

## **EIGHTH MEETING OF THE UNITED NATIONS OPEN-ENDED INFORMAL CONSULTATIVE PROCESS ON OCEANS AND THE LAW OF THE SEA: 25-29 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) opens today, 25 June 2007, at UN headquarters in New York, and will continue until 29 June 2007. During the week, delegates are expected to: exchange views on areas of concern and actions needed, including on issues discussed at previous meetings; discuss cooperation and coordination on oceans issues, particularly as they relate to marine genetic resources; and identify issues that could benefit from attention in future work of the General Assembly on oceans and the law of the sea. A discussion panel will be held to consider marine genetic resources. Recommendations from the meeting will be forwarded to the General Assembly at its 62nd session for consideration under its agenda item entitled "Oceans and the law of the sea."

### **A BRIEF HISTORY OF THE LAW OF THE SEA AND THE CONSULTATIVE PROCESS**

On 1 November 1967, Malta's Ambassador to the UN, Arvid Pardo, asked the nations of the world to recognize a looming conflict that could devastate the oceans. In a speech to the General Assembly, he called for "an effective international regime over the seabed and the ocean floor beyond a clearly defined national jurisdiction." The speech set in motion a process that spanned 15 years and saw the creation of the UN Seabed Committee, the signing of a treaty banning nuclear weapons on the seabed, the adoption of a declaration by the General Assembly that all resources of the seabed beyond the limits of national jurisdiction are the common heritage of mankind, and the convening of the Stockholm Conference on the Human Environment. These were some of the factors that led to the convening of the Third UN Conference on the Law of the Sea during which the UN Convention on the Law of the Sea (UNCLOS) was adopted.

**UNCLOS:** Opened for signature on 10 December 1982, in Montego Bay, Jamaica, at the third UN Conference on the Law of the Sea, UNCLOS sets forth the rights and obligations of states regarding the use of the oceans, their resources, and the protection of the marine and coastal environment. UNCLOS entered into force on 16 November 1994, and is supplemented by the 1994 Deep Seabed Mining Agreement and the 1995 Agreement for the Implementation of the Provisions of

UNCLOS relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks (UNFSA).

**UNCED:** The United Nations Conference on Environment and Development (UNCED) was held in June 1992, in Rio de Janeiro, Brazil. Chapter 17 of Agenda 21, the programme of action adopted in Rio, addresses "the protection of the oceans, all kinds of seas, including enclosed and semi-enclosed seas, and coastal areas and the protection, rational use and development of their living resources." This remains the fundamental programme of action for achieving sustainable development of oceans and seas.

**UNGA RESOLUTION 54/33:** On 24 November 1999, the General Assembly adopted resolution 54/33 on the results of the review undertaken by the Commission on Sustainable Development at its seventh session on the theme of "Oceans and seas." In this resolution, the General Assembly established an open-ended informal consultative process to facilitate the annual review of developments in oceans affairs. The General Assembly decided that the Consultative Process would consider the Secretary-General's annual reports on oceans and the law of the sea, and suggest particular issues to be considered by the General Assembly, with an emphasis on identifying areas where intergovernmental and interagency coordination and cooperation should be enhanced. The resolution further established the framework within which meetings of the Consultative Process would be organized, and decided that the General Assembly would review the effectiveness and utility of the Consultative Process at its 57th session.

**ICP-1 to 3:** The first three meetings of the Consultative Process were co-chaired by Tuiloma Neroni Slade (Samoa) and Alan Simcock (UK). Each meeting identified issues to be suggested and elements to be proposed to the General Assembly, and highlighted issues that could benefit from attention in its future work. The first meeting of the Consultative Process (30 May-2 June 2000, New York) held discussion panels addressing fisheries, and the impacts of marine pollution and degradation. The second meeting of the Consultative Process (7-11 May 2001, New York) focused on marine science and technology, and coordination and cooperation in combating piracy and armed robbery at sea. The third meeting of the Consultative Process (8-15 April 2002, New York) held discussion panels on the protection and preservation of the marine environment, capacity building, regional cooperation and coordination, and integrated oceans management.

**WORLD SUMMIT ON SUSTAINABLE DEVELOPMENT:** The World Summit on Sustainable Development (WSSD) (26 August - 4 September 2002, Johannesburg, South Africa) negotiated and adopted

two main documents: the Johannesburg Plan of Implementation (JPOI) and the Johannesburg Declaration on Sustainable Development. Among the 11 chapters of the JPOI, which provide a framework for action to implement sustainable development commitments, Chapter IV on “Protecting and Managing the Natural Resource Base of Economic and Social Development” contains several paragraphs on the sustainable development of oceans that address, *inter alia*: water pollution prevention for the protection of ecosystems; improved cooperation and coordination on oceans and coastal issues within the UN system; and the application by 2010 of the ecosystem approach to marine areas.

**UNGA RESOLUTION 57/141:** On 12 December 2002, the 57th session of the General Assembly adopted resolution 57/141 on “Oceans and the law of the sea.” The General Assembly welcomed the previous work of the Consultative Process, extended it for an additional three years, and decided to review the Consultative Process’ effectiveness and utility at its 60th session.

**ICP-4 and 5:** These two meetings were co-chaired by Philip Burgess (Australia) and Felipe Paolillo (Uruguay). The fourth meeting of the Consultative Process (2-6 June 2003, New York) adopted recommendations on safety of navigation, the protection of vulnerable marine ecosystems, and cooperation and coordination on oceans issues. The fifth meeting of the Consultative Process (7-11 June 2004, New York) adopted recommendations on new sustainable uses of the oceans, including the conservation and management of the biological diversity of the seabed in areas beyond national jurisdiction.

**ICP-6:** The sixth meeting of the Consultative Process (6-10 June 2005, New York), co-chaired by Philip Burgess (Australia) and Cristián Maquieira (Chile), adopted recommendations on fisheries and their contribution to sustainable development, and considered the issue of marine debris.

**ICP-7:** The seventh meeting of the Consultative Process (12-16 June 2006, New York), co-chaired by Lori Ridgeway (Canada) and Cristián Maquieira (Chile), enhanced understanding of ecosystem-based management, and adopted recommendations on ecosystem approaches and oceans.

### INTERSESSIONAL HIGHLIGHTS

#### SECOND INTERGOVERNMENTAL REVIEW OF THE GLOBAL PROGRAMME OF ACTION FOR THE PROTECTION OF THE MARINE ENVIRONMENT FROM LAND-BASED ACTIVITIES:

The Second Intergovernmental Review (IGR-2) Meeting of the Global Programme of Action for the Protection of the Marine Environment from Land-based Activities (GPA) took place in Beijing, China, from 16-20 October 2006. Delegates addressed several key issues, including: the way forward with National Plans of Action; a review of accomplishments in GPA implementation from 2001 to 2006; and Guidance for the Implementation of the GPA 2007-2011. The outcomes of the meeting include: a Chair’s summary of the high-level discussions; a report of the meeting; and the Beijing Declaration on Furthering the Implementation of the GPA.

**UNGA RESOLUTION 61/222:** On 20 December 2006, the 61st session of the General Assembly adopted resolution 61/222 on “Oceans and the law of the sea,” calling on states to take actions on, *inter alia*: protection and preservation of the marine environment; addressing destructive practices that impact marine biodiversity and ecosystems; and increasing marine scientific research in accordance with UNCLOS. The General Assembly also requested the Secretary-General to convene the eighth meeting of the Consultative Process from 25-29 June 2007. The General Assembly recommended that ICP-8 organize its discussions around the theme of “Marine genetic resources,” and the ninth meeting in 2008 focus its discussions on “Maritime security and safety.”

#### TWENTY-SEVENTH SESSION OF THE FAO COMMITTEE

**ON FISHERIES:** The twenty-seventh session of the Committee on Fisheries (COFI) was held in Rome from 5-9 March 2007. The Committee reviewed issues of an international character and the programme of work of FAO in fisheries and aquaculture. In addition to the further work to facilitate and ensure the implementation of the Code of Conduct for Responsible Fisheries and its International Plans of Action, COFI welcomed the pending submission of a general multi-year programme of work on genetic resource management in fisheries and aquaculture.

The Committee, *inter alia*, encouraged member states to join or cooperate with the voluntary International Monitoring, Control and Surveillance Network and to develop a new legally-binding instrument on port state measures to combat illegal, unreported and unregulated (IUU) fishing.

#### FIRST MEETING OF THE GROUP OF EXPERTS FOR THE ASSESSMENT OF ASSESSMENTS OF THE REGULAR PROCESS FOR GLOBAL REPORTING AND ASSESSMENT OF THE STATE OF THE MARINE ENVIRONMENT, INCLUDING SOCIOECONOMIC ASPECTS:

The first meeting of the Group of Experts was held at UNESCO headquarters in Paris, France from 28-30 March 2007. The Group of Experts discussed and developed the overall working approach for the “Assessment of Assessments.” They also considered and developed an annotated outline, a work plan and timetable, and considered the utility of the survey and database for the “Assessment of Assessments.”

**ICP INFORMAL PREPARATORY MEETING:** An informal preparatory meeting for ICP-8 was held at UN headquarters in New York on 30 March 2007. Following this meeting and consultations with country delegations, a draft format and provisional agenda for the meeting was prepared (A/AC.259/L.8).

#### SIXTH INFORMAL CONSULTATIONS OF STATES PARTIES TO THE UNFSA:

The sixth round of Informal Consultations of States Parties to UNFSA convened from 23-24 April 2007, at UN headquarters in New York. Participants considered implementation of the Agreement, progress in the implementation of the outcomes of the Review Conference of the Agreement, and preparatory steps for the resumption of the Review Conference. A side event on recommended criteria for reviewing the performance of Regional Fisheries Management Organizations (RFMOs) made progress towards drafting a list of suggested criteria for RFMO review.

**CITES COP14:** CoP14 of the Convention on International Trade in Endangered Species in Wild Fauna and Flora convened from 3-15 June 2007, in The Hague, the Netherlands. Delegates, *inter alia*: agreed to a new Strategic Vision for CITES, and listed sawfishes and eels on the CITES appendices. Proposed listings of pink and red corals and two shark species were narrowly rejected.

#### ELEVENTH REGULAR SESSION OF THE COMMISSION ON GENETIC RESOURCES FOR FOOD AND AGRICULTURE:

The eleventh Regular Session of the Commission on Genetic Resources for Food and Agriculture (CGRFA-11) met from 11-15 June 2007 and discussed among other things biodiversity-related matters, including aquatic genetic resources. In the meeting’s report, the Commission requested that coverage of aquatic genetic resources under the Multi-Year Programme of Work be undertaken with, *inter alia*, the FAO Committee on Fisheries, the CBD, and the UN informal consultative process on oceans and the law of the sea. The Commission agreed that improving the collection and sharing of information on aquatic genetic resources is a high priority.

## 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.

## ICP-8 HIGHLIGHTS: TUESDAY, 26 JUNE 2007

On Tuesday, delegates to the eighth meeting of the UN Open-ended Informal Consultative Process on Oceans and the Law of the Sea (Consultative Process or ICP-8) reconvened in a discussion panel on marine genetic resources (MGRs). In the morning, presentations were made and a discussion was held on understanding activities related to MGRs and other relevant aspects relating to experiences in collection. In the afternoon, delegates addressed issues regarding experiences in commercialization.

### DISCUSSION PANEL ON MARINE GENETIC RESOURCES

**EXPERIENCES IN COLLECTION: Presentations:** Sophie Arnaud-Haond, French Research Institute for the Exploitation of the Sea, presented on genetic resources around hydrothermal vents, cold seeps and nodules in the deep sea, stressing that access using ships, submarines and robots is difficult and costly. She highlighted the diversity and biomass of bacteria in these ecosystems and stressed that knowledge is needed to: understand how deep sea systems interrelate with ecosystem cycles such as the carbon cycle; and construct ocean conservation strategies to address direct threats from extractive industries and indirect threats from global warming.

Marcia Creary, University of the West Indies, Jamaica, highlighted that 3427 species of marine flora and fauna have been identified in Jamaica's EEZ, with only 149 from the deep sea and perhaps a million species yet unknown. She explained that the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) governs Jamaica's endangered species, but because many species are not endemic to Jamaica, they do not require a Material Transfer Agreement for export. Creary outlined a coral reef restoration project identifying coral species that are resistant to rising sea temperatures, and discussed challenges facing Jamaica's MGR management, stressing that small island developing States need to establish controlled access, prior informed consent, participation in research, and mechanisms to share proceeds from MGR activities.

John Hooper, Queensland Museum, Australia, discussed maximizing research benefits from biodiscovery for both research and coastal states, and experiences in major biodiversity collections in Queensland. He highlighted Queensland's 2004 Biodiscovery Act, which established a streamlined legislative framework to regulate collection, ensure investment and fair and equitable benefit sharing, and enhance knowledge of biodiversity. He noted benefits to research states such as acquisition of specimen libraries, and commercial benefits from the discovery of new structures and compounds, including those with anti-

cancer properties. He said benefits for coastal states include capacity building in taxonomy, identification of species diversity "hotspots," and new knowledge relevant to bioregional planning.

