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POUR LE DÉBAT

N° 08/2008 | NATURAL RESOURCES

Towards a New Governance of High Seas Biodiversity

Report of the International Seminar held in
Monaco on March 20-21 mars, 2008

This document, written in close cooperation with the contributors, provides a summary of the presentations and discussions held during the international seminar “Towards a New Governance of High Seas Biodiversity”, organised by the Institute for Sustainable Development and International Relations (IDDRi) on 20 and 21 March 2008 at the Oceanographic Museum of

Monaco, in partnership with the Prince Albert II of Monaco Foundation, the French Agency of Marine Protected Areas, the French Global Environmental Facility (FFEM) and with the collaboration of the Maritime and Oceanic Law Centre (University of Nantes). The opinions expressed by contributors during this seminar do not necessarily reflect the official position of the

institutions to which they belong.

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Governed since the 17th century on the basis of Grotius's principle of the freedom of the seas, the high seas remain the least known and least explored area on earth. As a global public good par excellence, the high seas are in need of internationally coordinated management within a global framework of effective environmental governance. However, the current international framework seems unable to consistently respond effectively to the threats weighing on the particularly rich and vulnerable resources of the high seas, which represent 64% of the total surface of seas and oceans. A debate on establishing an international system of environmental governance is mounting, and it will be essential to define an appropriate political, legal and institutional framework for the sustainable use and exploitation of marine biodiversity in areas beyond national jurisdiction.

Aware of the urgency of the situation, the international community is therefore gradually mobilizing and debating the issue of high seas governance within different forums – whether intergovernmental (UN Secretariat, UNEP, FAO, UNESCO, IMO, CBD Secretariat, etc.) or not (IUCN, WWF, the Deep Sea Conservation Coalition, etc.) – and through different processes (Joint group of experts on the scientific aspects of marine environmental protection, United Nations open-ended informal consultative process on oceans and the law of the sea, Ad hoc open ended informal working group to study issues relating to conservation and sustainable use of marine biological diversity beyond areas of national jurisdiction, the Countdown 2010 initiative, etc.).

The recent debates conducted within these different institutions have raised some critical issues – of a scientific, legal, institutional and economic nature – that must now be dealt with as a matter of urgency for the sake of biodiversity conservation. The aim of the international seminar “Towards a New Governance of High Seas Biodiversity”, organised by the Institute for Sustainable Development and International Relations (IDDRI), was thus to bring together high level international experts with a view to informing the current debate, examining the issues that raise the greatest difficulties, and considering new approaches to the sustainable management of high-seas resources. On 20 and 21 March 2008, this event – organised in partnership with the Prince Albert II of Monaco Foundation, the French Agency of Marine Protected Areas, the French Global Environmental Facility (FFEM) and with the collaboration of the Maritime and Oceanic Law Centre (University of Nantes) – brought together around 100 experts from international organizations, national administrations, non-governmental organisations and research centres.

As **Jean-Louis Etienne** stressed during the opening session, the task facing participants was immense: the aim was to explore new avenues for the governance of almost 70% of the marine area. **Christophe Du Castel** acknowledged the urgency of defining a new framework for protecting high seas areas and resources. With this in mind, **Robert Calcagno** invited participants to assess the relevance of the international tools and mechanisms in force in view of the threats currently facing marine biodiversity in areas beyond national jurisdiction. Thus, in line with IDDRI's role and with the very purpose of the Prince Albert II of Monaco Foundation, outlined by **Laurence Tubiana** and **Bernard Fautrier**, the debate required a global, transdisciplinary approach.

This document provides a summary of the presentations and discussions held during this two-day seminar. Workshop by workshop, it presents the main perspectives put forward for a new governance of high seas biodiversity.

Introductory session

The introductory session recalled the extent of the threats facing the high seas and presented the different institutions in which the issue of their sustainable conservation and use is currently being debated.

