

DIFFICULT ISSUES IN THE LAW OF THE SEA AND FUTURE CHALLENGES FOR THE INTERNATIONAL SEABED AUTHORITY

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Introduction

First, let me express my thanks to the Chairman, Ron Mcnab, and the ABLOS organizers, for inviting the International Seabed Authority to participate in this year's conference and to make this brief presentation on the future challenges for the International Seabed Authority.

The theme of this year's conference – addressing difficult issues in the law of the sea – is particularly timely in view of the fact that 2004 will mark the tenth anniversary of the entry into force of the Law of the Sea Convention.¹ It will also be the tenth anniversary of the establishment of the institutions² created by the Convention, one of which, of course, is the International Seabed Authority. The ten-year mark therefore seems to me to present an ideal opportunity to pause and take stock of the contribution that the institutions created by the Convention have made to the progressive development of the law of the sea and for us to consider how these institutions might best respond to the challenges that lie ahead.

The focus of my presentation today will be firstly to describe the work that the Authority is presently undertaking and its place within the overall framework for ocean governance. In so doing I hope to identify some of the challenges and opportunities that lie ahead for the Authority. I will then touch on what I see as some

* The views expressed are those of the author and do not necessarily represent the views of the International Seabed Authority or any of its members.

¹ The United Nations Convention on the Law of the Sea entered into force on 16 November 1994, twelve months after the date of deposit of the sixtieth instrument of ratification or accession (Article 308, para. 1).

² The others are the International Tribunal for the Law of the Sea and the Commission on the Limits of the Continental Shelf.

of the more difficult issues in the law of the sea that may affect the work of the Authority in years to come.

The work of the Authority

The euphoric vision of the International Seabed Authority elaborated in Part XI of the Convention was based on economic assumptions and political ideologies that were current in the 1960s and 1970s but are now redundant.³ As a result of the 1994 implementation agreement,⁴ it is clear that the basic functions of the Authority are defined by a narrowly-based sectoral mandate. The Authority exists as the organization through which States Parties to the Convention are to manage the mineral resources of the international seabed area,⁵ which are the common heritage of mankind.⁶ The ultimate objective is that benefits derived from mining of the minerals from the seabed by way of royalties paid to the Authority will be distributed to mankind as a whole.⁷ In addition, the Authority also has a general responsibility to promote and encourage the conduct of marine scientific research in the international area⁸ and a specific duty to ensure effective protection of the marine environment from harmful effects which may arise both from exploration of the international area and, subsequently, from exploitation of its resources.⁹

It must be recalled, however, that the mandate of the Authority is based upon certain fundamental principles which, although often taken for granted, represent a relatively recent concept in the law of the sea and a radical departure from the doctrine of *mare liberum* which had governed relations between States for more than 300 years.¹⁰ These principles include the following:

³ It is recognized in the Preamble of the 1994 Agreement itself: “Recognizing that political and economic changes, including in particular a growing reliance on market principles, have necessitated the re-evaluation of some aspects of the regime for the Area and its resources”.

⁴ The Agreement Relating to the Implementation of Part XI of the Convention was annexed to resolution 48/263 adopted by the General Assembly on 17 August 1994, A/RES/48/263, Annex. It entered into force on July 1996. It is also reproduced in *The Law of the Sea: Compendium of Basic Documents* (International Seabed Authority/The Caribbean Law Publishing Company, 2001), p. 206.

⁵ 1982 Convention, Article 157.

⁶ 1982 Convention, Article 136.

⁷ 1982 Convention, Article 140.

⁸ 1982 Convention, Article 143.

⁹ 1982 Convention, Article 145.

¹⁰ See Tullio Scovazzi, The evolution of international law of the sea: new issues, new challenges, *Recueil des Cours de l'Académie de Droit International*, 2000, Tome 286, at 62-68.

