their communities and the factors that control their distribution. He also noted that humanity has no knowledge of microbes’ vulnerability to environmental changes or their potential role in climate change, and he therefore called for enhanced research on oceanic microbial life.

Libby Evans-Illidge, Australian Institute of Marine Science, discussed practical databases and knowledge-sharing for MGRs, focusing on the diversity of macro-organisms in the ocean. She highlighted existing tools to access marine biodiversity data and networking projects that bring the data together, underscored lack of consistency in taxonomy as a challenge to integrating databases, and emphasized that biodiversity conservation is fundamental to realizing MGRs’ potential. As examples, she pointed to various databases such as the UN Atlas of the Oceans, which is a UN portal for oceans-related data, and the Census of Marine Life, which is a network of researchers assessing diversity, distribution and abundance of marine life.

David Rowley, University of Rhode Island, US, spoke on services provided by MGRs. He explained that as well as providing oxygen production, carbon cycling, ecosystem stability and food, marine biodiversity has also yielded compounds and microorganisms for

medical and industrial applications. He said that many organisms produce useful compounds in very limited amounts, raising issues of production and supply. In closing, Rowley called for improved marine ecosystem conservation, cross-disciplinary collaboration between scientists and engineers, and knowledge-sharing through open-access databases.

Discussion: On whether sampling microbes for research has a significant impact on ecosystems, Glöckner said any impact from extraction is generally very small, although this could differ in ecological niches such as extreme environments. Evans-Illidge said extensive collection should be preceded by an environmental impact assessment. She added that collection takes place for research purposes only, and that drug companies are not interested in basing commercial production on the wild harvest of organisms.

When asked how to improve knowledge of MGRs, Evans-Illidge noted the potential for industry investment in marine biodiscovery, and Suttle advocated public-private partnerships, saying that government involvement in research is necessary due to intellectual property issues. On the proportion of developed and developing countries and multinational corporations’ ownership of MGRs, Rowley suggested that ownership could be a three-way partnership to bring products to the market. Evans-Illidge noted that ownership is most commonly linked to those who invest in the commercialization of the product.

In response to a question on the potential effects of ocean fertilization, ocean sequestration and climate change on microbial organisms, Suttle said the large-scale effects of these processes are still unknown but are worth considering. Evans-Illidge highlighted a micro-algae switch in corals as an example of a response to temperature and environmental shifts. On whether an organism’s genetic code can change in the laboratory, Suttle noted that researchers extract an organism’s nucleic acids, which do not change. On the movement of organisms beyond national jurisdiction, Glöckner said the location of much of the ocean’s life has not yet been mapped.

When asked about silent genes, which are mutant genes having no detectable phenotypic effect, Suttle pointed out that some genetic information is not accessible in laboratories. He also distinguished between life in the deep seabed and on the ocean’s surface. Rowley emphasized the dynamic nature of hydrothermal vents, likening them to volcanoes, and said they were not sensitive to perturbation. On the sharing of information, he said most scientific information is shared, particularly in the public sector, but noted the dilemma between intellectual property rights and information sharing. Evans-Illidge pointed to hurdles and challenges regarding sharing information, noting inconsistencies in the organization of data sets. Glöckner called attention to information about which genes are expressed in natural conditions, and said more biodiversity implies more genetic resources.

IN THE CORRIDORS

As cheerful delegates flowed into UN headquarters Monday morning, many were looking forward to a largely educational week of panel presentations and discussions on marine genetic resources. Some participants believed that ICP-8 could be of most value by simply sharing information that would contribute to next year’s meeting of the *Ad Hoc* Open-ended Informal Working Group on marine biodiversity beyond areas of national jurisdiction, and a few even suggested that text negotiations might play a lesser role than in previous ICPs. However, other delegates were less certain of a smooth ride, pointing to the existing sharp divergence of views on the legal status of MGRs in areas beyond national jurisdiction, and the conflictive debates on genetic resources and access and benefit-sharing in fora such as the CBD.