Kristina Gjerde thus provided an exhaustive list of the threats facing areas and resources beyond national jurisdiction, emphasizing the fact that 40% of the oceans are already strongly affected by human impacts. Thus, 75% of fish stocks are now fully exploited or overexploited; recent studies have shown that unless there is a major break away from traditional fisheries management methods, the majority of commercial species are expected to collapse by 2048. Similarly, growth in international maritime transport over the last few decades is leading to a constant increase in oil pollution, marine debris (trash) and to the introduction of alien species. Furthermore, the marine environment is also affected by the consequences of climate change, which is causing ocean acidification and the resulting disruption of ecosystem balance. Finally, new ways of exploiting the oceans, such as bottom trawling, fertilization, bioprospecting or using energy resources in or under the seabed are all now threatening ecosystems in areas beyond national jurisdiction. Consequently, there is an urgent need to implement modern tools for managing high seas areas and resources in order to meet the numerous objectives set within negotiating arenas. Thus, establishing measures to protect vulnerable ecosystems against

bottom trawling before 31 December 2008, implementing the ecosystem approach by 2010, creating a representative network of marine protected areas by 2012, and maintaining fish stocks or restoring them to levels that can produce maximum sustainable yield by 2015, are all particularly ambitious objectives that will only be achieved if the international community steps up its efforts

Henceforth, expert workshops could facilitate official negotiation processes by clarifying options for improving high seas biodiversity governance. This was precisely the aim of the "Strategic Planning Workshop on Global Oceans Issues in Marine Areas Beyond National Jurisdiction" organised in Nice in January 2008 within the framework of the Global Forum on Oceans, Coasts, and Islands. Its findings, presented by **Biliana Cicin-Sain**, reflect a sense of urgency in addressing governance of areas beyond national jurisdiction, discuss the application of principles of modern ocean governance to these areas, and detail steps that could be taken to implement integrated sea and ocean management in marine areas beyond national jurisdiction.

Workshop 1. How can high seas biodiversity be assessed in order to inform decision-making?

The participants of the first workshop examined the links – existing or to be developed – between scientific knowledge and decision-making processes.

Taking the example of the research conducted by the Intergovernmental Panel on Climate Change (IPCC), the chair, **Harold Mooney**, stressed the importance of assessment processes in mobilizing the international community. **Adi Kellermann** and **Kim Juniper** demonstrated that considerable efforts are now underway to improve knowledge of the physical, biological and chemical mechanisms governing high seas ecosystems. Through international organisations such as the International Council for the Exploration of the Sea (ICES) or scientific initiatives such as the Census of Marine Life, scientists are gaining more and more understanding of the dynamics of these environments and are now better equipped to direct policies towards the objective of sustainability.

There is, however, no doubt that a great deal of work remains to be done in this field. Some 250 000 marine species have so far been identified, when deep sea biodiversity is estimated at between 500 000 and 10 000 000 species. Likewise, it is now necessary to improve bathymetric maps, to develop knowledge of the mobility and biology of species, to conduct research on the geological aspects of the seabed and to continue assessing the impact of climate change on the oceans. **Sophie Arnaud-Haond**, **Patricio Bernal** and **Jake Rice** thus stressed the need to conduct integrated assessments in order to understand long-term connections between ecosystems and their dynamics.

Despite a unanimously recognised lack of knowledge, the contributors nevertheless highlighted the fact that information available today is sufficient to allow action. **Adi Kellermann** focused on knowledge of the specific biology of deep sea species – slow growth, late sexual maturity – to conclude that deep sea fishing requires better management in order to avoid jeopardising the associated species and habitats. Likewise, **Kim Juniper** showed that knowledge of deep ecosystems – especially hydrothermal vents and seamounts – now makes it possible to identify biodiversity hotspots.

Next, the specific question of the link between science and decision-making was raised. **Jake Rice** pointed out that scientific knowledge has not prevented the collapse of stocks of many commercial species, such as North Sea cod. The success or failure of resource conservation policies does not therefore depend on science alone: recommendations made must be accompanied by strong political decisions. In this respect, **Patricio Bernal** used a recent study carried out at the scale of the United States to point out that the rate of approval of scientific councils by politicians has considerably fallen over the last few years. In the absence of relevant data enabling the implementation of optimal strategies, **Sophie Arnaud-Haond** suggested to immediately adopt conservative measures in order to preserve vulnerable ecosystems and to refine them continuously in light of future scientific knowledge.