- That the use of the international seabed area, beyond the limits of national jurisdiction, shall be exclusively for peaceful purpose.¹¹
- That no State shall claim or exercise sovereignty or sovereign rights over any part of the international area or its resources, nor shall any State or natural or juridical person appropriate any part thereof.¹²
- That the Area and its resources are the common heritage of mankind.¹³ All activities of exploration for, and exploitation of, the resources of the Area, shall be carried out in accordance with a formal written plan of work drawn up in the form of a contract with the Authority.¹⁴

It is important that these fundamental principles are not overlooked.

As described in the annual report of the Secretary-General for 2003,¹⁵ the substantive work programme of the Authority is largely determined by the provisions of the Convention and the Agreement, and in particular section 1, paragraph 5, of the annex to the Agreement, which lists the items that the Authority is to concentrate on between the entry into force of the Convention and the approval of the first plan of work for exploitation. The work programme is focused in five main areas:

- (a) The supervisory functions of the Authority with respect to existing contracts for exploration for polymetallic nodules;
- (b) The development of an appropriate regulatory framework for the future development of the mineral resources of the Area, particularly hydrothermal polymetallic sulphides and cobalt-rich crusts, including standards for the protection and preservation of the marine environment;
- (c) The promotion and encouragement of marine scientific research in the Area and coordination and dissemination of the results of such research;

¹¹ 1982 Convention, Article 141.

¹² 1982 Convention, Article 137(1).

¹³ 1982 Convention, Article 136.

¹⁴ 1982 Convention, Article 153(3).

¹⁵ ISBA/9/A/3, Report of the Secretary-General of the International Seabed Authority under article 166, paragraph 4, of the United Nations Convention on the Law of the Sea.

- (d) Information-gathering and the establishment and development of databases of scientific and technical information with a view to obtaining a better understanding of the deep ocean environment; and
- (e) Ongoing assessment of available data relating to prospecting and exploration.

Let me now look at some of the challenges and opportunities for the Authority in implementing its work programme.

Perhaps the greatest **challenge** to the Authority in moving forward is how to cope with uncertainty. There is a massive amount of uncertainty associated with anything to do with the deep ocean. Perhaps the greatest **uncertainty** of all relates to the prospects for commercial-scale seabed mining. At least with respect to polymetallic nodules, there appears to be no real prospect of commercial mining in the foreseeable future. The prospects for recovery of polymetallic sulphides and cobalt-rich crusts appear more promising, but even here it is likely that mining would take place in areas under national jurisdiction before it takes place in the international area.

In the case of these resources, the key **challenge** for the Authority will be to develop a regime for prospecting and exploration that is sufficiently favourable to investors to generate genuine interest and long-term investment in the Area, yet incorporates recognition of the need to take a precautionary approach to the potential environmental consequences of mining. This is particularly difficult given that, with respect to these resources, the Authority effectively finds itself in competition with States seeking to develop the same resources in areas under national jurisdiction. These resources may be in shallower water and will be found closer to land, thus reducing the cost of prospecting and exploration. In addition, national regimes for prospecting and exploration may be more favourable to potential investors than the Convention regime, thus making it difficult for the Authority to generate interest in exploration in the Area.

Another major area of **uncertainty** relates to our understanding of the deep ocean environment. Deep seabed miners face particular challenges with respect to environmental issues because of the relatively undefined nature of the deposits to be mined and the systems to be used to mine them as well as the popular mystique with

regard to the oceans and marine biodiversity. Clearly, any human activity in the Area, whether prospecting, exploration or exploitation, is likely to have some effect on the marine environment. Yet some such activities need to go ahead if there is to be any utilization of the resources of the Area in future. In these circumstances it is essential to begin the process of environmental regulation, which is a responsibility of the Authority under the Convention and the Agreement, at an early stage with a view to ensuring that the critical decisions that will have to be made in the future are made on the basis of adequate scientific information, using consistent methods of analysis and environmental characterization, rather than on the basis of political considerations and public perceptions.