Emma Sarne, Philippine Permanent Mission to the UN, on behalf of Maria Rowena, Southeast Asian Fisheries Development Center, discussed bioprospecting and the management of Philippine MGRs in the Verde Island Passage Marine Corridor, stating that the Philippines is a center of marine biodiversity. Noting threats to MGRs, including illegal trade and fishing, she outlined a 1995 Executive Order to regulate bioprospecting and biopiracy activities in the Philippines on the premise that biological and genetic resources are part of the national patrimony. She emphasized that while bioprospecting for academic pursuits is beneficial, if the materials are subsequently patented to foreign investors, the source country can lose control over its own MGRs.

**Discussion:** Commencing the discussion, Co-Chair Maquieira challenged panelists to identify the "enabling environment" that could improve bioprospecting access and research. In response, Arnaud-Haond recommended joint ventures that pool stakeholder efforts. Hooper agreed, stressing the need to facilitate access and to ensure legal certainty for interested parties such as scientists and bioprospectors, while retaining coastal state involvement, such as in processing. Sarne said regulations should: be practical and enforceable; delineate liabilities and responsibilities among partners; and allow work to proceed while encouraging collaborative efforts between those with research technology, and those with biodiversity information. One participant suggested that regulation should permit legal access to information, while ensuring that coastal states benefit from the research.

Many participants asked about biopiracy, including how developing countries might manage the issue. Hooper underscored that if access is unduly restricted then illegal activity might occur, but a clear, certain process will encourage legal behavior. Sarne noted that the global magnitude of biopiracy is unknown, adding that identifying the "victim" can be difficult. Arnaud-Haond proposed that newly-described species and genes should include a reference to the location of the original sample.

Regarding advice on drafting legislation, Sarne recommended establishing local enabling laws and identifying available resources. On government involvement in defining codes of conduct for the scientific community: Creary said the Jamaican government has not been involved in designing codes of conduct for scientists; Arnaud-Haond noted that codes are often based on mutual trust, rather than written; and Hooper stated that ethical codes regarding animals and product usage were enshrined in the 2004 Biodiscovery Act. Arnaud-Haond said when data and resources are shared, the code needs to be developed in collaboration with researchers and governments.

When asked about potentially destructive sampling methods, and following standards or protocols for research practices, Hooper said countries aspire to implement less destructive methods. When asked if long-term monitoring of the impacts of MGR collection exists, Hooper described a study on bottom trawling and benthic organisms that examined long-term harvesting of species, and Arnaud-Haond highlighted a Canadian study on deep sea vents. On databases, Creary called attention to a clearinghouse mechanism in her country, and Hooper highlighted the UNU database on biodiscovery.

On shortfalls in taxonomic information, Hooper and Arnaud-Haond lamented that training and funding for this work is declining even in developed countries. IUCN suggested an international collaborative structure on deep sea research, with government funding and open to all scientists. Hooper underlined the difficulty of capacity building for taxonomy, but noted that biodiscovery has helped fund taxonomy within a national context. In response to a question concerning species mobility and range, he explained that scientists assume that MGRs within a coastal state are endemic.

The following issues were also raised: strengthening compliance through awareness-raising and setting clear rules; that concepts of “compliance” and “non-compliance” do not apply to bioprospecting in areas beyond national jurisdiction; the possibility of international collaboration on codes of conduct; and the legal ramifications of using certain terms, including biopiracy.

**EXPERIENCES IN COMMERCIALIZATION: Presentations:** Geoff Burton, Jean Shannon and Associates, Australia, outlined how both public and private research bodies are commercializing MGRs and underscored that nature, as opposed to recombinant chemistry, is still the major source of new drugs. He highlighted that commercialization of MGRs is largely in the hands of specialized biotechnology companies and publicly funded bodies, both of which usually lack capital. He stressed the need for managing legal and commercial risks, said that companies are keen to ensure that their samples are collected legally, and urged governments to support commercialization by providing legal certainty and reliable taxonomic information.

Marc Slattery, University of Mississippi, US, spoke on experiences in commercializing MGRs, particularly in the pharmaceutical field. He reported that getting from the collection stage to the commercial launch of a drug can take between 15 and 30 years, and that very few samples ever have commercial potential. Slattery therefore recommended that governments should not hope for a “lottery win” but should focus on the benefits of research collaboration, which include improved scientific knowledge and technology transfer, local educational opportunities and a boost for local economies. He added that research results can also contribute to solving marine environmental problems.

Simon Munt, PharmaMar, Spain, described his company as a biopharmaceutical business that focuses on the discovery and development of marine-derived medicines. He explained the business case for undertaking MGR research and conserving biodiversity, stating that 60% of the 877 new chemical entities that reached the market over the last 20 years had natural origins. He highlighted the need for legal certainty to protect research investment and then described the process of using macro and micro-organisms and environmental DNA to develop medicinal products, emphasizing that the process takes at least 15 years and does not guarantee success.

Maureen McKenzie, Denali BioTechnologies, addressed economic self-determination and commercialization of subsistence marine resources of Alaska Natives, and said Denali depends heavily on the wisdom of native people for utilizing resources for commercial purposes, particularly for nutraceuticals. She discussed the Alaska Native Claims Settlement Act, with its self-imposed ethical standards and “fair treatment” provisions, and noted implementation of a “biodiversity access agreement” with a tiered royalty/profit sharing

model, and compensation based on the extent of participation in product development and commercialization. McKenzie underscored that participation may involve shared intellectual property and “co-invention” patents. She discussed instances where access to marine habitats is through native lands, marine resources travel inland to native lands, and native people are a repository of knowledge for food and medicinal applications of marine resources.

**Discussion:** Many delegates asked about issues of legal certainty, which all panelists agreed were essential in order for biotechnology companies to proceed with development. Slattery recommended that bioprospectors and countries avoid misunderstandings by signing a memorandum of understanding on benefit-sharing at the beginning of the research process. Burton highlighted the CBD’s Bonn Guidelines on Access and Benefit-Sharing as a useful template when developing national approaches, and both Slattery and Burton suggested that governments create a single focal point for contact with bioprospectors.

When asked how to enable research in areas beyond national jurisdiction, Burton suggested codes of conduct to ensure research is conducted in an appropriate manner, and Slattery suggested international cooperation between countries, including sharing research voyages, samples and results. On natural versus synthetic products, Munt noted that many synthetically-manufactured products are based on natural compounds. He said products made from natural sources can be difficult to standardize, and Burton added that this can protect naturally-based products from being illegally replicated. McKenzie noted that natural products have a competitive advantage in the dietary-supplement market.

In response to a question on whether national regulatory mechanisms could be a disincentive for companies wanting to undertake marine research within national jurisdiction, Burton explained that most research occurs within coastal waters to minimize fuel and vessel costs. Slattery agreed, noting that one country’s regulatory system can be more alluring than others. Munt added that all of PharmaMar’s MGR samples come from water near the coast.

In response to a question on intellectual property options for industry, including in relation to traditional knowledge, Burton highlighted that trademarks for nutraceuticals provide consumers with high-quality products that concurrently respect indigenous communities’ rights. McKenzie underscored that “indigenous branded products” can enjoy market advantages.

Responding to a question on existing arrangements between companies and coastal states that might govern access and benefit-sharing arrangements, Slattery noted the National Cancer Institute as an effective model. In answer to a query on facilitating participation by developing countries with limited resources, Burton called attention to bilateral agreements and GEF projects aimed at assisting developing countries with access and benefit-sharing arrangements.

Panelists also discussed: the difference between the marine and terrestrial context of intellectual property rights of indigenous products; encouraging research activities in the high seas; and society’s views on the ethics of marine biotechnology development.

### IN THE CORRIDORS

On Tuesday, delegates appeared to be “sponging up” the highly technical information on MGRs, with one delegate commenting that participants were slowly beginning to realize the oceanic breadth and complexity of the topic. Panelists and delegates alike seemed to agree that more and better science would help the policy discussion to move forward at more than a mollusk’s pace, although one observer felt that delegates’ focus on listening and learning represented a “strategic avoidance” of a possibly contentious legal and policy debate. Overall, hopes are high that when the “Friends of the Co-Chairs” group begins to draft text on Wednesday night, participants will focus on “moving forward together, rather than highlighting differences.”

## ICP-8 HIGHLIGHTS: WEDNESDAY, 27 JUNE 2007

On Wednesday, delegates to the eighth meeting of the UN Open-ended Informal Consultative Process on Oceans and the Law of the Sea (Consultative Process or ICP-8) reconvened in a discussion panel on marine genetic resources (MGRs). In the morning, a discussion was held on international cooperation and coordination on MGR issues relating to current activities at the global and regional levels. In the afternoon, delegates addressed issues regarding current and future challenges. At the close of the session, a Co-Chairs' paper on possible elements to be suggested to the UN General Assembly was distributed to delegates for consideration.

### **DISCUSSION PANEL ON MARINE GENETIC RESOURCES CURRENT ACTIVITIES AT THE GLOBAL AND**

**REGIONAL LEVELS: Presentations:** Jihyun Lee, CBD Secretariat, outlined CBD Articles and CoP8 decisions relating to MGRs, such as the decision on the conservation and sustainable use of deep seabed genetic resources beyond the limits of national jurisdiction, which recommended that parties and other states take measures to control threats to MGRs and enhance scientific research. She said CBD and UN-DOALOS are collaborating on an information document regarding mitigation and threats to seabed habitat, and outlined a number of studies on high seas management to be reviewed and considered at the thirteenth meeting of CBD's Subsidiary Body on Scientific, Technical and Technological Advice (SBSTTA) in February 2008.

Rama Rao, World Intellectual Property Organization (WIPO), described WIPO's work on genetic resources, which he said deals chiefly with traditional knowledge relating to genetic resources. Rao outlined a set of draft provisions developed by the WIPO Intergovernmental Committee on Intellectual Property and Genetic Resources, Traditional Knowledge and Folklore (IGC) to assist policymakers in drawing up protection for traditional knowledge, including intellectual property in products derived from the utilization of genetic resources through traditional knowledge. He added that patents can be designed to include benefit-sharing and technology transfer requirements while allowing developers to market a product.

Tony Ribbink, Sustainable Seas Trust, South Africa, discussed the African Coelacanth Ecosystem Programme, which he said is a New Partnership for Africa's Development (NEPAD) marine project. He explained that the Programme is a collaborative conservation project between nine African countries bordering the Western Indian Ocean,

and that the African coelacanth, a type of fish once believed to have been extinct, has become an icon of hope for conserving Africa's marine biodiversity. He emphasized that the Programme aims to "attain, train, retain and sustain" the project and its employees, with a significant focus on capacity building.

Margaret Tivey, Woods Hole Oceanographic Institution, US, stressed the need for research to gain understanding on how deep sea hydrothermal vent organisms adapt to the high pressure, low light, little to no oxygen and high toxicity associated with vent fields. She discussed how the Biology Working Group of InterRidge, a network of ocean ridge researchers, developed a voluntary code of conduct on responsible research on deep sea hydrothermal vents. Tivey outlined guidelines for conducting scientific research to prevent, *inter alia*: deleterious impacts on sustainability of populations of vent organisms; non-essential collection; and transplanting biota or geological material between sites.

**Discussion:** Lee urged caution in applying agricultural management models to oceans, given the different economic and ecological contexts, and the cross-sectoral and multi-disciplinary nature of oceans management. She noted cooperation with the UN-Oceans Task Forces, and with FAO, UNEP and others.

In response to a comment on adoption of codes of conduct by scientists without government involvement, Tivey said scientists need to be intimately involved in regulating use of hydrothermal vent sites and therefore took the initiative in developing policies. On penalties for violating codes of conduct, she said adhering to codes is usually voluntary, except in EEZs. Tivey agreed that governments could assist with developing codes of conduct by: including input from users other than scientists; identifying policy needs such as how to evaluate effectiveness; and linking research funding to compliance with a code of conduct, as occurs in the US. In discussing whether a code would be applicable to scientists researching ocean systems other than ocean ridges, Tivey said the guidelines could be used as a blueprint for developing codes for other research areas.

When asked how ocean-dependant communities can benefit from indigenous knowledge, Ribbink urged people to find ways to make conservation more profitable than exploitation, and suggested the creation of village or community trusts whereby everyone owns and manages the resources, albeit with some government oversight. Regarding traditional communities' involvement in WIPO, Rao said voluntary funds were earmarked for indigenous peoples' participation in the IGC. On science to support international initiatives, Lee stated

that the CBD Secretariat has no scientific capacity itself, but works with consultants, expert workshops and partners such as UN-DOALOS, FAO and IUCN to ensure scientific integrity. Ribbink added that NEPAD flagship projects support scientific capacity building, training and operational guidance.

Concerning accessibility of databases, Tivey noted that while InterRidge does not have a collective database, some individual states do, and that companies and researchers funded through the US National Science Foundation are required to make their data publicly available. Rao said WIPO's databases are open and free of charge for use by developing countries. On exploration, Tivey said commercial and medicinal developments based on discoveries from deep sea vents are likely to occur in the future. Ribbink emphasized that marine protected areas (MPAs) are a cornerstone for marine conservation and are most effective when developed as a network.

Discussion also focused on: the possibility of international patents; disclosure of the origin of genetic material that contributes to a patented product; and the need for better taxonomy to support intellectual property. Ribbink added the need to market taxonomy more effectively, while Lee called for increased funding for taxonomy in developing countries.