Workshop 2. Prospects for the sustainable management of fishery resources in areas beyond national jurisdiction

The aim of the second workshop was to define possibilities for the sustainable management of fishery resources in areas beyond national jurisdiction.

Jacqueline Alder first recalled that recent assessments, such as the Millennium Ecosystem Assessment or the Global Environment Outlook, revealed a global threat to fishery resources. The high seas are not spared by this trend, as technological progress means that ever further and deeper areas can be exploited. However, the international framework governing fisheries is currently deficient: discussions therefore revolved around the measures capable of ensuring a more sustainable management of fishery resources.

At the legal level, **Tullio Treves** demonstrated that the United Nations Convention on the Law of the Sea (UNCLOS) includes several relevant provisions for the conservation of high seas fish stocks, especially in articles 117, 118, 119 and 194(5). Similarly, the 1995 Agreement on straddling stocks and highly migratory species or the decisions adopted within regional fisheries management organisations (RFMOs) establish, to a large extent, the principles for the sustainable management of fishery resources. However, several failings of international law were discussed: the lack of clarity in the provisions of UNCLOS and the 1995 Agreement, the small number of RFMOs party States, the impossibility of taking binding action against third party States, and the lack of any binding legal force for the guidelines established by FAO. Beyond the additional agreement to UNCLOS, currently being promoted by the European Union, use of the dispute settlement mechanism provided for by UNCLOS (Part XV) and the 1995 Agreement (Part VIII) could lead to a new interpretation of these texts, in the light of the threats currently facing high seas resources. States must therefore exploit the potential represented by the application and development of the legal tools already in force. In this respect, **Gudmundur Eiriksson** stressed that the difficulties in applying the law presented by Tullio Treves mainly stemmed from a lack of State capacity. **Robin Allen** said that the political will to apply an international agreement is just as, if not more, important than the simple fact of ratifying it.

Beyond these legal considerations, the economic context of international fisheries was also discussed, through a study of the link between the sustainable management of fishery resources and the subsidies granted to fishing activities. **Anthony Cox** thus showed that the subsidies granted for capital (construction, fleet modernisation, etc.) and for operating costs (fuel, insurance, etc.) are not in keeping with the sustainability of global fisheries, especially in the high seas. Although important steps have been taken in recent years through the negotiations conducted within the World Trade Organisation (WTO), several fundamental questions remain in abeyance today (the scope of the ban on subsidies, special and differential treatment for developing countries and small-scale fisheries, etc.).

Rosemary Rayfuse focused on the certification processes underway in order to encourage the sustainability of fishery resources, especially by combating illegal, unreported and unregulated fishing. Based on international conventions and agreements, RFMOs have thus set up systems for catch and trade documentation schemes: by means of a traceability mechanism, these tools aim to ensure the exploitation of fishery resources is in line with conservation measures. In a similar vein, ecolabels are also being developed with the aim of encouraging consumers to purchase species that are fished in compliance with international and regional rules. Although interesting, for ecolabels to be truly effective, detailed criteria for assessing the sustainability of fisheries are needed. Ecolabels could then be utilised together with catch and trade documentation schemes to enhance the overall effectiveness of efforts to ensure sustainability of fisheries.

The participants also stressed the need to set priorities for action in order to rapidly put a stop to the collapse of fish stocks. In this respect, the chair, **Ussif Rashid Sumaila**, considered the elimination of fuel subsidies as a key requirement for ensuring the sustainable exploitation of high seas resources. **Gudmundur Eiriksson** recalled that the report of the Ministerially-led Task Force on Illegal, Unreported and Unregulated Fishing (IUU) on the High Seas contained a set of practical proposals intended to tackle the root causes of IUU. **Robin Allen** then stressed the need for an external assessment of RFMOs, while **Lisa Speer** called for the application of the impact assessments provided for by UN General Assembly Resolution 61/105 to all activities carried out in the high seas and the adoption by this assembly of a declaration of principles on oceans governance.