As far as environmental regulation is concerned, from the point of view of a lawyer, providing appropriate regulatory direction becomes a major **challenge** when scientific knowledge is limited and highly uncertain. Accordingly, the strategy that has been adopted by the Authority is one that requires contractors to monitor progressively the impacts caused by their exploration activities and to collect baseline data establishing the natural conditions of the local environment before any human intervention takes place. It is widely accepted that, during the initial phase of exploration, there would be little, if any, impact on the marine environment.¹⁶ Most exploration work would be non-invasive, relying primarily on remote sensing and standard sampling techniques.¹⁷ This provides the Authority with an opportunity to build up a much better understanding of the deep ocean environment in the period before mining of these resources begins.

The adoption of such a strategy has been particularly appropriate in the elaboration of regulations to govern prospecting and exploration for polymetallic sulphides and cobalt crusts. Because of the nature of these resources,¹⁸ and especially their

¹⁶ See for instance Craig R. Smith, The biological environment in the nodule provinces of the deep sea, 41 in *Deep-Seabed Polymetallic Nodule Exploration: Development of Environmental Guidelines* (International Seabed Authority, January 1999). See Regulation 31 and section 5 of Annex 4 of Regulations on prospecting and exploration for polymetallic nodules, ISBA/6/A/18, Decision of the Assembly relating to the regulations on prospecting and exploration for polymetallic nodules in the Area, in *Selected Decisions* 6, 44.

¹⁷ *Proposed Technologies for Deep Seabed Mining of Polymetallic Nodules*, Proceedings of the International Seabed Authority's Workshop held in Kingston, Jamaica August 3-6, 1999 (International Seabed Authority, 2001).

¹⁸ ISBA/7/C/2, Considerations relating to the regulations for prospecting and exploration for hydrothermal polymetallic sulphides and cobalt-rich ferromanganese crusts in the Area, Printed in

association with active hydrothermal vents surrounded by poorly-understood and biologically diverse ecosystems, it is essential to develop a regulatory framework which results in the systematic collection of environmental baseline data and information on the biological characteristics of areas where these resources occur. This has to include information on species composition and community structure and acquisition of information on the basic biology of species found in such areas, as well as procedures for environmental impact assessment.

Of course, merely collecting data is not enough by itself. Data must be analyzed and used. Accordingly, another major strategy of the Authority is to not only build up scientific data and information on the deep seabed, but also to promote and encourage marine scientific research in the international area and disseminate the results of that research. Indeed, this is one of the basic responsibilities of the Authority under the Convention.¹⁹ The most immediate and practical way in which the Authority has begun to implement its responsibilities is through a programme of technical workshops. These workshops have brought together internationally-recognized scientists, experts, researchers, contractors, representatives of the offshore mining industry and member States and have covered issues such as the assessment of environmental impacts from deep sea exploration,²⁰ mining technology,²¹ the status of resources,²² standardization of techniques for data collection²³ and prospects for international collaboration in deep sea environmental research.²⁴ As a direct result of these workshops, the Authority has developed environmental guidelines for deep sea

Selected Decisions and Documents of the Seventh Session, 19-30; ISBA/8/A/1 and Corr. 1, Summary presentations on polymetallic massive sulphide deposits and cobalt-rich ferromanganese crusts, *Selected Decisions and Documents of the Eighth Session*, 5-9; ISA Technical Study: No. 2, *Polymetallic Massive Sulphides and Cobalt-Rich Ferromanganese crusts: Status and Prospects* (International Seabed Authority, 2002).

¹⁹ 1982 Convention, Articles 143 and 256.

²⁰ *Deep-Seabed Polymetallic Nodule Exploration: Development of Environmental Guidelines*, Proceedings of the International Seabed Authority's Workshop held in Sanya, Hainan Island, People's Republic of China 1-5 June 1998 (International Seabed Authority, 1999).

²¹ *Proposed Technologies for Deep Seabed Mining of Polymetallic Nodules*, Proceedings of the International Seabed Authority's Workshop held in Kingston, Jamaica August 3-6, 1999.

²² ISA Technical Study: No. 2, *Polymetallic Massive Sulphides and Cobalt-rich Ferromanganese Crusts: Status and Prospects* (international Seabed Authority, 2002).