#### **CURRENT AND FUTURE CHALLENGES: Presentations:**

Harlan Cohen, IUCN, spoke on ensuring conservation and sustainable use of MGRs. He discussed how practices within national jurisdiction might be applied in areas beyond national jurisdiction, such as through advance notification of activities, prior assessment of possible environmental impacts, publication of results and findings, and benefit-sharing. Cohen explained how the Antarctic Treaty and its Protocol on Environmental Protection could serve as a model for prior assessment of environmental impacts, and how UNCLOS provisions on international cooperation in marine scientific research and on environmental impact assessment also offer building blocks for considering MGR management in areas beyond jurisdiction.

Marcos de Almeida, Ministry of Defense, Brazil, on behalf of Cassiano Monteiro-Neto, Fluminense Federal University, Brazil, highlighted barriers to scientific research in the high seas such as high costs and lack of international cooperation, and noted the promise that MGRs hold for biotechnology uses such as aquaculture, pharmaceuticals and cosmetics. Almeida said there are approximately 1700 biotechnology research groups in Brazil, but few working with MGRs. On a legal framework for MGRs, he highlighted: an outstanding implementation issue on the relationship between the Agreement on Trade Related Aspects of Intellectual Property Rights (TRIPS) and the CBD; the issue of biopiracy; and that MGR use beyond national jurisdiction should aim to provide benefits to all people.

Timothy Hodges, Co-Chair, CBD *Ad Hoc* Open-ended Working Group on Access and Benefit-Sharing, discussed capacity building and technology transfer challenges and opportunities, noted connections between activities on MGRs under UNCLOS and under the CBD, and outlined the CBD "Action Plan" on capacity building related to access and benefit-sharing. Regarding marine genetic research collaborations, he advocated improving the participation rates of developing countries, and underscored the importance of scientific networks. He said the institutional framework for marine biodiversity beyond national jurisdiction is poorly understood and governance structures are under debate. He emphasized the high potential of monetary and non-monetary wealth to be derived from MGRs, which he said could lead to a "win-win situation," particularly if the capacity building needs of indigenous and local coastal communities are met and their knowledge and capacity recognized. He said enhancing the understanding of the nature and use of MGRs can build capacity.

Sam Johnston, United Nations University, provided an overview of regional efforts to address genetic resource use, focusing on examples from the Antarctic Treaty system, which he said had much in common with efforts to consider MGRs under UNCLOS. Johnston observed that the Antarctic Treaty system's lack of clear rules on bioprospecting issues is restricting research and use of genetic resources by, *inter alia*: creating uncertainty for industry; hampering information exchange between scientists; and holding back government efforts to negotiate benefit-sharing arrangements. He outlined the development of an Antarctic bioprospecting database to provide scientists and policymakers with a more systematic presentation of data on the issue.

Lisa Speer, Natural Resources Defense Council (NRDC), discussed challenges related to conserving and appropriately managing MGRs, especially overfishing, destructive fishing practices, climate change and ocean acidification. She said the legal system has fallen behind managing areas beyond national jurisdiction and called for a new UNCLOS implementing agreement to consider managing MGRs in these areas, which for the long term would include a uniform procedure for environmental impact assessments and establishing MPAs for biodiversity conservation.

**Discussion:** Responding to questions on transfer of technology and capacity building within developing countries, Hodges noted a number of examples in Asia where a developed country made an initial investment to help build institutions to assess the value of a country's MGRs. Almeida emphasized that political will is vital for creating international cooperation on capacity building.

Almeida and NRDC highlighted the need to conserve the oceans because of their intrinsic value and their value to humanity. Responding to a question on assessing changes in habitats in areas beyond national jurisdiction, NRDC highlighted the need to develop MPAs in order to assess these against the areas that are not protected.

Cohen said a user's intention may not be important if common-sense practices are followed. He further explained how IUCN's list of "common-sense practices" from areas within national jurisdiction was developed, saying it was compiled from Australia and the Philippines' national legislation. He said countries could use the list as a basis for implementing the practices domestically or regionally, or developing them into codes of conduct or implementing agreements.

Participants also addressed: preventing destructive practices; better flag-state controls on vessels; international cooperation and coordination for conserving MGRs; ways to regulate activities in the deep seabed; the possibility of creating a clearinghouse mechanism for MGRs to stop repetitive sampling; and handling patents on compounds from areas within and beyond national jurisdiction in the same manner.

#### **IN THE CORRIDORS**

A few delegates were surprised on Wednesday afternoon by the Co-Chairs' circulation of an initial draft of elements to be suggested to the General Assembly, recalling that the March preparatory meeting had agreed to an open drafting group process. However, most delegates were satisfied with the change in procedure, particularly a number of those from developing countries, who felt that being able to submit textual amendments directly to the Co-Chairs would allow their views to be better represented. Others voiced gratitude that the change would reduce the time spent in "painful formal negotiations," pointing out the meeting's mandate as an informal and cooperative consultation. Only a few dissenting voices lamented that ICP-8 was spending "too much time listening and not enough time producing outcomes," and emphasized that the divergence between country positions seems narrower than at previous ICP sessions.

## ICP-8 HIGHLIGHTS: THURSDAY, 28 JUNE 2007

On Thursday morning, delegates to the eighth meeting of the UN Open-ended Informal Consultative Process on Oceans and the Law of the Sea (Consultative Process or ICP-8) reconvened in plenary for a general exchange of views on areas of concern and actions needed. In the afternoon, delegates addressed cooperation and coordination, especially as it relates to marine genetic resources (MGRs), and also addressed issues that could benefit from attention in the UN General Assembly's future work. A revised Co-Chairs' paper on possible elements to be suggested to the UN General Assembly was then distributed, and delegates discussed the text following a recess for group consultations.

### PLENARY

**EXCHANGE OF VIEWS ON AREAS OF CONCERN AND ACTIONS NEEDED:** ICELAND said MGRs in areas beyond national jurisdiction are subject to the high seas regime of UNCLOS, and expressed willingness to engage in a constructive debate to find fair and equitable practical solutions regarding their exploitation. NORWAY said threats to biodiversity beyond national jurisdiction can be addressed using existing legal instruments.

The EU called for the development of a comprehensive and practical framework for the preservation, exploration and exploitation of MGRs in areas beyond national jurisdiction, within the UNCLOS framework, including for access and benefit-sharing. SOUTH AFRICA said the EU's proposal represented "a convergence of ideas."

On rules and guidelines to govern MGRs in areas beyond national jurisdiction, TRINIDAD AND TOBAGO recommended the development of legal rules, while MALAYSIA highlighted, *inter alia*, the need for a code of conduct for the research and commercialization of MGRs in areas beyond national jurisdiction. ARGENTINA said voluntary codes of conduct were unlikely to be effective. MEXICO discussed the need for regulations in areas beyond national jurisdiction, taking into account the ecosystem and precautionary approaches for MGR sustainability, and including technology transfer and international cooperation. The REPUBLIC OF KOREA sought further discussion on establishing a clear and practical legal regime for exploiting MGRs beyond national jurisdiction. KENYA said MGRs beyond national jurisdiction are the common heritage of mankind, and SURINAME emphasized that all activities affecting the Area should be conducted under the

principle of the common heritage of mankind. NORWAY said the principle of common heritage of mankind only applies to mineral resources.

KENYA stressed that the equitable sharing of MGR benefits should be implemented by the international community. The INTERNATIONAL TRANSPORT WORKERS' FEDERATION, on behalf of several NGOS, urged adopting a precautionary approach to bioprospecting, and, with the INTERNATIONAL OCEAN INSTITUTE, called for fair and equitable access and benefit-sharing, taking into account developing countries' needs. UNCTAD highlighted the need for mechanisms concerning access and intellectual property rights to be consistent with protecting biodiversity.

On managing MGRs within national jurisdiction, NORWAY urged states to put national legislation in place to regulate bioprospecting and clarify benefit-sharing, based on the CBD's Bonn Guidelines on Access and Benefit-Sharing. The REPUBLIC OF KOREA sought further discussion on whether MGRs within national jurisdiction are subject to the same legal conditions as fisheries resources. TRINIDAD AND TOBAGO stressed that MGR research partnerships are useful, but benefits must help the source country.

On capacity building, CHINA urged the international community to increase funding for research and encouraged cooperation for developing country capacity building. The BAHAMAS said SIDS need assistance in developing national bioprospecting legislation and using complex databases, and suggested that UN-DOALOS compile information on capacity building opportunities and institutions for developing countries. VENEZUELA called on the UN and international financial institutions to provide technical and financial assistance to strengthen capacities to access MGRs.

On other issues, COSTA RICA, supported by VENEZUELA, IUCN and the HUMANE SOCIETY INTERNATIONAL, discussed sharkfinning as a barrier to achieving sustainable fisheries and healthy ocean ecosystems and called for regulations to prevent unloading fins severed from a shark's body. Emphasizing sea turtles' rare genetic lineage, the TURTLE ISLAND RESTORATION NETWORK sought global protection for turtles through time and area closures and protection of migration corridors. ARGENTINA emphasized that achieving sustainable high seas fisheries would require improved flag state controls, and added that any mechanism to establish MPAs beyond national jurisdiction must be inclusive and take coastal state interests into account. IUCN urged: combating illegal, unreported and unregulated (IUU) fishing; ensuring flag state implementation; establishing a legally binding instrument

on port state control; and understanding the effects of carbon sequestration before embarking on such activities. The DEEP SEA CONSERVATION COALITION said threats to marine biodiversity should not be addressed separately, and called for an UNCLOS implementing agreement, including a network of marine reserves, to address threats in an integrated manner.

UNEP reported on the World Conservation Monitoring Centre's effort to promote an integrated ecosystem-based approach to ocean management. The UN University discussed the work of its Institute of Advanced Studies related to MGRs, including the recent establishment of the Global Marine Governance Project, which assesses bioprospecting in the Antarctic, Arctic, the Pacific Island Countries and marine areas.

FAO described the work of the Intergovernmental Commission on Genetic Resources for Food and Agriculture, and said fisheries management is limited by the lack of effective policies and recognition of the importance of fish genetic resources. The INTERGOVERNMENTAL OCEANOGRAPHIC COMMISSION (UNESCO/IOC) noted, *inter alia*, establishment of: an expert group on Biogeographic Classification Systems in Open Ocean and Deep Seabed Areas; and criteria and guidelines on the development and transfer of marine technology.

The INTERNATIONAL MARITIME ORGANIZATION, anticipating ICP-9 discussions on maritime safety and security, expressed concern about acts of piracy disrupting humanitarian aid to Somalia, and human rights violations of migrants at sea.

**COOPERATION AND COORDINATION, ESPECIALLY AS IT RELATES TO MARINE GENETIC RESOURCES:** Anne Rogers, UN Department of Economic and Social Affairs, discussed the history and progress of UN-Oceans, presenting a matrix summarizing UN-Oceans' activities from 2006-2007. She noted that the UN-Oceans Task Force on Biodiversity in Marine Areas Beyond National Jurisdiction is still continuing its work. Rogers said a new UN-Oceans Task Force on Marine Protected Areas and Other Area-based Management Tools was established in May 2007 at UN-Oceans' fifth formal meeting. She also highlighted UN-Oceans' work on information sharing and outreach such as the UN Atlas of the Oceans.

Salif Diop, UNEP, reported on progress of the "Assessment of Assessments" of the regular process for global reporting and assessment of the state of the marine environment, including socio-economic aspects. He said the *Ad Hoc* Steering Group to oversee the "Assessment of Assessments," and the Group of Experts have been put in place. He stressed that the Group of Experts had only mobilized 50% of its required funding, and said the "Assessment of Assessments" summary report is expected to be ready in 2009, and will consist of three parts: a state of the assessment landscape for oceans and coasts; an evaluation of existing assessments; and a framework and options for the regular process.

Delegates discussed participation in the UN-Oceans Task Forces, and Rogers said participation by non-UN actors is not allowed. On regular reporting mechanisms and strengthening transparency for UN-Oceans, Rogers proposed updating the matrix regularly and posting it on the UN-Oceans website.

**ISSUES THAT COULD BENEFIT FROM ATTENTION IN FUTURE WORK OF THE GENERAL ASSEMBLY:** Introducing the agenda item, Co-Chair Ridgeway: noted difficulties faced in planning ICP-8, and urged delegates to begin planning well in advance of ICP-9; requested delegates to set parameters for ICP-9's theme of "Maritime security and safety"; encouraged parties to contribute to the Voluntary Trust Fund to allow developing country delegates and panelists to attend future ICPs; and suggested delegates begin providing recommendations for ICP-10's theme.

The EU said the Secretary-General's report should reflect this week's discussions to ensure a follow up to ICP-8. ICELAND suggested the structure of ICP-9 could begin with an examination

of Australia's proposed maritime security framework and outcomes from the conference on Legal Challenges in Maritime Security held in Heidelberg, Germany in May 2007. BRAZIL proposed ICP-10 focus on the social aspects of oceans and the law of the sea. KENYA suggested discussing consequences of and adaptation to climate change, and NORWAY, with ICELAND, suggested IUU fishing as a topic for ICP-10 in 2009.