Workshop 3. Strengthening the protection of marine biodiversity in areas beyond national jurisdiction

The third workshop focused on the conservation of vulnerable ecosystems and the sustainable use of high seas biological resources.

Tullio Scovazzi first maintained that the principle of the freedom of the seas could no longer be understood as it was by Grotius in the 17th century, given that the threats facing marine ecosystems have considerably developed since then. He therefore welcomed the progressive erosion of this principle, in the field of fisheries as in that of maritime navigation. In this respect, Tullio Scovazzi highlighted several legal provisions that

would ensure better management of international maritime transport in vulnerable high seas ecosystems: article 194(5) of UNCLOS, which requires States to protect rare or fragile ecosystems; the MARPOL Convention, whose field of application stretches to the high seas; or the implementation of the concept of Particularly Sensitive Sea Areas under the aegis of the International Maritime Organisation (IMO). A major problem persists, however, in the exercise of effective jurisdiction by States over ships sailing under their flags: considering ships sailing under a flag of convenience as ships “without nationality”, as defined in article 92(2) of UNCLOS, would make it possible to impose compliance with article 91 of the Convention, which requires a “genuine link between the State and the ship”. Finally, recalling that the emergence of new challenges compelled States to renegotiate legal tools, Tullio Scovazzi called for the adoption of an UNCLOS implementation agreement, which, on the basis of article 194(5), would ensure broader protection of high seas ecosystems.

Jean-Pierre Beurier and **Gwenaëlle Proutière-Maulion** maintained that the legal regime for marine biodiversity was currently based on a weak ideological consensus and centuries-old concepts that were unsuited to the modern world. The *res nullius* status attached to marine genetic resources and the provisions of the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS) are clearly incompatible with the objective of protecting and conserving these resources, in that they bear a risk of reserving resources and knowledge. Although avenues have been suggested for extending the mandate of the International Seabed Authority (ISA) to the conservation of marine genetic resources, today a broader redefinition of the legal regime for marine biodiversity is required. In this respect, the concepts of heritage, global public goods and the common interest of mankind have interesting possibilities.

This debate on the legal regime applying to marine genetic resources, the development of bottom trawling and the broader plan for biodiversity conservation in areas beyond national jurisdiction are now leading the international community to ask whether a new inter-State agreement on the high seas is needed. **Serge Beslier** thus focused on the possible content of such an instrument, stressing the need to strive towards integrated ocean management. With this in mind, he called for a distinction between the conservation and the use of marine biodiversity, as these two debates currently fall within very different political and legal frameworks. Consequently, a potential UNCLOS implementation agreement specifically on the high seas should first concentrate on a conservation objective, by examining several key points: organising research and implementing the ecosystem approach, establishing rules for compatibility between measures applicable within and beyond national jurisdictions, setting up a decision-making process for the creation of high seas marine protected areas and defining relations with other international agreements.

Speaking on the role of the ISA in high seas biodiversity governance, **Gwenaëlle Le Gurun** first recalled that the mandate entrusted to the Authority did not directly fall within such an approach. Indeed, in line with UNCLOS article 136, only the Area and its resources are declared the common heritage of mankind. Moreover, the ISA’s territorial jurisdiction is limited to the Area, in other words to the seabed and ocean floor and subsoil thereof, beyond the limits of national jurisdiction. However, Gwenaëlle Le Gurun maintained that the role of the Authority in discussions on high seas biodiversity governance was greater than it might seem. Thus, the ISA participates directly in these debates, not only within its own bodies, but also within the international authorities concerned. Moreover, the Authority is also involved in this issue in the sense that any new regulation must be compatible with the mandate it is given by UNCLOS. Finally, it has broad powers in terms of marine scientific research and in protecting the marine environment against the harmful impact of activities carried out in the Area.