²³ *Standardization of Environmental Data and Information: Development of Guidelines*, Proceedings of the 2001 International Seabed Authority's Workshop held in Kingston, Jamaica 25-29 June 2001.

²⁴ Workshop on Prospects for International Collaboration in Marine Environmental Research to Enhance Understanding of the Deep-Sea Environment held in Kingston 29 July – 2 August 2002.

exploration²⁵ and is in the process of elaborating international guidelines for standardization of data from deep sea research as well as a geologic model of the ocean floor in the Clarion-Clipperton Fracture Zone of the Pacific.²⁶

Judging by the response from interested scientists, deep sea researchers and organizations, it would appear that this is an area in which the Authority has a comparative advantage and has acted as a catalyst to greater international cooperation.

Difficult issues

One of the characteristics of the law of the sea is that it has never stood still. There are always difficult issues to be addressed. Some of the most difficult issues which may affect the Authority are the following:

The outer continental shelf

Under the Convention the Authority has no direct interest in the delineation of the continental shelf. Where the continental shelf extends beyond 200 nautical miles, however, the Authority does have an obvious indirect interest in knowing where the outer limit lies because that outer limit also forms the boundary of the Area.

The most important difference between the legal regime for the continental shelf within 200 nautical miles and that beyond is found in the revenue-sharing requirement under article 82 of the Convention. It should not be overlooked that articles 76 and 82 together constituted the compromise reached at UNCLOS III between the broad-shelf States and those States wishing to limit the continental shelf to 200 nautical miles. Since the entry into force of the Convention, and the establishment of the Authority and the Commission for the Limits of the Continental Shelf, attention has quite rightly focused on the implementation of article 76. Article 82, on the other hand, has been largely neglected.²⁷

²⁵ ISBA/7/LTC/1/Rev.1, Recommendations for the guidance of the contractors for the assessment of the possible environmental impacts arising from exploration for polymetallic nodules in the Area.

²⁶ The ISA organized from 13 to 20 May 2003 in Nadi, Fiji a workshop concerned with the development of a geologic model for the Clarion-Clipperton Fracture Zone, the main nodule-bearing region of the Central Pacific Ocean. ISBA/9/A/3, Report of the Secretary-General of the International Seabed Authority under article 166, paragraph 4, of the United Nations Convention on the Law of the Sea, paras. 53-57.

²⁷ ISBA/8/A/5, Report of the Secretary-General of the International Seabed Authority under article 166, paragraph 4, of the United Nations Convention on the Law of the Sea, paras. 59-62 in Selected

This is unfortunate, because it is becoming apparent that there is considerable potential for greater exploitation of continental shelf resources in the future. Technological improvements in recovery efficiency and greater access to deepwater areas are already increasing the range of economically recoverable resources offshore. In recent years, offshore hydrocarbon exploration and development has moved into some of the deepest deepwater sedimentary areas on the continental shelf. For example, in the Gulf of Mexico, deepwater production surpassed shallow water production in 2000 for the first time since lease activities in that region started in 1996. There is also growing interest in the possibilities offered by methane hydrates in offshore areas.

Article 82 requires States that exploit the non-living resources of the continental shelf beyond 200 nautical miles to make “payments or contributions in kind” in respect of such exploitation according to a scale set out in the article. These payments or contributions are to be made through the Authority and distributed by the Authority to States Parties on the basis of equitable sharing criteria, taking into account the interests and needs of developing States. It is clear, however, that during UNCLOS III, very little attention was given to the technicalities of implementation of article 82. Nor is there any existing State practice or intergovernmental precedent to provide guidance on what may raise very important questions of concern to the offshore oil and gas industry as well as governments. Article 82 is thus another of those provisions of the Convention that will probably require further elaboration if it is to be implemented effectively.