**CONSIDERATION OF ELEMENTS TO BE SUGGESTED TO THE GENERAL ASSEMBLY:** The Co-Chairs introduced revised draft text for delegates' consideration. The G-77/CHINA urged more focus on MGRs beyond national jurisdiction, and the EU suggested "greater collaboration" beyond national jurisdiction. MEXICO supported stronger text on benefit-sharing and international cooperation. BRAZIL and INDIA proposed reference to marine scientific research. CANADA and the EU advocated more emphasis on vulnerable ecosystems, and the RUSSIAN FEDERATION stressed sustainable use as well as conservation. CHINA supported keeping the text general as the topic of MGRs is new.

The G-77/CHINA requested reformulation of text on patents and intellectual property relating to MGRs, with EGYPT asserting that any exploitation of MGRs should be for the benefit of all mankind, and the BAHAMAS and INDIA lamenting that intellectual property rights were not specifically mentioned.

The G-77/CHINA supported text that noted "a divergence of views on whether the provisions of UNCLOS relating to the Area also apply to MGRs," and, with INDIA, called for additional reference to the concept of common heritage of mankind. ICELAND and AUSTRALIA said reference to a divergence of views was inappropriate, and, with the EU, NORWAY, US, JAPAN, RUSSIAN FEDERATION and NEW ZEALAND, proposed its deletion. Supporting retention of the language, ARGENTINA said deleting the text would imply that there is no divergence of views.

To those concerned about the limited reference to MGRs in areas beyond national jurisdiction, Co-Chair Ridgeway explained that these issues would also be discussed during the upcoming meeting of the *Ad Hoc* Working Group on marine biodiversity beyond areas of national jurisdiction. She reiterated that the text aims to elaborate on issues where consensus exists. Noting that the ICP's intention is not to negotiate a resolution, Co-Chair Maquieira said the discussions were aimed at "throwing light" on the issues' complexities in order to inform political positions in the future.

### IN THE CORRIDORS

Delegates left plenary yesterday evening after a relatively amiable exchange of views on the revised draft text of the possible elements to be suggested to the General Assembly. Some suggested this was merely the calm before the squall. Many participants noted that the negotiation's primary area of contention would continue to be the dispute about whether to mention the divergence of views over the legal framework for MGRs in areas beyond national jurisdiction. One participant predicted that Friday evening would be "tough, and go until midnight." Another delegate feared the issue would merely be swept under the rug. Still, a number of participants highlighted that consensus on many of the other elements represented a success emerging from the in-depth discussions about MGRs. Perhaps the attire for casual Friday will enable a relaxed cooperative atmosphere for Friday's negotiations. But just in case, participants may come armed with umbrellas to protect themselves from the torrent of opposing views.

**ENB SUMMARY AND ANALYSIS:** The *Earth Negotiations Bulletin* summary and analysis of ICP-8 will be available on Monday, 2 July 2007, online at: <http://www.iisd.ca/oceans/icp8/>

## SUMMARY OF THE EIGHTH MEETING OF THE UN OPEN-ENDED INFORMAL CONSULTATIVE PROCESS ON OCEANS AND THE LAW OF THE SEA: 25-29 JUNE 2007

The eighth meeting of the UN Open-Ended Informal Consultative Process on Oceans and the Law of the Sea (ICP-8 or Consultative Process) took place from 25-29 June 2007, at UN headquarters in New York. The meeting brought together over 400 representatives from governments, intergovernmental organizations, non-governmental organizations (NGOs) and academic institutions.

Delegates convened in plenary sessions throughout the week to: exchange views on areas of concern and actions needed, including on issues discussed at previous meetings; discuss cooperation and coordination on oceans issues, particularly as they relate to marine genetic resources (MGRs); and identify issues that could benefit from attention in future work of the General Assembly on oceans and the law of the sea. In addition, a discussion panel was held to consider various aspects of MGRs.

The Co-Chairs, Cristián Maquieira (Chile) and Lori Ridgeway (Canada), developed a draft text of elements to be suggested to the General Assembly, drawing from the panel discussions, to be considered by plenary. In the subsequent negotiations, delegates were unable to agree on key language referring to the relevant legal regime for MGRs in areas beyond national jurisdiction and, as a result, no consensus text on elements will be forwarded to the General Assembly for consideration. However, the Co-Chairs announced that they would include the draft elements and recommendations within the Co-Chairs' Report of ICP-8 to the General Assembly, including an explanation of the divergence of views. Although some expressed disappointment about the stalemate, most delegates emphasized that the exchange of views and panel discussions had been valuable learning experiences. All eyes seemed to turn to the next meeting of the *Ad Hoc* Open-ended Informal Working Group on marine biodiversity beyond areas of national jurisdiction, which will take place in the first half of 2008, as the forum for continuing this debate.

## A BRIEF HISTORY OF THE LAW OF THE SEA AND THE CONSULTATIVE PROCESS

On 1 November 1967, Malta's Ambassador to the UN, Arvid Pardo, asked the nations of the world to recognize a looming conflict that could devastate the oceans. In a speech to the General Assembly, he called for "an effective international regime over the seabed and the ocean floor beyond a clearly defined national jurisdiction." The speech set in motion a process that spanned 15 years and saw the creation of the UN Seabed Committee, the signing of a treaty banning nuclear weapons on the seabed, the adoption of a declaration by the General Assembly that all resources of the seabed beyond the limits of national jurisdiction are the common heritage of mankind, and the convening of the Stockholm Conference on the Human Environment. These were some of the factors that led to the convening of the Third UN Conference on the Law of the Sea during which the UN Convention on the Law of the Sea (UNCLOS) was adopted.

**UNCLOS:** Opened for signature on 10 December 1982, in Montego Bay, Jamaica, at the third UN Conference on the Law of the Sea, UNCLOS sets forth the rights and obligations of states regarding the use of the oceans, their resources, and the

### IN THIS ISSUE

A Brief History of the Law of the Sea and the Consultative Process . . . . .	1
ICP-8 Report . . . . .	2
Plenary . . . . .	3
Discussion Panel on Marine Genetic Resources . . . . .	4
Elements to be Considered by the General Assembly . . . . .	6
Closing Plenary . . . . .	9
A Brief Analysis of ICP-8 . . . . .	9
Upcoming Meetings . . . . .	11
Glossary . . . . .	12

This issue of the *Earth Negotiations Bulletin* © <enb@iisd.org> is written and edited by Robynne Boyd, Andrew Brooke, Leila Mead and James Van Alstine. The Digital Editor is Dan Birchall. The Editor is Pamela S. Chasek, Ph.D. <pam@iisd.org> and the Director of IISD Reporting Services is Langston James "Kimo" Goree VI <kimo@iisd.org>. The Sustaining Donors of the *Bulletin* are the United Kingdom (through the Department for International Development – DFID), the Government of the United States of America (through the Department of State Bureau of Oceans and International Environmental and Scientific Affairs), the Government of Canada (through CIDA), the Danish Ministry of Foreign Affairs, the Government of Germany (through the German Federal Ministry of Environment – BMU, and the German Federal Ministry of Development Cooperation – BMZ), the Netherlands Ministry of Foreign Affairs, the European Commission (DG-ENV) and the Italian Ministry for the Environment, Land and Sea. General Support for the *Bulletin* during 2007 is provided by the Swiss Federal Office for the Environment (FOEN), the Norwegian Ministry of Foreign Affairs and the Ministry of Environment, the Government of Australia, the Austrian Federal Ministry for the Environment, the Ministry of Environment of Sweden, the New Zealand Ministry of Foreign Affairs and Trade, SWAN International, the Japanese Ministry of Environment (through the Institute for Global Environmental Strategies - IGES) and the Japanese Ministry of Economy, Trade and Industry (through the Global Industrial and Social Progress Research Institute - GISPRI). Funding for translation of the *Earth Negotiations Bulletin* into French has been provided by the International Organization of the Francophonie (IOF) and the French Ministry of Foreign Affairs. Funding for the translation of the *Earth Negotiations Bulletin* into Spanish has been provided by the Ministry of Environment of Spain. The opinions expressed in the *Earth Negotiations Bulletin* are those of the authors and do not necessarily reflect the views of IISD or other donors. Excerpts from the *Earth Negotiations Bulletin* may be used in non-commercial publications with appropriate academic citation. For information on the *Bulletin*, including requests to provide reporting services, contact the Director of IISD Reporting Services at <kimo@iisd.org>, +1-646-536-7556 or 212 East 47th St. #21F, New York, NY 10017, USA.

protection of the marine and coastal environment. UNCLOS entered into force on 16 November 1994, and is supplemented by the 1994 Deep Seabed Mining Agreement and the 1995 Agreement for the Implementation of the Provisions of UNCLOS relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks (UNFSA).

**UNCED:** The United Nations Conference on Environment and Development (UNCED) was held in June 1992, in Rio de Janeiro, Brazil. Chapter 17 of Agenda 21, the programme of action adopted in Rio, addresses “the protection of the oceans, all kinds of seas, including enclosed and semi-enclosed seas, and coastal areas and the protection, rational use and development of their living resources.” This remains the fundamental programme of action for achieving sustainable development of oceans and seas.

**UNGA RESOLUTION 54/33:** On 24 November 1999, the General Assembly adopted resolution 54/33 on the results of the review undertaken by the Commission on Sustainable Development at its seventh session on the theme of “Oceans and seas.” In this resolution, the General Assembly established an open-ended informal consultative process to facilitate the annual review of developments in oceans affairs. The General Assembly decided that the Consultative Process would consider the Secretary-General’s annual reports on oceans and the law of the sea, and suggest particular issues to be considered by the General Assembly, with an emphasis on identifying areas where intergovernmental and interagency coordination and cooperation should be enhanced.

**ICP-1 to 3:** The first three meetings of the Consultative Process were co-chaired by Tuiloma Neroni Slade (Samoa) and Alan Simcock (UK). Each meeting identified issues to be suggested and elements to be proposed to the General Assembly, and highlighted issues that could benefit from attention in its future work. The first meeting of the Consultative Process (30 May-2 June 2000, New York) held discussion panels addressing fisheries, and the impacts of marine pollution and degradation. The second meeting of the Consultative Process (7-11 May 2001, New York) focused on marine science and technology, and coordination and cooperation in combating piracy and armed robbery at sea. The third meeting of the Consultative Process (8-15 April 2002, New York) held discussion panels on the protection and preservation of the marine environment, capacity building, regional cooperation and coordination, and integrated oceans management.

**WORLD SUMMIT ON SUSTAINABLE DEVELOPMENT:** The World Summit on Sustainable Development (WSSD) (26 August - 4 September 2002, Johannesburg, South Africa) negotiated and adopted two main documents: the Johannesburg Plan of Implementation (JPOI) and the Johannesburg Declaration on Sustainable Development. Among the 11 chapters of the JPOI, which provide a framework for action to implement sustainable development commitments, Chapter IV on “Protecting and Managing the Natural Resource Base of Economic and Social Development” contains several paragraphs on the sustainable development of oceans that address, *inter alia*: water pollution prevention for the protection

of ecosystems; improved cooperation and coordination on oceans and coastal issues within the UN system; and the application by 2010 of the ecosystem approach to marine areas.

**UNGA RESOLUTION 57/141:** On 12 December 2002, the 57th session of the General Assembly adopted resolution 57/141 on Oceans and the law of the sea. The General Assembly welcomed the previous work of the Consultative Process, extended it for an additional three years, and decided to review the Consultative Process’ effectiveness and utility at its 60th session.

**ICP-4 and 5:** These two meetings were co-chaired by Philip Burgess (Australia) and Felipe Paolillo (Uruguay). The fourth meeting of the Consultative Process (2-6 June 2003, New York) adopted recommendations on safety of navigation, the protection of vulnerable marine ecosystems, and cooperation and coordination on oceans issues. The fifth meeting of the Consultative Process (7-11 June 2004, New York) adopted recommendations on new sustainable uses of the oceans, including the conservation and management of the biological diversity of the seabed in areas beyond national jurisdiction.

**ICP-6:** The sixth meeting of the Consultative Process (6-10 June 2005, New York), co-chaired by Philip Burgess (Australia) and Cristián Maquieira (Chile), adopted recommendations on fisheries and their contribution to sustainable development, and considered the issue of marine debris.

**ICP-7:** The seventh meeting of the Consultative Process (12-16 June 2006, New York), co-chaired by Lori Ridgeway (Canada) and Cristián Maquieira (Chile), enhanced understanding of ecosystem-based management, and adopted recommendations on ecosystem approaches and oceans.

### ICP-8 REPORT

The eighth meeting of the Consultative Process opened on Monday, 25 June 2007, at UN headquarters in New York. Co-Chair Cristián Maquieira highlighted the importance of ICP-8 for gaining knowledge on access, scientific complexity, and economic and legal issues related to MGRs. 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 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 identify MGRs’ unique characteristics and associated risks.

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

During the week, plenary sessions were held on Monday, Thursday and Friday to address: areas of concern and actions needed, including on issues discussed at previous meetings; cooperation and coordination on oceans issues, particularly as they relate to marine genetic resources; issues that could benefit from attention in future work of the General Assembly on oceans and the law of the sea; and elements to be suggested to the General Assembly for consideration. States were invited to provide written submissions regarding issues for further consideration.