Highlighting the value and the complementarity of the different contributions, the chair, **Biliana Cicin-Sain**, considered that the global approach to high seas biodiversity conservation should be supplemented by initiatives at the regional scale. In this respect, **Jim Barnes** recalled that the Convention on the Conservation of Antarctic Marine Living Resources (CCAMLR) has been working for the protection of the marine environment since 1982. Considerable efforts are now being made to improve this management regime, most recently through requiring impact assessments on bottom trawling and the identification of the most vulnerable ecosystems. Although illegal, unreported and unregulated fishing remains a major problem in this region, it could be stopped by shared use of satellite imagery to track down pirate fishing vessels on the high seas and to the ports where the illegal catches are offloaded as well as better port State control, for example. Based on initiatives carried out within the framework of the Indian Ocean Commission (IOC) – the creation of a network of marine protected areas and an initiative for the conservation of cetaceans – **Denis Etienne** noted that the regional approach facilitated the integrated management of the marine environment and the implementation of the ecosystem approach. **Mickael I. Jeffery** insisted on the need to submit any activity conducted in the high seas to prior assessment of its environmental impact, along the lines of the Madrid Protocol on environmental protection in the Antarctic. Finally, **Habib Slim** presented the first findings of the informal project on the governance of the western Mediterranean. There is currently no body or process whereby States can consult

and exchange information on their intentions to extend their spatial hold beyond the territorial waters. The creation of a structure of this kind would increase the stability of international relations and would contribute to improving environmental governance systems, especially in the high seas. Commending all of these initiatives, **Billiana Cicin-Sain** concluded that it was equally important to highlight other regional structures that, like OSPAR, are increasingly adopting a proactive approach to the conservation of marine ecosystems, especially in areas beyond the limits of national jurisdiction.

Closing session. What are the options for the true governance of marine biodiversity in areas beyond national jurisdiction?

Jean-Louis Bissuel, the chair, first recalled the highly complex nature of the marine environment: a wide range of different actors, both public and private, of legal tools and of institutional structures, etc. **Annick de Marffy** then provided an exhaustive picture of this complexity, analyzing the four pillars that structure ocean governance: the legal pillar, made up of a multitude of treaties signed at the global and regional levels; the political pillar, reflected by the negotiations conducted within the international authorities; the institutional pillar, marked by a labyrinth of global and regional institutions; and the research and training pillar, which is essential to understanding the marine environment. Highlighting the general objective of achieving integrated ocean management, she then made proposals aimed at improving the high seas biodiversity governance system: revising and coordinating existing legal rules according to their field of application, reforming the way certain forums for discussion work (the informal consultative process on oceans and the law of the sea, the informal working group to study issues relating to the conservation and sustainable use of marine biological diversity beyond areas of national jurisdiction), and modernizing and coordinating the international institutions concerned by the conservation of the marine environment, etc.

Basing his remarks on the "Options Paper" report published in 2007 within the context of the Informal Consultative Process on the Institutional Framework for the United Nations' Environmental Activities, **Lucien Chabason** demonstrated that the importance given to marine issues in international environmental governance is now very small. Agreeing with these remarks, **Ibrahim Thiaw** expressed his hope that future reforms of the United Nations system would pay greater heed to ocean conservation issues. **Lucien Chabason** nevertheless acknowledged that the initiatives conducted since 1972 by the United Nations Environment Programme (UNEP) had allowed considerable progress to be made. Thus, in addition to the specific conventions on the seas and oceans, several multilateral environmental agreements include a marine dimension: this is true, for example, of the Bonn Convention on Migratory Species and the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal. Similarly, the creation of the Regional Seas Programme has made it possible to implement an integrated approach to marine issues at the scale of eco-regions. However, the overlapping of existing legal tools and the limitations of the regional approach call for a global debate on a future ocean governance mechanism. In this respect, although the drafting of an additional agreement to UNCLOS on the conservation of high seas biodiversity appears appropriate, **Lucien Chabason** emphasized that the international community must think about the mechanisms aimed at ensuring the effective exercise of the flag State's duties. **Ibrahim Thiaw** added that this global debate should be conducted at the same time as efforts are made to apply existing legal instruments. In the same vein, **Jacob Werksman** insisted on the need to establish priorities for action. Although the use of marine genetic resources or carbon capture and storage are emerging issues, their current development does not necessarily require an immediate legal framework. Henceforth, the international community must concentrate its efforts on other activities, such as the exploitation of fishery resources, whose regulation is now a particularly urgent matter.