Management of deep ocean biodiversity

Another difficult issue concerns the management of biodiversity on the high seas,²⁸ both in the water column (including the water column over the outer continental shelf)

Decisions and Documents of the Eighth Session, 21-22; ISBA/9/A/3, Report of the Secretary-General of the International Seabed Authority under article 166, paragraph 4, of the United Nations Convention on the Law of the Sea, paras. 60-61. Aldo Chircop, Bruce A. Marchand, *International Royalty and Continental Shelf Limits: Emerging Issues for the Canadian Offshore*, Canadian Petroleum Law Foundation, Second East Coast Seminar, September 18-20, 2003.

²⁸ ISBA/9/A/3, Report of the Secretary-General of the International Seabed Authority under article 166, paragraph 4, of the United Nations Convention on the Law of the Sea, paras. 62-64. Richard J. McLaughlin, Foreign Access to Shared Marine Genetic Materials: Management Options for a Quasi-Fugacious Resource, *Ocean development and International Law*, 34: 297-348, 2003; Lyle Glowka, The

and on the deep seabed. The issues that arise are firstly whether there should be any international regulation of exploitation of so-called ‘genetic resources’ in such areas and, secondly, how best to manage risks to the environment and biodiversity of the high seas and the Area.

With respect to the first issue, there would clearly be two schools of thought on whether and to what end there should be any international regulation of exploitation of these resources, which range from to so-called extremophiles, to deep water corals and sponges and microbacteria found both in the water column and associated with deep sea sediments and minerals. Should international regulation of the recovery of these resources be aimed exclusively at preventing environmental degradation, or should the objective be to promote the equitable sharing of the benefits to mankind from these resources? It seems to me that these are two fundamentally different questions involving difficult and complex issues which need to be considered by the international community in a coherent manner. The uncertainty of the existing legal regime led the Independent World Commission on the Oceans to recommend in 1998 that:

“The potentials of the genetic resources of the seabed should become the object of urgent study, focusing on their legal, environmental and economic implications, and negotiation leading to their inclusion within an appropriate international regulatory regime.”²⁹

It is encouraging to note that such a study is now taking place as a result of a joint initiative by UN/DOALOS and the secretariat of the Convention on Biological Diversity. As a result of this initiative it is hoped that there can be a comprehensive review of issues relating to the conservation and use of biological resources beyond the limits of national jurisdiction with a view to making appropriate recommendations to the General Assembly in due course.³⁰

Deepest of Ironies: Genetic Resources, Marine Scientific Research and the Area, *Ocean Yearbook* 12: 154-178, 1996.

²⁹ The Report of the Independent World Commission on the Oceans “The Ocean our future”, (Cambridge University Press, 1998) at 71.

³⁰ See UNEP/CBD/SBSTTA/8/9/Add. 3/Rev. 1, Marine and Coastal Biodiversity: Review, Further Elaboration and Refinement of the Programme of Work, 20 February 2003; UNEP/SBSTTA/8/INF/3/Rev.1, Marine and Coastal Biodiversity: Review, Further Elaboration and Refinement of the Programme of Work, 22 February 2003; Nele Matz, *The Interaction between the*

From the point of view of the Authority, the issue of most concern is how to manage the risks to the deep sea environment and biodiversity (which is obviously an integral part of the marine environment) from threats that may arise in the course of mineral prospecting and exploration. The most immediate threat to deep sea biodiversity appears to be from prospecting, exploration and scientific research being carried out around active hydrothermal vents. In accordance with article 145 of the Convention, the responsibility of the Authority is to ensure that “necessary measures shall be taken with respect to activities in the Area to ensure effective protection for the marine environment from the harmful effects which may arise from such activities”. Such measures must include “the protection and conservation of the natural resources [biodiversity] of the Area and the prevention of damage to the flora and fauna of the marine environment”. In relation to the benthic ecosystem, and now in relation to hydrothermal vent ecosystems which are the subject of mineral prospecting, the Authority gives effect to its responsibilities under article 145 through its regulations, associated environmental recommendations, and international cooperative scientific projects.