The discussion panel on marine genetic resources (MGRs) met from Monday through Wednesday to consider: understanding MGRs, their vulnerability and the services they provide; understanding the activities related to MGRs and other relevant aspects, including experiences in collection and commercialization; and international cooperation and coordination on issues related to MGRs, including current activities at the global and regional levels and current and future challenges.

On Wednesday evening, the Co-Chairs' draft elements to be suggested to the General Assembly for consideration were distributed, and then revised and redistributed on Thursday afternoon. After discussion in plenary, a third draft was distributed on Thursday evening for discussion on Friday.

This report summarizes discussions held by the plenary and the discussion panel, organized by agenda item, as well as elements to be submitted to the General Assembly.

## PLENARY

### AREAS OF CONCERN AND ACTIONS NEEDED:

This agenda item was addressed in plenary on Monday and Thursday. Delegates considered issues pertaining to: MGRs beyond national jurisdiction; MGRs within national jurisdiction; scientific research and commercialization; capacity building; and other issues.

**MGRs beyond national jurisdiction:** Pakistan, for the Group of 77 and China (G-77/China), welcomed consideration of MGRs, which they asserted are part of the common heritage of mankind. Iceland said MGRs in areas beyond national jurisdiction are subject to the high seas regime of UN Convention on the Law of the Sea (UNCLOS). Norway said threats to biodiversity beyond national jurisdiction can be addressed using existing legal instruments. The US cautioned that a new international regime to protect MGRs in areas beyond national jurisdiction would inhibit research. Germany, for the European Union (EU), called for developing a comprehensive and practical framework for the preservation, exploration and exploitation of MGRs in areas beyond national jurisdiction, within the UNCLOS framework.

Argentina said ICP-8 should focus on developing specific standards for accessing MGRs in areas beyond national jurisdiction. Trinidad and Tobago, with Mexico, recommended the development of legal rules. Malaysia highlighted the need for a code of conduct for the research and commercialization of MGRs in areas beyond national jurisdiction, and the US suggested that scientists develop self-imposed codes of conduct. The Republic of Korea sought further discussion on establishing a clear and practical legal regime for exploiting MGRs beyond national jurisdiction.

Suriname, with South Africa, emphasized that all activities affecting the Area (the seabed and subsoil beyond national jurisdiction) should be conducted under the principle of the common heritage of mankind. Norway said the principle of common heritage of mankind only applies to mineral resources. Kenya, with India, stressed that the equitable sharing of MGR benefits should be implemented by the international community. Brazil, with New Zealand, 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.

**MGRs within national jurisdiction:** 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. Norway, with Australia, urged states to put national legislation in place to regulate bioprospecting and clarify benefit-sharing, based on the Convention on Biological Diversity (CBD) Bonn Guidelines on Access and Benefit-Sharing. The International Ocean Institute called for fair and equitable access and benefit-sharing, taking into account developing countries' needs. The United Nations Conference on Trade and Development (UNCTAD) highlighted the need for mechanisms concerning access and intellectual property rights to be consistent with protecting biodiversity.

Canada suggested considering regulatory approaches that provide certainty, flexibility and benefit-sharing, and called for balancing public and private benefits through partnerships. Trinidad and Tobago stressed that MGR research partnerships are useful, but benefits must help the source country. Papua New Guinea, for the Pacific Islands Forum, emphasized the need for effective regulatory approaches for the conservation and sustainable use of marine biodiversity. The Republic of Korea sought further discussion on whether MGRs within national jurisdiction are subject to the same legal conditions as fisheries resources.

**Scientific research and commercialization:** Palau, with Chile, highlighted that without precautionary, ecosystem-based management, deep sea resources could become overexploited before longer-term benefits can be developed. The G-77/China, with Brazil, noted that the distinction between pure and applied marine scientific research has not been universally accepted. The US 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. Japan said that bioprospecting increases scientific knowledge and benefits mankind, and opposed unnecessary regulation of bioprospecting. India underscored that developing countries' participation depends on the scientific data available to them.

Canada called for improving understanding of MGRs and their potential uses, maximizing research and facilitating access without endangering MGRs. Greenpeace highlighted that the current lack of knowledge of deep-sea ecosystems makes their protection all the more urgent. The International Transport Workers' Federation, on behalf of several NGOs, urged adopting a precautionary approach to bioprospecting.

**Capacity building:** China urged the international community to increase funding for research and encouraged cooperation for developing country capacity building. The Bahamas said small island developing states (SIDS) need assistance in developing national bioprospecting legislation and using complex databases, and suggested that the UN Division of Ocean Affairs and the Law of the Sea (UN-DOALOS) compile information on capacity-building opportunities and institutions for developing countries. Venezuela called on the UN and international financial institutions to provide technical and financial assistance to strengthen capacities to access MGRs.

**Other issues:** Argentina emphasized that achieving sustainable high seas fisheries would require improved flag state controls, and added that any mechanism to establish marine protected areas (MPAs) beyond national jurisdiction must be inclusive and take coastal state interests into account. The Deep Sea Conservation Coalition, with Greenpeace, called for an UNCLOS implementing agreement, including a network of marine reserves, to address threats in an integrated manner.

The Sierra Club called for multilateral action to address the threat posed to marine biodiversity by anthropogenic noise. Costa Rica, supported by Venezuela, IUCN and Humane Society International, discussed sharkfinning as a barrier to achieving sustainable fisheries and healthy ocean ecosystems. The Turtle Island Restoration Network sought global protection for turtles through time and area closures and protection of migration corridors. IUCN urged combating illegal, unreported and unregulated (IUU) fishing, and ensuring flag state implementation.

UNEP reported on the World Conservation Monitoring Centre's effort to promote an integrated ecosystem-based approach to ocean management. The United Nations University (UNU) discussed the recently established Global Marine Governance Project, which assesses bioprospecting in the Antarctic, Arctic, the Pacific Island Countries and marine areas. FAO described relevant work of its Commission on Genetic Resources for Food and Agriculture, and said fisheries management is limited by the lack of effective policies and recognition of the importance of fish genetic resources. The Intergovernmental Oceanographic Commission (UNESCO/IOC) noted, *inter alia*, establishment of: an expert group on Biogeographic Classification Systems in Open Ocean and Deep Seabed Areas; and criteria and guidelines on the development and transfer of marine technology. The International Maritime Organization, anticipating ICP-9 discussions on maritime safety and security, expressed concern about acts of piracy disrupting humanitarian aid to Somalia, and human rights violations of migrants at sea.

#### **COOPERATION AND COORDINATION ON OCEAN ISSUES, ESPECIALLY RELATING TO MARINE**

**GENETIC RESOURCES:** Anne Rogers, UN Department of Economic and Social Affairs, discussed the history and progress of UN-Oceans, presenting a matrix of its activities from 2006-2007. She noted that the UN-Oceans Task Force on Biodiversity in Marine Areas Beyond National Jurisdiction is still continuing its work. Rogers said a new UN-Oceans Task Force on MPAs and Other Area-based Management Tools was established in May 2007 at UN-Oceans' fifth formal meeting.

Salif Diop, UNEP, reported on progress of the "Assessment of Assessments" of the regular process for global reporting and assessment of the state of the marine environment, including socioeconomic aspects. He said the *Ad Hoc* Steering Group to oversee the "Assessment of Assessments" and the Group of Experts have been put in place. He said the "Assessment of Assessments" summary report is expected to be ready in 2009, and will consist of three parts: a state of the assessment landscape for oceans and coasts; an evaluation of existing assessments; and a framework and options for the regular process.

During the ensuing debate, delegates discussed participation in the UN-Oceans Task Forces, and, on regular reporting mechanisms and strengthening transparency for UN-Oceans. Rogers proposed updating the matrix regularly and posting it on the UN-Oceans website.

#### **ISSUES THAT COULD BENEFIT FROM ATTENTION IN FUTURE WORK OF THE GENERAL ASSEMBLY ON OCEANS AND THE LAW OF THE SEA:**

**Introducing the agenda item, Co-Chair Ridgeway:** noted difficulties faced in planning ICP-8, and urged delegates to begin planning well in advance of ICP-9; requested delegates to set parameters for ICP-9's theme of "Maritime security and safety"; encouraged parties to contribute to the Voluntary Trust Fund to facilitate participation of developing country delegates and panelists in future ICPs; and suggested delegates begin providing recommendations for ICP-10's theme.

The EU said the Secretary-General's report should reflect ICP-8's discussion to ensure a follow up to the meeting. Iceland suggested the structure of ICP-9 could begin with an examination of Australia's proposed maritime security framework and outcomes from the conference on Legal Challenges in Maritime Security held in Heidelberg, Germany, in May 2007. Brazil proposed ICP-10 focus on the social aspects of oceans and the law of the sea. Kenya suggested discussing consequences of and adaptation to climate change, and Norway, with Iceland, suggested IUU fishing as a topic for ICP-10 in 2009.

#### **DISCUSSION PANEL ON MARINE GENETIC RESOURCES**

**UNDERSTANDING MARINE GENETIC RESOURCES, THEIR VULNERABILITY AND THE SERVICES THEY PROVIDE:** On Monday afternoon, Frank Oliver Glöckner, Max Planck Institute for Marine Microbiology, Germany, highlighted that marine microorganisms are both a driver and an indicator of global climate change, and would inevitably be used as genetic resources for new enzymes and reactions that can be utilized for pharmaceutical and industrial applications. Glöckner underscored the need for a stable intellectual property rights framework to ensure investigations of MGRs, as well as the need for investment in laboratory infrastructure in order to analyze the data acquired from marine genome sequencing projects.

Curtis Suttle, University of British Columbia, Canada, discussed the ocean's unexplored genetic diversity, notably its microbial resources, which comprise 95% of the biomass in the ocean and drive global geochemical cycles. Suttle said humans still know very little about microbes' genetic diversity, the composition of their communities and factors controlling their distribution. Noting the lack of knowledge on microbes' vulnerability to environmental changes or their potential role in climate change, he called for enhanced research on oceanic microbial life.

Libby Evans-Illidge, Australian Institute of Marine Science, discussed practical databases and knowledge-sharing for MGRs, and highlighted existing tools to access marine biodiversity data and networking projects. As examples, she pointed to various databases such as the UN Atlas of the Oceans and the Census of Marine Life. She underscored lack of consistency in taxonomy as a challenge to integrating databases, and emphasized that biodiversity conservation is fundamental to realizing MGRs' potential.

David Rowley, University of Rhode Island, US, discussed services provided by MGRs, explaining that as well as providing oxygen production, carbon cycling, ecosystem stability and food, marine biodiversity also yields compounds and microorganisms for medical and industrial applications. He said many organisms produce useful compounds in very limited amounts, raising issues of production and supply. Rowley called for improved marine ecosystem conservation, cross-disciplinary collaboration between scientists and engineers, and knowledge-sharing through open-access databases.

In the ensuing discussion, delegates addressed, *inter alia*: the impact on ecosystems of sampling microbes; improving knowledge of MGRs; the proportion of MGR ownership by developed and developing countries and multinational corporations; effects of climate change on microbial organisms; movement of organisms beyond national jurisdiction; the dynamic nature of hydrothermal vents; and the dilemma between intellectual property rights and information sharing. A more detailed summary of these presentations and discussions is available at: <http://www.iisd.ca/vol25/enb2539e.html>

#### **UNDERSTANDING THE ACTIVITIES RELATED TO MARINE GENETIC RESOURCES AND**

**OTHER RELEVANT ASPECTS: EXPERIENCES IN COLLECTION:** On Tuesday morning, Sophie Arnaud-Haond, French Research Institute for the Exploitation of the Sea, presented on genetic resources around hydrothermal vents, cold seeps and nodules in the deep sea, stressing that access using ships, submarines and robots is difficult and costly. She said knowledge is needed to: understand how deep sea systems interrelate with ecosystem cycles; and construct ocean conservation strategies to address threats from extractive industries and global warming.

Marcia Creary, University of the West Indies, Jamaica, explained that the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) governs Jamaica's endangered species, but because many species are not endemic to Jamaica, they do not require a Material Transfer Agreement for export. Creary discussed challenges facing Jamaica's MGR management, stressing that SIDS need to establish controlled access, prior informed consent, participation in research, and mechanisms to share proceeds from MGR activities.

John Hooper, Queensland Museum, Australia, discussed maximizing research benefits from biodiscovery for both research and coastal states. He highlighted Queensland's 2004 Biodiscovery Act, which established a legislative framework to, *inter alia*, regulate collection, enable investment, and ensure fair and equitable benefit-sharing. He said research states benefit commercially from the discovery of new structures and compounds, while coastal state benefits include capacity building in taxonomy and new knowledge relevant to bioregional planning.

Emma Sarne, Philippine Permanent Mission to the UN, on behalf of Maria Rowena, Southeast Asian Fisheries Development Center, discussed bioprospecting and the management of MGRs in the Verde Island Passage Marine Corridor. Noting threats to MGRs, including illegal trade and fishing, she outlined a 1995 Executive Order to regulate bioprospecting and biopiracy

activities in the Philippines. She emphasized benefits of bioprospecting for academic pursuits, but said foreign patents put source country control of MGRs at risk.