Discussions then turned to the stakeholders of international environmental governance, especially the government-civil society-market "triangle". **Ibrahim Thiaw** deplored the low level of civil society mobilisation in debates on the marine environment: as shown by discussions on climate change, it can be an important lever in influencing political decisions. **Paul Holthus** stressed that establishing a new form of ocean governance required the involvement of the private sector. Consequently, it is essential for industries to cooperate in order to identify priorities for action and to work together to implement them.

More broadly, **Jacob Werksman** recognised the dynamics and ambition currently animating the marine community, while at the same time acknowledging its legitimate frustration: defining a management framework for a global public good such as the high seas in fact requires a good deal of patience. However, he noted that this community has a number of advantages: a high level of scientific knowledge, well-identified groups of stakeholders, principles that are commonly accepted by the international community, and the existence of legal rules and institutional frameworks on marine biodiversity conservation. Consequently, he

does not believe it necessary to wait for a charismatic leader – “an Al Gore” – to take on this cause in order to continue to strive towards the sustainable conservation and use of the high seas.

Closing the debate, **Laurence Tubiana** first praised the quality of the discussions held over the two days, expressing her hope that they will significantly contribute to the process of implementing effective high seas biodiversity governance. Recalling the main options put forward during the different workshops, she noted the many bridges – conceptual, legal and institutional – linking the high seas to the governance of the other global public goods, calling particularly for a more coordinated debate between the climate community and the marine biodiversity community. Finally, insisting on the need for immediate action, she stressed that all the questions raised during the seminar called more broadly for our societies to question their development patterns and the paths they choose to follow over the next few decades.

List of Acronyms

CBD	Convention on Biological Diversity
CCAMLR	Convention on the Conservation of Antarctic Marine Living Resources
FAO	United Nations Food and Agriculture Organisation
FFEM	French Global Environmental Facility (Fonds français pour l'environnement mondial)
ICES	International Council for the Exploration of the Sea
IMO	International Maritime Organisation
IOC	Indian Ocean Commission
IPCC	Intergovernmental Panel on Climate Change
ISA	International Seabed Authority
IUCN	International Union for Conservation of Nature
IUU	Illegal, Unreported and Unregulated Fishing
MARPOL	International Convention for the Prevention of Pollution from Ships
OSPAR	Commission for the Protection of the Marine Environment of the North-East Atlantic
RFMO	Regional Fisheries Management Organisation
TRIPS	Agreement on Trade-Related Aspects of Intellectual Property Rights
UN	United Nations
UNCLOS	United Nations Convention on the Law of the Sea
UNEP	United Nations Environment Programme
UNESCO	United Nations Educational, Scientific and Cultural Organisation
WTO	World Trade Organisation
WWF	World Wide Fund For Nature

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INTERNATIONAL SEMINAR PRINCIPALITY OF MONACO – OCEANOGRAPHIC MUSEUM – MARCH 20-21, 2008

Towards a new governance of high seas biodiversity

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Thursday 20 March

Opening session

- 08:30 **Welcome and participant registration.**
- 09:00 **Welcome speech.**
Jean-Louis Etienne, General Director, Albert I Prince of Monaco Foundation
Robert Calcagno, Government Advisor For Equipment, Environment and Urbanisation, Principality of Monaco
Bernard Fautrier, Chief Executive Officer, Prince Albert II of Monaco Foundation
- 09:20 **Opening remarks.**
Christophe Du Castel, Project Manager, International Waters, Forests and Desertification, French Global Environmental Facility
- 09:30 **Introduction and presentation of the Seminar**
Laurence Tubiana, Director, Institute for Sustainable Development and International Relations (IDDRI), (France)
- 09:45 **Protecting marine biodiversity in areas beyond national jurisdiction: processes underway and main deadlines.**
Kristina Gjerde, High Seas Policy Advisor, IUCN
- 10:05 **Main findings of the Strategic planning workshop on global oceans issues in marine areas beyond national jurisdiction (Nice, January 23-25, 2008).**
Biliana Cicin-Sain, Director, Gerard J. Mangone Centre for Marine Policy, University of Delaware (United States)
- 10:15 **Coffee break**