The problem that arises with respect to these potential resources, however, is a broader one. There is in fact a plethora of international laws and regulations aimed in some way at protecting biodiversity both on the high seas and within national jurisdiction. These include the 1982 Convention,³¹ the Convention on Biological Diversity,³² the various UNEP regional seas programmes,³³ the instruments and measures adopted by the International Maritime Organization³⁴ and measures adopted

Convention on Biological Diversity and the UN Convention on the Law of the Sea, 203-220 in P. Ehlers, E. Mann-Borgese and R. Wolfrum (eds.), *Marine Issues* (Kluwer Law International, 2002).

³¹ The duty to cooperate and take such measures as may be necessary for the conservation of the living resources of the high seas (articles 117-119); the duty to “protect and preserve rare or fragile ecosystems” (article 194(5)).

³² Article 8 of the Convention on Biological Diversity, done at Rio de Janeiro on 5 June 1992, entered into force on 29 December 1993. Reprinted at 31 *ILM* 818 (1992).

³³ “The 2003 United Nations List indicates that, while the oceans comprise 70 percent of the Earth’s surface, less than 0.5 per cent of the marine environment is within protected areas, compared with about 11.5 per cent of the land surface. [...] Areas outside of national jurisdiction are an obvious gap in the current global system of marine and coastal protected areas. The high seas, comprise an estimated 64 per cent of the world’s oceans. However, nearly all of the existing marine and coastal protected areas lie within national jurisdiction. [...] The exception to this is a high-seas protected area established recently in the Mediterranean under the Protocol Concerning Mediterranean Specially Protected Areas.” UNEP/CBD/SBSTTA/9/5/Rev.1, paras. 24 and 26, 9.

³⁴ Annexes I, II and V of the International Convention for the Prevention of Pollution from Ships, 1973, as modified by the Protocol of 1978 relating thereto (MARPOL 73/78); resolution A. 927(22) Procedures

pursuant to other regional agreements.³⁵ At the national level, several States have already taken action to establish marine protected areas around hydrothermal vent sites in areas under national jurisdiction³⁶ while at the regional level a proposal has been made to designate part of the Lucky Strike area, on the Mid-Atlantic Ridge as a Marine Protected Area under the OSPAR Convention.³⁷ At the same time, proposals for more radical measures have been put forward, such as a global moratorium on certain deep sea fishing methods and global networks of high seas marine protected areas.³⁸

The intentions behind these initiatives are to be welcomed, but it is also vitally important that such initiatives do not lead to the creation of overlapping or conflicting legal regimes. In other words, it is essential that international measures adopted for the protection of biodiversity whether in the high seas or in the Area are fully consistent with the over-arching principles contained in the 1982 Convention.

for designation of particularly sensitive sea area There are currently six designated particularly sensitive sea areas: the Great Barrier Reef, Australia (designated a PSSA in 1990); the Sabana-Camagüey Archipelago in Cuba (1997); Malpelo Island, Colombia (2002); Around the Florida Keys, United States (2002); the Wadden Sea, Denmark, Germany, Netherlands (2002); and Paracas National Reserve, Peru (2003).

³⁵ “A marine area encompassing 30 square kilometers in Terra Nova Bay, is expected in mid-2003 to become the first entirely marine protected area (MPA) in Antarctica, to be developed under the Marine Protocol [...]. A proposal by Italy to designate the site as an Antarctic Specially Protected Area (ASPA) was approved in October 2002 by the Commission for the Conservation of Antarctic Marine Living Resources’. First Marine Protected Area in Antarctica Coming Soon, *Sea Technology*, February 2003, 61.

³⁶ On June 8, 2001, the Canadian government approved a plan to designate the Endeavour Hydrothermal Vents as an official marine protected area under article 35 of Canada’s Oceans Act, 1996.

³⁷ The Lucky Strike hydrothermal vent field in the Exclusive Economic Zone of Portugal and the World Wildlife Fund proposed the site to be proposed as Marine Protected Area to OSPAR by Portugal. Annex V of the Convention for the Protection of the Marine Environment of the North-East Atlantic, done at Paris on 22 September 2002. Reprinted 32 *ILM* 1069 (1993).