In the ensuing discussion, delegates addressed, *inter alia*: enabling environments that could improve bioprospecting access and research, issues related to biopiracy, drafting regulatory legislation, codes of conduct for scientists, destructive sampling methods, monitoring impacts of MGR collection, databases, capacity building for taxonomy, and species mobility. A more detailed summary of these presentations and discussions is available at: <http://www.iisd.ca/vol25/enb2540e.html>

**EXPERIENCES IN COMMERCIALIZATION:** On Tuesday afternoon, Geoff Burton, Jean Shannon and Associates, Australia, outlined how both public and private research bodies are commercializing MGRs and underscored that new drugs primarily come from natural sources. He said MGR commercialization is largely driven by specialized biotechnology companies and publicly funded bodies. He supported managing legal and commercial risks, said companies are keen to ensure samples are collected legally, and urged governments to provide legal certainty and reliable taxonomic information.

Marc Slattery, University of Mississippi, US, discussed experiences in commercializing MGRs, particularly in the pharmaceutical field. He reported that commercially launching a drug can take between 15 and 30 years, and that very few samples ever have commercial potential. Slattery said governments should not expect immediate success, but rather should focus on the benefits of research collaboration, including improved scientific knowledge and technology transfer, local educational opportunities, and assistance in solving marine environmental problems.

Simon Munt, PharmaMar, Spain, said his biopharmaceutical company focuses on the discovery and development of marine-derived medicines. He explained the business case for undertaking MGR research and conserving biodiversity, stating that 60% of new chemicals reaching the market over the last 20 years have natural origins. Munt advocated the need for legal certainty to protect research investment and, describing the process of using macro- and micro-organisms and environmental DNA to develop medicinal products, emphasized that the process takes at least 15 years and does not guarantee success.

Maureen McKenzie, Denali BioTechnologies, addressed economic self-determination and commercialization of subsistence marine resources of Alaska Natives, and said Denali depends heavily on the wisdom of native people for commercial resource use, particularly for nutraceuticals. She said the Alaska Native Claims Settlement Act includes self-imposed ethical standards and "fair treatment" provisions, and noted implementation of a "biodiversity access agreement" with a tiered royalty/profit sharing model, and compensation based on the extent of participation in product development and commercialization.

In the ensuing discussion, delegates addressed, *inter alia*: enabling research in areas beyond national jurisdiction; whether national regulatory mechanisms could discourage companies from undertaking marine research within national jurisdiction; natural versus synthetic products; intellectual property options for industry; existing access and benefit-sharing arrangements

between companies and coastal states; and facilitating participation by developing countries with limited resources. A more detailed summary of these presentations and discussions is available at: <http://www.iisd.ca/vol25/enb2540e.html>

**INTERNATIONAL COOPERATION AND COORDINATION ON ISSUES RELATED TO MARINE GENETIC RESOURCES: CURRENT ACTIVITIES AT THE GLOBAL AND REGIONAL LEVELS:** On Wednesday morning, Jihyun Lee, CBD Secretariat, outlined CBD Articles and CoP8 decisions relating to MGRs, such as the decision on the conservation and sustainable use of deep seabed genetic resources beyond national jurisdiction. She also outlined a number of studies on high seas management to be considered at the thirteenth meeting of CBD's Subsidiary Body on Scientific, Technical and Technological Advice in February 2008.

Rama Rao, World Intellectual Property Organization (WIPO), described WIPO's work on genetic resources, which he said deals chiefly with traditional knowledge relating to genetic resources. He also outlined a set of draft provisions developed by the WIPO Intergovernmental Committee on Intellectual Property and Genetic Resources, Traditional Knowledge and Folklore to assist policymakers in drawing up protection for traditional knowledge.

Tony Ribbink, Sustainable Seas Trust, South Africa, discussed the African Coelacanth Ecosystem Programme, which he said is a New Partnership for Africa's Development marine project and explained that the Programme is a collaborative conservation project between nine African countries.

Margaret Tivey, Woods Hole Oceanographic Institute, US, stressed the need for research on how deep sea hydrothermal vent organisms adapt to the high pressure, low light, little to no oxygen and high toxicity associated with vent fields. Tivey outlined guidelines for conducting scientific research to prevent, *inter alia*, deleterious impacts on the sustainability of populations of vent organisms.

In the ensuing discussions, participants addressed: the need for government and scientist involvement in developing policies on codes of conduct; ways in which ocean-dependent communities can benefit from indigenous knowledge; disclosure of the origin of genetic material that contributes to a patented product; and the need for better taxonomy to support intellectual property. A summary of these presentations and discussions is available online at: <http://www.iisd.ca/vol25/enb2541e.html>

**CURRENT AND FUTURE CHALLENGES:** On Wednesday afternoon, Harlan Cohen, IUCN, spoke on ensuring conservation and sustainable use of MGRs and how UNCLOS provisions on international cooperation in marine scientific research and on environmental impact assessment also offer building blocks for considering MGR management in areas beyond jurisdiction.

Marcos de Almeida, Ministry of Defense, Brazil, on behalf of Cassiano Monteiro-Neto, Fluminense Federal University, Brazil, highlighted barriers to scientific research in the high seas such as high costs and lack of international cooperation, and noted the promise that MGRs hold for biotechnology uses such as aquaculture, pharmaceuticals and cosmetics. Almeida said few of the approximately 1700 biotechnology research groups in Brazil are working with MGRs.

Timothy Hodges, Co-Chair, CBD *Ad Hoc* Open-ended Working Group on Access and Benefit-Sharing, discussed capacity building and technology transfer challenges and opportunities, noted connections between activities on MGRs under UNCLOS and under the CBD, and outlined the CBD "Action Plan" on capacity building related to access and benefit-sharing.

Sam Johnston, UNU, provided an overview of regional efforts to address genetic resource use, focusing on examples from the Antarctic Treaty system, which he said had much in common with efforts to consider MGRs under UNCLOS. He also outlined the development of an Antarctic bioprospecting database to provide scientists and policymakers with a more systematic presentation of data on the issue.

Lisa Speer, Natural Resources Defense Council, discussed challenges related to conserving and appropriately managing MGRs, especially overfishing, destructive fishing practices, climate change and ocean acidification. She called for a new UNCLOS implementing agreement to consider managing MGRs in these areas.

In the ensuing discussions, participants discussed: examples of transfer of technology and capacity building within developing countries; conserving the oceans because of their intrinsic value and their value to humanity; preventing destructive practices; better flag-state controls on vessels; international cooperation and coordination for conserving MGRs; ways to regulate activities in the deep seabed; and the possibility of creating a clearinghouse mechanism for MGRs to prevent repetitive sampling. A summary of these presentations and discussions is available online at: <http://www.iisd.ca/vol25/enb2541e.html>

### **ELEMENTS TO BE CONSIDERED BY THE GENERAL ASSEMBLY**

An initial draft Co-Chairs' text on possible elements to be suggested to the General Assembly for consideration was distributed on Wednesday afternoon. Delegates submitted comments through Thursday afternoon, when a revised Co-Chairs' draft text was distributed to delegates for discussion in plenary, following which a third revised Co-Chairs' draft text was prepared. This text was discussed throughout Friday, with numerous breaks during the day to allow for informal consultations. By 11:00 pm, delegates had reached agreement on several paragraphs but, despite repeated efforts, were unable to agree on key text referring to the relevant legal regime for MGRs in areas beyond national jurisdiction. The negotiations ended without consensus late Friday evening.

Agreement was reached on several of the proposed elements, but fundamental differences of opinion on the legal status of MGRs stymied negotiations. As a result, the Co-Chairs' Report will contain the Co-Chairs recommended elements for consideration by the General Assembly, and will reflect the areas of consensus and disagreement.

In addition to chapeau language, delegates considered text on: abundance and diversity of MGRs; vulnerability of marine biodiversity; the UNCLOS legal framework; the role of the CBD; sovereign rights of coastal states; marine scientific research; identifying and mapping biodiversity; research benefits of MGRs; commercial development of MGRs; intellectual property regimes; capacity building; taxonomy; encouraging

research; technological and financial challenges and international collaborative opportunities; and access, research and use of MGRs beyond national jurisdiction. Delegates had not yet considered text on, *inter alia*: existing international efforts, codes of conduct and standards for MGR exploration when negotiations were halted.

**General comments:** Pakistan, for the G-77/China, said their views were not adequately reflected in the document. He also suggested adding paragraphs referencing the need to give developing countries sufficient time to prepare for the Consultative Process, and for the Co-Chairs to ensure equal and timely nomination of developing country representatives on the discussion panels. Václav Mikulka, Director, UN-DOALOS, praised the Co-Chairs' efforts to facilitate attendance by representative panelists. Egypt lamented that the issue of biopiracy was not reflected in document.

**Chapeau:** The Co-Chairs' proposed chapeau language highlighted the divergence of views among states as to whether MGRs in areas beyond national jurisdiction are governed by UNCLOS provisions relating to the Area, including the principle of the common heritage of mankind, or by the provisions relating to the high seas. Reference was also made to further discussions that will take place in the *Ad Hoc* Open-ended Informal Working Group on marine biodiversity beyond areas of national jurisdiction.

Brazil proposed language reflecting that, because of the difference of views on MGRs in areas beyond national jurisdiction, delegates agreed that further discussions would take place in the *Ad Hoc* Informal Working Group. He also called for text reflecting that there were divergent views on the application of the principle of the common heritage of mankind to activities and resources in the Area, and whether such resources should be used for the benefit of mankind as a whole, or on a "first come, first served" basis.

Opposing Brazil's suggestion, Iceland said the chapeau should be neutral. Australia noted agreement on the need to discuss issues related to areas beyond national jurisdictions in the *Ad Hoc* Informal Working Group. No agreement was reached on the chapeau.

**Abundance and diversity of MGRs:** This paragraph was agreed to by delegates with minor amendments. The text notes the abundance and diversity of MGRs, their dynamic nature, and the role of these resources as important constituents of marine biodiversity, geochemical cycles and sustaining life on earth.

**Vulnerability of marine biodiversity:** This paragraph addresses the vulnerability of marine biodiversity posed by direct threats. To this paragraph, Canada proposed adding reference to MGRs, and, opposed by the G-77/China, deleting reference to overexploitation and destructive fishing practices. The US proposed adding reference to naturally occurring processes, which India and others opposed. On reference to diverse threats, the US preferred "influences" to "threats," and delegates agreed to include both references.

The text notes the vulnerability of marine biological diversity, including MGRs, to diverse threats and influences, including pollution, climate change, habitat destruction, destructive fishing practices, physical alteration of the environment and overexploitation.

**UNCLOS legal framework:** This element recognizes UNCLOS as the legal framework for all oceans and seas activities. The G-77/China said in order for discussions to continue on the elements, this paragraph should highlight the divergence of views concerning the legal framework of MGRs in areas beyond national jurisdiction, namely whether MGRs fall under the regime for the Area or under the regime for the high seas. He explained that this paragraph is linked to a number of other paragraphs, including the one on codes of conduct for exploration and sampling of MGRs, and on intellectual property rights, and proposed deleting the entire paragraph, stating that UNCLOS is already accepted as the overarching legal regime for ocean activities. Iceland opposed deleting the paragraph.

Following informal consultations, the G-77/China, opposed by Australia, Iceland, Norway, the Russian Federation and the US, proposed an additional paragraph urging states to address the issues laid out in the Secretary-General's report on the need for the status of MGRs in areas beyond national jurisdiction to be clarified due to the divergence of views, and encouraging further discussions to take place in the *Ad Hoc* Informal Working Group. The EU, supported by the G-77/China, proposed text stating that discussions would be within the *Ad Hoc* Informal Working Group's mandate for its 2008 meeting.

Australia proposed language noting the discussion of the legal regime for areas beyond national jurisdiction and encouraging further discussions to take place in the context of the mandate of the *Ad Hoc* Informal Working Group in 2008. The US, Australia, Norway, Iceland and the Russian Federation opposed including reference to the divergence of opinions on this topic. A lengthy debate ensued between the two options, and delegates broke into informal discussions once again in an effort to reach consensus.

A final text was then tabled, which noted discussion on the relevant legal regime on MGRs in areas beyond national jurisdiction in accordance with the Convention, and called on states to further consider this issue in the context of the mandate of the *Ad Hoc* Informal Working Group with a view to making further progress on the issue. Iceland, Canada, the EU, Japan, the Russian Federation and the US supported this proposal. Brazil said he could accept the text if a reference to the general principles contained in UNCLOS was accepted. No consensus could be reached.

**The role of the CBD:** This paragraph recognizes the important role of the CBD and its objectives. Australia, supported by the EU, proposed including language on pursuing the CBD's objectives in accordance with its relevant provisions. Iceland, supported by Brazil, preferred adding language stating that benefits of genetic resources would occur within national jurisdiction. Parties agreed to include both suggestions.

The text recognizes the important role of the CBD, and lists its objectives as: the conservation of biological diversity and the sustainable use of its components; and the fair and equitable sharing of benefits arising out of the utilization of genetic resources within national jurisdiction or control.

**The sovereign rights of coastal states:** This paragraph recognizes that coastal states have sovereign rights with respect to marine resources in areas within national jurisdiction. Supporting a previous statement by the G-77/China, the Philippines, with Colombia, Iceland, India, Indonesia,

Mexico, Peru and the Russian Federation, proposed including “sovereignty” along with sovereign rights. The US clarified that sovereignty applies to territorial seas and waters, and sovereign right to the Exclusive Economic Zone and added wording on rights and “duties” and marine “living” resources. Iceland proposed wording that included sovereignty and sovereign rights and duties, but excluded living marine resources. After further minor amendments, delegates agreed.