10:30 **WORKSHOP 1. How can high seas biodiversity be assessed in order to inform decision-making?**

CHAIR: **Harold Mooney**, Professor, Department of Biological Sciences, Stanford University (United States)

Knowledge of the physical, biological and chemical mechanisms governing high seas ecosystems is a necessary condition for establishing appropriate management measures. However, although the scientific community is currently involved in this marine biodiversity assessment process, it remains to be seen to what extent the opinions expressed will help to inform the decision-making process and how they can effectively be translated by international organisations in their conservation policies. Furthermore, in view of the increasing threats facing deep-sea ecosystems, there is no choice but to act now even though our knowledge is incomplete and uncertainties will only be removed in the very long term. Biodiversity assessment thus appears to be a particularly critical issue within the framework of high seas governance.

10:45 **Assessing high seas fishery resources and political guidelines for sustainable fisheries management: how can they work together?**

Adi Kellermann, Head, Science Programme, International Council for the Exploration of the Sea (ICES)

11:05 **Is the lack of scientific data on deep-sea ecosystems a limiting factor for decision-making?**

Kim Juniper, Professor, BC Leadership Chair in Ocean Ecosystems and Global Change, School of Earth & Ocean Sciences and Department of Biology, University of Victoria (Canada)

11:25 **DISCUSSION Different views on the marine biodiversity assessment processes.**

Sophie Arnaud-Haond, Researcher, French Research Institute for Exploitation of the Sea (IFREMER)

Patricio Bernal, Executive Secretary, Intergovernmental Oceanographic Commission (IOC), United Nations Educational, Scientific and Cultural Organisation (UNESCO)

Jake Rice, Senior National Advisor, Ecosystem Sciences, Fisheries and Oceans (Canada)

12:30 Lunch

14:00 **WORKSHOP 2. Prospects for the sustainable management of fishery resources in areas beyond national jurisdiction.**

CHAIR: **Ussif Rashid Sumaila**, Associate Professor, Director of the Fisheries Economics Research Unit, Fisheries Centre, University of British Columbia (Canada)

The international scientific community is currently witnessing an unprecedented depletion of fishery resources. In the high seas, international and regional fisheries organisations' attempts to restrict catches are coming up against the long-standing acceptance of the principle of the freedom of the seas, and thus remain largely dependent on the good will of participating States. Furthermore, even though fishing in areas beyond national jurisdiction yields only limited economic benefit, the impact on marine species and habitats is considerable. Today, the entire global fisheries management system is being questioned.

14:15 **International fisheries governance and the threats facing high seas biodiversity: an appraisal.**

Jacqueline Alder, Research Associate, Fisheries Centre, University of British Columbia (Canada)

14:45 **Do fisheries organizations and agreements provide an appropriate framework for the sustainable management of deep-sea fisheries in the high seas?**

Tullio Treves, Professor, University of Milan (Italy) / Judge, International Tribunal for the Law of the Sea (ITLOS)

15:15 **Subsidies for fisheries activities and the sustainable management of high seas resources.**

Anthony Cox, Senior Analyst, Fisheries Division, Organisation for Economic Co-operation and Development (OECD)

15:45 **Building sustainable fisheries through certification processes: issues and perspectives.**

Rosemary Rayfuse, Professor, University of New South Wales (Australia)

16:15 Coffee break

16:45 **DISCUSSION What are the options for ensuring the sustainable management of high seas fishery resources?**

Robin Allen, Executive Secretary, South Pacific Regional Fisheries Management Organisation Interim Secretariat

Gudmundur Eiriksson, Former Director, International Law and Human Rights Studies, University for Peace (Costa Rica) / Chair, Legal Working Group, Ministerially-led Task Force on illegal, unreported and unregulated fishing on the high seas

Lisa Speer, Director, Water and Oceans Programme, Natural Resources Defense Council / Deep Sea Conservation Coalition (DSCC)

19:00 Cocktail

“In the high seas, the ambition to restrict catches is coming up against the long-standing acceptance of the principle of the freedom of the seas.”