³⁸ “In order to protect high seas marine living resources, some NGOs have recently suggested that the General Assembly adopt a resolution imposing a global moratorium on fishing around high seas seamounts to prevent the further loss of biodiversity in deep sea areas pending the negotiation of a regime for the conservation of these fragile ecosystems. [...] The suggestion was inspired by the global moratorium on all large-scale pelagic high seas drift-net fishing established by the General assembly in its resolution 46/215 of 20 December 1991.” Report of the Secretary-General Oceans and the law of the sea, A/58/65, 3 March 2003, para. 230, 68. UN moratorium on driftnet use on the high seas started in 1993; “(a) Maintain the productivity and biodiversity of important and vulnerable marine and coastal areas, including in areas within and beyond national jurisdiction; [...] (c) Develop and facilitate the use of diverse approaches and tools, including the ecosystem approach, the elimination of destructive fishing practices, the establishment of marine protected areas consistent with international law and based on scientific information, including representative networks by 2012”, paragraph 32 of the International Plan of Action to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing adopted by the Committee on Fisheries of the Food and Agriculture Organization of the United Nations. Resolution Oceans and the Law of the Sea, A/RES/57/141, 21 February 2003, para. 53.

Marine scientific research

Finally, I want to make mention of the issue of marine scientific research. The Convention provisions on marine scientific research represent a very delicately-balanced compromise between competing interests. It is essential that this balance is preserved and that there is no encroachment on the freedom for all States to conduct scientific research in the water column beyond the exclusive economic zone and in accordance with the consent regime elaborated in the Convention within the exclusive economic zone and on the continental shelf. Indications that State practice is developing in ways that do not conform to the Convention provisions should be viewed with concern.

From the point of view of the Authority, under article 256 of the Convention, all States and competent international organizations have the right to conduct marine scientific research in the Area. However, unlike the situation in other jurisdictional zones (including the high seas), marine scientific research in the Area is to be carried out exclusively for peaceful purposes and “for the benefit of mankind as a whole.” As I had explained, the Authority has already begun to implement its responsibilities under the Convention with respect to marine scientific research but it is likely that further steps may be needed to give full effect to the provisions of article 143, paragraphs 2 and 3. The Authority is well-placed to provide a forum for discussion and the development of principles for the better implementation of the regime for marine scientific research in the Area.

Conclusion

Since its establishment in 1994, the Authority has successfully established itself as a fully-functional and autonomous international organization within the United Nations common system. The efforts of States Parties and the Secretariat during this time have been directed primarily at taking the organizational decisions necessary for the proper functioning of the Authority,³⁹ including election of its various organs and bodies, adoption of the rules of procedure and host country agreement as well as the

³⁹ For a compendium of the related decisions and documents together with a commentary and a source documentation, see *International Seabed Authority: Basic Texts*, (International Seabed Authority, 2003).

progressive development of a stable budget and scale of contributions. In terms of its substantive work, the Authority has adopted regulations for prospecting and exploration for polymetallic nodules and has issued exploration contracts to the former registered pioneer investors.

As far as the Authority is concerned, it seems to me that the most difficult issue in the law of the sea at present is how to preserve the delicate balance struck in the Convention between the rights, duties and interests of coastal States in respect of areas within national jurisdiction and the right, duties and interests of the international community as a whole in areas beyond national jurisdiction, including in the Area. As a result of developments in marine science and technology, the possibility exists for tensions between these interests to develop in certain critical areas.

However, one of the greatest achievements of the 1982 Convention is that, although, like any treaty, it is linked to the moment when it was adopted and the balance of interests which existed at that time, it has also proved itself to be remarkably resilient. In spite of the erosive effects of differing interpretations of the provisions of the Convention, inconsistencies in State practice, the evolution of new political, economic and ecological boundaries, the norms contained in the Convention remain the basis of the legal framework for ocean governance.

Difficult issues in the law of the sea can best be resolved, therefore, by strict application of the provisions of the Convention and their implementation in the spirit in which they were intended.