The text recognizes that coastal states have sovereignty or sovereign rights, as appropriate, and duties, with respect to resources, including MGRs, in areas within national jurisdiction in accordance with international law, in particular the Convention.

**Marine scientific research:** This paragraph stresses the importance of marine scientific research. The US proposed referring to “research” instead of “marine and other scientific research,” which Argentina and India opposed. Mexico suggested the paragraph only refer to marine and scientific research, which was accepted by the US, pending decisions on other elements.

The text notes the importance of sharing, disseminating and using results of current marine and other scientific research.

**Identifying and mapping biodiversity:** This paragraph notes the importance of identifying and mapping biodiversity to improve the understanding of MGRs. The G-77/China suggested adding that this be done with consent of the coastal states as appropriate, while Argentina preferred “with consent of the coastal states, within areas of national jurisdiction.” Australia, supported by Brazil, Norway and the US, proposed that identifying and mapping be done in accordance with the Convention, and the G-77/China agreed.

The text notes the importance of identifying and mapping biodiversity across all marine ecosystems for improving understanding of the ecological functions, conservation needs, and current and potential uses of MGRs, in accordance with the Convention.

**Research benefits of MGRs:** This paragraph addresses the potential benefits of research on MGRs and the importance of conservation in safeguarding these benefits. Proposals were made to: replace ecosystem performance with ecosystem services (EU); add reference to sustainable use of marine biodiversity (China); and delete reference to marine scientific research (US). The US said language on conservation of marine biodiversity as a prerequisite for safeguarding benefits was too strong, and delegates subsequently agreed on language stating that conservation is a key requirement rather than prerequisite.

Much of the debate revolved around whether to refer to products derived from research, and to reference commercial benefits. Brazil suggested replacing benefits with products, and opposed reference to commercial applications. Iceland proposed deleting all examples, both commercial and environmental, and referring to products and benefits more generally. Two options emerged from this debate: one, referring to products and benefits, and a range of applications, without spelling out examples; and another, specifying only benefits with no reference to applications. Following more discussion on this paragraph, delegates agreed to only refer to potential benefits of research, and delete reference to commercial applications, on the condition that this issue be reflected elsewhere in the text.

The text recognizes the current and potential benefits of research on MGRs for understanding ecosystem services, environmental change and oceans processes, and notes that the conservation and sustainable use of marine biodiversity and its components are a key requirement for safeguarding such benefits.

**Commercial development of MGRs:** This paragraph recognizes the range of sectors that seek to explore the potential of MGRs, and notes that commercial development may involve risk.

The G-77/China, opposed by Norway and the EU, also suggested deleting language concerning the lengthy process and risk involved in MGR commercialization. After debating the necessity of referring to the risk of MGR commercialization, as well as the cause of this risk, which Guatemala suggested is “due to financial and technological challenges,” Brazil proposed, and delegates agreed, to language stating that commercial development may involve risk.

The text recognizes the value of goods and services from MGRs and the range of sectors, including food, health, industry and environmental remediation, that seek to explore the potential of MGRs, and notes that the commercial development of MGRs can often be a lengthy process that may involve risk, uncertainty and significant capital investment, and further notes that the conservation and sustainable use of marine biological diversity and its components are a key requirement for safeguarding such goods.

**Intellectual property regimes:** This paragraph notes several aspects of intellectual property regimes relating to MGRs. Australia proposed removing reference to aspects such as disclosure of the source of origin of MGRs, links to traditional knowledge, and implications for access and benefit-sharing. Supporting Australia, the US noted that the ICP is not the appropriate forum for discussing intellectual property regimes. Brazil, with the G-77/China, suggested language stating that intellectual property regimes and MGRs need to be “considered and regulated” rather than “understood.”

Norway opposed deleting the list of aspects, and supported Brazil’s proposed text. Australia suggested replacing the specific aspects with language that notes ongoing discussions and expertise in relevant international organizations including WIPO and the World Trade Organization. The G-77/China rejected the Australian proposal. No consensus was reached on this paragraph.

**Capacity building:** This paragraph notes the importance of strengthening capacity building for marine scientific research. Colombia and South Africa, with Brazil and Canada, proposed language on strengthening capacity building in a “sustainable and comprehensive way,” while the US proposed language stating that this be done “when possible.”

The text encourages states and international organizations to strengthen capacity-building activities, in particular in developing countries, in the field of marine scientific research, by training personnel, investing in facilities, providing research platforms and transferring environmentally-sound technologies.

**Taxonomy:** This paragraph discusses the role of taxonomy for the classification of marine organisms in research. Indonesia suggested, and delegates agreed, to promoting training in taxonomy, particularly in developing countries.

The text recognizes the fundamental role of taxonomy for the classification of marine organisms in research, data integration and conservation, and invites states and relevant organizations to promote training and careers in taxonomy in order to address the shortage of taxonomic expertise, particularly in developing countries.

**Encouraging research related to MGRs:** On this paragraph, delegates agreed that reference to relevant international institutions would implicitly include regional organizations.

The text invites states, relevant international organizations and stakeholders to promote further scientific cooperation and multidisciplinary research efforts, partnerships, and public and private joint ventures in order to encourage research related to MGRs.

**Technological and financial challenges and international collaborative opportunities:** This paragraph addresses challenges in the exploration and study of deep water ecosystems, and encourages engagement in international collaborative opportunities. Brazil added language reflecting that challenges exist in marine scientific research. Delegates agreed to use the term “assistance” instead of “incentives” in the context of international collaboration.

The text notes the technological and financial challenges in marine scientific research, and in the exploration and study of deep water ecosystems. It also encourages states and scientific institutions to engage in further international collaborative opportunities and assistance for this work in accordance with international law.

**Access, research and use of MGRs beyond national jurisdiction:** After delegates began to negotiate language on this topic, the G-77/China noted this paragraph was linked to the issue of the legal regime for MGRs beyond national jurisdiction. Discussions were then redirected back to debate on the UNCLOS legal framework, which was not resolved.

**Other elements:** Other elements in the Co-Chairs’ draft text that were not discussed in plenary included recommendations to:

- encourage existing international efforts and initiatives to collect, integrate and make publicly available marine scientific data;
- encourage states to ensure that any marine scientific research, investigation and use of MGRs within national jurisdiction or control is conducted sustainably;
- recognize the mutual need for fair, transparent, predictable and effective frameworks for MGRs in areas under national jurisdiction;
- encourage states, relevant organizations and institutions, and researchers to consider adopting, as appropriate, codes of conduct, standards and technical guidelines for the sustainable exploration and sampling of MGRs; and
- invite states to use the CBD’s Bonn Guidelines on Access and Benefit-Sharing in areas under their jurisdiction.

## CLOSING PLENARY

At 11:00 pm, plenary resumed, and following a final attempt to reach consensus, the negotiations remained deadlocked. Co-Chairs Ridgeway and Maquieira stated that no consensus text of elements could be forwarded to the General Assembly for consideration. However, the Co-Chairs announced that they would include the draft elements and recommendations within the Co-Chairs’ Report of ICP-8, including a summary of the divergence of views, to the General Assembly.

The final report of the meeting will include: the Co-Chairs’ elements to be submitted to the UN General Assembly; a Co-Chairs’ summary of discussions; and additions and amendments to issues that could benefit from attention in future work of the General Assembly.

In closing, Co-Chair Ridgeway emphasized that the week had been informative, much had been learned, including on the parameters of forthcoming debates. Co-Chair Maquieira stressed that lessons must be learned from the “honest difference of opinion” that halted ICP’s work. Noting that this was his last ICP as Co-Chair, he thanked participants and closed the meeting at 11:36 pm.

This final report will be available online, during the coming weeks on the UN-DOALOS website at: <http://www.un.org/Depts/los>

## A BRIEF ANALYSIS OF ICP-8

At the eighth meeting of the of the United Nations Open-ended Informal Consultative Process on Oceans and the Law of the Sea (Consultative Process or ICP-8), four days of informative and constructive panel discussions on marine genetic resources (MGRs) set the stage for Friday’s negotiations on its recommendations to the UN General Assembly. Scientists discussed a myriad of activities relating to MGRs, including their vulnerability and services they provide, their collection and commercialization, and experiences with international cooperation and coordination at the global and regional levels. Despite the instructive and neutral atmosphere of the panel discussions and plenary meetings, the academic atmosphere dissipated as Friday’s negotiations ground to an unceremonious halt when the matter of the legal regime for MGRs came to a head.

Despite the fact that deadlock prevented a consensus document from being agreed, Co-Chairs Cristián Maquieira and Lori Ridgeway and participants alike were keen not to characterize the meeting as a failure. Many pointed to the productive panel sessions, which raised delegates’ awareness of the complexity and scope of the MGR issue. Many also regarded the legal debate as inevitable, and were refreshed that positions were now clearly out in the open, as a first step on the path to resolution.

This analysis will review the key revelations from the panel discussions, and will also assess the divergence of views over the legal regime for MGRs in areas beyond national jurisdiction. In conclusion, it will reflect on some of the reasons that ICP-8 did not reach a consensus outcome, unlike previous, equally-divided ICP meetings.

## **MARINE GENETIC RESOURCES – AN OCEAN-SIZED DEBATE**

During the week, ICP-8 delegates took in much new information on MGRs from panelists including scientists, legal experts and representatives of other multilateral environmental agreements. At least three “revelations” from the panel discussions had immediate effect on many delegates’ thinking. The first was the demonstration of the conceptual difference between genetic information and biodiversity itself. The legal differences can be significant. As one delegate pointed out, a country can own an individual fish, but whether anyone can own the genetic information of the fish species, particularly if the species is not endemic, is a different matter.

A second revelation was the varying characteristics, and accompanying conservation challenges, of organisms with potentially useful genetic information. Some microorganism systems are massively abundant and dynamic, while species such as commercially interesting “extremophiles” like those living beside deep-sea hydrothermal vents can be extremely rare. Other chemical compounds are only produced by a creature when a certain combination of diet, parasites and competitors is also present, making it very difficult to reproduce these chemicals in the laboratory.

Thirdly, biotechnology experts also tried to pour cold seawater on expectations of those who see a pot of genetic gold in every new marine organism. Panelists warned that developing commercial products from MGRs takes at least fifteen years of investment, and that few samples ever lead to a marketed product. Developed countries repeated this point, urging developing countries to focus on the “non-profit” benefits of research – jobs, capacity building and better science. But developing countries observed that products and profits are being made from MGRs at least occasionally, and that they also have a right to share these benefits. Developing countries’ perception that they could be “missing out again” was a major factor in their insistence throughout the week on discussion of the legal regime, including access and benefit-sharing for MGRs beyond national limits.

### **A MATTER OF LAW**

UNCLOS establishes distinct regimes in the two maritime areas beyond the limits of national jurisdiction, the high seas (water column) and the Area (seabed and subsoil). However, Part XI (the Area) of the Convention does not mention the living marine resources of the seabed, which were undiscovered when the Convention was negotiated.

At ICP-8, the G-77/China argued that MGRs should be regarded as the “common heritage of mankind,” like the mineral resources of the Area. These countries see potentially lucrative spin-offs from MGRs in the Area and would like to see a benefit-sharing agreement put in place. They note that while the Convention is mute on the status of the living resources of the Area, General Assembly Resolution 27/49 of 1970, which predates the adoption of UNCLOS in 1982, declares “all resources” of the Area to be the common heritage of mankind, and assert that this should include living resources such as MGRs.

However, throughout the week’s discussions and negotiations, developed countries, chiefly the US, the Russian Federation, Australia, Iceland and Norway, strongly resisted the application of the common heritage principle extending beyond mineral resources to which it currently applies. Instead they assert that the high seas regime for living resources (UNCLOS Part VII) also applies to living resources in the Area. These countries are also mindful of the fact that the Convention is a carefully-balanced “package deal” of rights and obligations, and are wary of destabilizing UNCLOS by countenancing the possibility that its precepts are in dispute or flawed. Furthermore, while some may consider that the Convention is short on specific detail on marine environmental protection beyond national jurisdiction, developed countries do not regard that activities currently underway in the Area are of dubious legality simply because developing countries understandably wish to get involved as well.

In the end, delegates could not even agree to disagree. Some developed country delegates were doggedly unable to accept a recommendation to the General Assembly referring to a dispute over UNCLOS, and developing countries were steadfast in their unwillingness to accept a “business as usual” text that implied no divergence of views.

### **DOWN THE VENT?**

Long, tough Friday negotiating sessions have been a feature of past ICP meetings. Regular attendees are also accustomed to seeing contentious elements deleted from the draft consensus text at the last moment or accepted after much watering down, while the elements that cannot be agreed upon are reflected in the non-negotiated Co-Chairs’ report to retain the essence of the debate. However this ICP meeting was the first with no negotiated outcome at all.

The long argument over how – and if – to mention the divergence of views over the legal status of MGRs in areas beyond national jurisdiction was in one sense irrelevant – as one delegate stated, “we know the problem is there, whether we write it down or not.” Certainly ICP-8 did not attempt to resolve the impasse in substance, which delegates from both sides recognized to be well beyond the scope and will of the meeting. The chief importance of the debate may turn out to be the G-77/China’s actions in putting down a marker that this issue will be argued persistently wherever it arises.