Friday 21 March

09:00 **WORKSHOP 3. Strengthening the protection of marine biodiversity in areas beyond national jurisdiction.**

CHAIR: **Biliana Cicin-Sain**, Director, Gerard J. Mangone Centre for Marine Policy, University of Delaware (United States)

Initially governed on the basis of the “free seas” principle established at a time when the marine environment was still a vast, unexplored desert, the high seas are gradually being subjected to regulation through international navigation rules and fisheries agreements. However, the grip of the law on activities taking place in areas beyond national jurisdiction remains largely fragmentary and fails to ensure the sustainable management of the various elements of marine biodiversity. Furthermore, recent research has revealed exceptional sources of biodiversity within deep-sea ecosystems. As a result, the high seas have become the focus of new challenges, such as the exploitation of marine genetic resources, which are not covered by the legal instruments in force. Hence, what is lacking today is the implementation of an integrated system for the management of marine ecosystems beyond national jurisdiction.

09:15 **What can be done to manage international navigation in sensitive ecosystems found in areas beyond national jurisdiction?**

Tullio Scovazzi, Professor, University of Milan-Bicocca (Italy)

09:45 **Should the international regime on access and sharing of high seas resources be redefined?**

Jean-Pierre Beurier, Professor, Maritime and Oceanic Law Centre, University of Nantes (France) and **Gwenaëlle Proutière-Maulion**, Senior Lecturer, Director, Maritime and Oceanic Law Centre, University of Nantes (France)

10:15 **Content of a possible UNCLOS Implementing Agreement on the conservation of high seas biodiversity.**

Serge Beslier, Former Head of Unit, International Policy and Law of the Sea, Directorate-General for Fisheries and Maritime Affairs, European Commission

10:45 **What role for the International Seabed Authority in a future governance of biodiversity in the high seas?**

Gwenaëlle Le Gurun, Legal Officer, International Seabed Authority (ISA)

11:15 **Coffee break**

11:45 **DISCUSSION The regional level: alternative or complement to a global approach to the protection of high seas biodiversity?**

Jim Barnes, Executive Director, Antarctic and Southern Ocean Coalition (ASOC)

Denis Etienne, Technical Advisor Marine Environment, Marine Protected Areas Network, Indian Ocean Commission (IOC)

Michael I. Jeffery, Director, Centre for Environmental Law, Macquarie University (Australia)

Habib Slim, Professor, Tunis University (Tunisia) / Governance of the Mediterranean Programme, IUCN Centre for Mediterranean Cooperation

12:30 **Lunch**

14:00 Closing session

What are the options for an effective governance of marine biodiversity in areas beyond national jurisdiction?

CHAIR: **Jean-Louis Bissuel**, Director of Maritime Affairs, Principality of Monaco

The use and conservation of marine biodiversity in areas beyond national jurisdiction now fall within a dispersed legal framework, made up of several global conventions and multiple regional agreements. Current negotiations on the future of the high seas and their resources are organized within different processes, themselves conducted under the aegis of several international authorities. This closing session will be the opportunity to examine the means of coordinating these different initiatives with a view to achieving a better governance of high seas resources.

14:15 What international coordination is possible for the governance of marine biodiversity in areas beyond national jurisdiction?

Annick De Marffy-Mantuano, Former Director, Division for Ocean Affairs and the Law of the Sea, Office of Legal Affairs, United Nations Secretariat / Vice-President, Institut du droit économique de la mer (INDEMER), (Monaco)

14:45 **DISCUSSION** How can the high seas be included in debates on international environmental governance?

Lucien Chabason, Advisor for Marine Affairs, Institute for Sustainable Development and International Relations (IDDRI), (France)

Paul Holthus, Executive Director, World Ocean Council

Ibrahim Thiaw, Director, Division of Environmental Policy Implementation, United Nations Environment Programme (UNEP)

Jacob Werksman, Programme Director, Institutions and Governance Programme, World Resources Institute

16:15 Closing address.

in the presence of H.S.H **Prince Albert II of Monaco**

Laurence Tubiana, Director, Institute for Sustainable Development and International Relations (IDDRI), (France)

16:30 End of Seminar.

“*The future of high seas incites to rethink principles of international environmental governance.*”