Parallels can be drawn with the original negotiations of the Convention. There, developing countries eventually succeeded in convincing the developed world of their serious intent to share the potential windfall from mining activities in the Area, and secured common-heritage status for those mineral resources as part of the giant package deal that makes up UNCLOS.

But there are significant differences between those negotiations and the state of the world today. For starters, in the 1970s deep seabed mining beyond the continental shelf was a vision of the future, whereas research into MGRs beyond national jurisdiction is occurring today, adding urgency to the debate for the G-77/China. Most observers consider that maintaining the status quo on MGRs in the Area suits developed countries, who have a technological and capacity advantage,

whereas a generation ago those countries had other interests to secure, such as navigation rights, which made the tradeoffs more palatable.

Perhaps with this in mind, the EU, which is looking for support for their proposed implementation agreement under UNCLOS to protect marine biodiversity beyond areas of national jurisdiction, hinted at possibly accommodating G-77/China views on MGRs as part of such an agreement.

### MOVING ON

In spite of the contentious negotiations there was no bitterness in the corridors as the meeting concluded on Friday night. Co-Chair Maquieira summarized the outcome as “the result of an honest difference of opinion.” Some delegates had their own additional explanations for why the deadlock became so entrenched. A few suggested that the G-77/China were simply dissatisfied at a meeting they perceived as giving unequal attention to their concerns, especially in the aftermath of a divisive Meeting of States Parties to UNCLOS the week before, where a joint Asian-African proposal relating to the allocation of seats in the Commission and the Tribunal failed to achieve consensus. Others asserted obstruction by developed countries who are satisfied with the status quo. Many also noted that meetings elsewhere on genetic resources and access and benefit-sharing are famously tough, and no less should have been expected at ICP-8.

This issue would have stayed alive even without the Co-Chairs retaining the draft elements and a summary of the divergence of views within their report of ICP-8 to the General Assembly. It will likely arise repeatedly during the next twelve months: especially at the debates preceding the adoption of UN General Assembly resolutions at the end of the year; and at the 2008 meeting of the *Ad Hoc* Informal Working Group on marine biodiversity beyond national jurisdiction. The discussions are not likely to get easier. However, as the Co-Chairs emphasized when closing ICP-8, there will always be disputes about interpretation, but the international community must find a way to move forward nonetheless.

## UPCOMING MEETINGS

### EUROPEAN SYMPOSIUM ON MARINE PROTECTED AREAS AS A TOOL FOR FISHERIES MANAGEMENT AND ECOSYSTEM CONSERVATION:

This meeting will be held from 25-28 September 2007, in Murcia, Spain, and is being organized by the EU-funded research projects EMPAFISH and PROTECT. The symposium aims to bring together scientists, managers and stakeholders to discuss new scientific findings and experiences on the use of a broad range of different types of MPAs. For more information, contact: Symposium Secretariat; e-mail: [info@MPAsymposium2007.eu](mailto:info@MPAsymposium2007.eu); internet: <http://www.MPAsymposium2007.eu>

### EXPERT WORKSHOP ON ECOLOGICAL CRITERIA AND BIOGEOGRAPHIC CLASSIFICATION SYSTEMS FOR MARINE AREAS IN NEED OF PROTECTION:

This meeting is being organized by the Convention on Biological Diversity (CBD) Secretariat and will be held from 2-4 October 2007, in Azores, Portugal. This workshop will aim to, among other things, refine and develop a consolidated set of scientific

criteria for identifying ecologically or biologically significant marine areas in need of protection, and compile a consolidated set of scientific criteria for representative networks of marine protected areas. For more information, contact: CBD Secretariat; tel: +1-514-288-2220; fax: +1-514-288-6588; e-mail: [secretariat@cbd.int](mailto:secretariat@cbd.int); internet: <http://www.cbd.int/meetings/default.shtml>

**ABS-5:** The fifth meeting of the CBD *Ad Hoc* Open-Ended Working Group on Access and Benefit-Sharing will take place from 8-12 October 2007, in Montreal, Canada. For more information, contact: CBD Secretariat; tel: +1-514-288-2220; fax: +1-514-288-6588; e-mail: [secretariat@cbd.int](mailto:secretariat@cbd.int); internet: <http://www.cbd.int/doc/meeting.aspx?mtg=ABSWG-05>

**FOURTH ANNUAL SOUTH EAST ATLANTIC FISHERIES ORGANIZATION (SEAFO) MEETING:** This meeting will take place from 8-12 October 2007, in Windhoek, Namibia. For more information, contact: SEAFO Secretariat; tel: +264-64-220387; fax: +264-64-220389; e-mail: [info@seafo.org](mailto:info@seafo.org); internet: <http://www.seafo.org>

**14TH ANNUAL MEETING OF THE COMMISSION FOR THE CONSERVATION OF SOUTHERN BLUEFIN TUNA (CCSBT):** This meeting will be held from 16-19 October 2007, in Canberra, Australia. For more information, contact Executive Secretary Neil Hermes; tel: +61-2-6282-8396; fax: +61-2-6282-8407; e-mail: [nhermes@ccsbt.org](mailto:nhermes@ccsbt.org); internet: <http://www.ccsbt.org/>

**SECOND SESSION OF THE ITPGR GOVERNING BODY:** Organized by the FAO, the second session of the Governing Body of the International Treaty on Plant Genetic Resources for Food and Agriculture will be held from 28 October - 2 November 2007, in Rome, Italy. For more information, contact: Shakeel Bhatti, ITPGR Secretary; tel: +39-06-570-53441; fax: +39-06-570-53057; e-mail: [shakeel.bhatti@fao.org](mailto:shakeel.bhatti@fao.org); internet: <http://www.fao.org/ag/cgrfa/itpgr.htm>

**PACEM IN MARIBUS XXXII:** This conference, to be held from 5-8 November 2007, in Birkirkara, Malta, will be hosted by the International Ocean Institute. PIM XXXII will be organized around three themes: the State of the Ocean – current challenges and future prospects; involvement of women and youth within the Millennium Development Goals’ strategies; and new solidarities for sustainable ocean governance. For more information, contact Conference Secretariat: tel/fax: +356-2144-0972; e-mail: [pim2007@capemalta.net](mailto:pim2007@capemalta.net); internet: <http://www.capemalta.net/pim2007/>

**20TH MEETING OF THE INTERNATIONAL COMMISSION FOR THE CONSERVATION OF ATLANTIC TUNAS (ICCAT):** This meeting will take place from 12-18 November 2007, in Istanbul, Turkey. For more information, contact ICCAT Secretariat; tel: +34-91-416-5600; fax: +34-91-415-2612; e-mail: [info@iccat.int](mailto:info@iccat.int); internet: <http://www.iccat.es/>

**EIGHTH ASIAN FISHERIES FORUM:** This meeting will take place from 20-23 November 2007, in Kochi, India. The Eighth Asian Fisheries Forum will address the theme “Fisheries and Aquaculture: Strategic Outlook for Asia,” and will convene several simultaneous technical sessions, a poster session, two symposia, a trade exhibition and post-forum tours. For more

information, contact Forum Secretariat: tel: +91-484-239-4798; fax: +91-484-239-4909; e-mail: 8aff2007@gmail.com; internet: <http://www.8aff2007.org>

**FOURTH REGULAR SESSION OF THE WESTERN AND CENTRAL PACIFIC FISHERIES COMMISSION (WCPFC):** This conference will be held from 3-7 December 2007, in Pohnpei, Federated States of Micronesia. For more information, contact: WCPFC Secretariat; tel: +691-320-1992 or 320-1993; fax: +691-320-1108; e-mail: [wcpfc@mail.fm](mailto:wcpfc@mail.fm); internet: <http://www.wcpfc.int/>

**MEETING TO IDENTIFY AND ELABORATE AN OPTION FOR INTERNATIONAL COOPERATION ON MIGRATORY SHARKS:** This meeting will take place from 11-13 December 2007, in Mahé, Seychelles. Organized under the Convention on Migratory Species (CMS), this meeting will consider the conservation status of migratory sharks and possible options for international cooperation. For more information, contact: CMS Secretariat; tel: +49-228-815-2401; fax: +49-228-815-2449; e-mail: [secretariat@cms.int](mailto:secretariat@cms.int); internet: <http://www.cms.int/>

**ABS-6:** The sixth meeting of the CBD *Ad Hoc* Open-Ended Working Group on Access and Benefit-Sharing will take place from 21-25 January 2008, in Geneva, Switzerland. For more information, contact: CBD Secretariat; tel: +1-514-288-2220; fax: +1-514-288-6588; e-mail: [secretariat@cbd.int](mailto:secretariat@cbd.int); internet: <http://www.cbd.int/doc/meeting.aspx?mtg=ABSWG-06>

**SECOND MEETING OF THE CBD AD HOC OPEN-ENDED WORKING GROUP ON PROTECTED AREAS:** This meeting under the Convention on Biological Diversity is expected to take place at FAO headquarters in Rome, Italy, from 11-15 February 2008. For more information, contact: CBD Secretariat; tel: +1-514-288-2220; fax: +1-514-288-6588; e-mail: [secretariat@cbd.int](mailto:secretariat@cbd.int); internet: <http://www.cbd.int/meetings/default.shtml>

**SBSTTA-13:** The thirteenth meeting of the CBD's Subsidiary Body for Scientific, Technical and Technological Advice will meet in Rome, Italy, from 18-22 February 2008. One of the issues on the agenda is the management of high seas biodiversity. For more information, contact: CBD Secretariat; tel: +1-514-288-2220; fax: +1-514-288-6588; e-mail: [secretariat@cbd.int](mailto:secretariat@cbd.int); internet: <http://www.cbd.int/meetings/default.shtml>

**AD HOC OPEN-ENDED INFORMAL WORKING GROUP ON MARINE BIOLOGICAL DIVERSITY BEYOND AREAS OF NATIONAL JURISDICTION:** The next meeting of the Working Group is expected to take place in the first half of 2008, as per UN General Assembly resolution 61/222. For more information, contact: UN-DOALOS Secretariat; tel: +1-212-963-3962; fax: +1-212-963-2811; e-mail: [doalos@un.org](mailto:doalos@un.org); internet: <http://www.un.org/Depts/los/biodiversityworkinggroup/biodiversityworkinggroup.htm>

**FOURTH GLOBAL CONFERENCE ON OCEANS, COASTS AND ISLANDS:** This conference will be held from 7-11 April 2008, in Hanoi, Viet Nam, with the theme of advancing integrated coastal and ocean management by 2010 in the context of climate change. Organized by the Global Forum on Oceans, Coasts and Islands, this conference will focus on: achieving ecosystem management and integrated coastal and ocean management by 2010; climate, oceans and

security; and addressing the governance of marine ecosystems and uses in areas beyond national jurisdiction. For more information, contact: Shelby Hockenberry, University of Delaware; tel: +1-302-831-8086; fax: +1-302-831-3668; e-mail: [smhocken@udel.edu](mailto:smhocken@udel.edu); internet: <http://www.globaloceans.org/globalconferences/2008>

**EFFECTS OF CLIMATE CHANGE ON THE WORLD'S OCEANS:** This symposium will be held from 19-23 May 2008, in Gijón, Spain, and is being organized by the International Council for the Exploration of the Sea (ICES), the North Pacific Marine Science Organization (PICES) and the Intergovernmental Oceanographic Commission (UNESCO/IOC). The Symposium will focus on the major climate change-related issues affecting oceans including oceanic circulation, climate modeling, carbon cycling, changes in species distributions and migratory routes, sea-level rise, and coastal erosion. For more information, contact: North Pacific Marine Science Organization (PICES) Secretariat; tel: +1-250-363-6366; fax: +1-250-363-6827; e-mail: [secretariat@PICES.int](mailto:secretariat@PICES.int); internet: [http://www.pices.int/meetings/international\\_symposia/2008\\_symposia/Climate\\_change/climate\\_background\\_3.aspx](http://www.pices.int/meetings/international_symposia/2008_symposia/Climate_change/climate_background_3.aspx)

**CBD COP9:** The ninth Conference of the Parties to the CBD will take place in Bonn, Germany, from 19-30 May 2008. For more information, contact: CBD Secretariat; tel: +1-514-288-2220; fax: +1-514-288-6588; e-mail: [secretariat@cbd.int](mailto:secretariat@cbd.int); internet: <http://www.cbd.int/>

**UNICPOLOS-9:** The ninth meeting of the UN Open-ended Informal Consultative Process on Oceans and the Law of the Sea is expected to take place in May or June 2008, at UN headquarters in New York. For more information, contact: UN-DOALOS; tel: +1-212-963-3962; fax: +1-212-963-2811; e-mail: [doalos@un.org](mailto:doalos@un.org); internet: <http://www.un.org/Depts/los/>

## GLOSSARY

CBD	Convention on Biological Diversity
ICP	Informal Consultative Process on Oceans and the Law of the Sea
IUU	Illegal, unreported and unregulated fishing
MGR	Marine genetic resource
MPA	Marine protected area
SIDS	Small island developing States
UNCLOS	UN Convention on the Law of the Sea
UN-DOALOS	UN Division for Ocean Affairs and the Law of the Sea
WIPO	World Intellectual Property Organization