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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

I. Introduction

1. The present report of the Secretary-General of the International Seabed Authority is submitted to the Assembly of the Authority under article 166, paragraph 4, of the 1982 United Nations Convention on the Law of the Sea. It provides the usual account of the work of the Authority over the past year as well as a brief overview of the present status of and prospects for deep seabed mining. The report also highlights some recent developments with respect to marine scientific research and emphasizes the need for ongoing international collaboration, including cooperation between relevant intergovernmental organizations, in order to ensure effective protection and preservation of the deep sea environment.

II. Membership of the Authority

2. The Authority is the organization through which States parties to the Convention, in accordance with part XI of the Convention, organize and control activities in the Area, particularly with a view to administering the resources of the Area. This is to be done in accordance with the regime for deep seabed mining established in part XI and other related provisions of the Convention and in the Agreement relating to the implementation of part XI of the United Nations Convention on the Law of the Sea adopted by the General Assembly of the United Nations under the terms of its resolution 48/263 of 28 July 1994. As provided by resolution 48/263 and the Agreement itself, the provisions of the Agreement and part XI of the Convention are to be interpreted and applied together as a single instrument. In the event of any inconsistency between the Agreement and part XI, the provisions of the Agreement prevail. In addition, the Authority has a number of other specific responsibilities, such as the responsibility to distribute to States parties to the Convention payments or contributions in kind derived from



exploitation of the resources of the continental shelf beyond 200 nautical miles pursuant to article 82, paragraph 4, of the Convention.

3. In accordance with article 156, paragraph 2, of the Convention, all States parties to the Convention are ipso facto members of the Authority. As at 15 March 2009, there were 157 members of the Authority (156 States and the European Community).

4. As at the same date, there were 135 parties to the 1994 Agreement. Since the last report of the Secretary-General, Cape Verde, Congo, Guyana and Liberia have become parties to the Agreement. This means that there are 22 members of the Authority that became parties to the Convention prior to the adoption of the 1994 Agreement but have not yet become parties to the 1994 Agreement. These are: Angola, Antigua and Barbuda, Bahrain, Bosnia and Herzegovina, Comoros, Democratic Republic of the Congo, Djibouti, Dominica, Egypt, Gambia, Ghana, Guinea-Bissau, Iraq, Mali, Marshall Islands, Saint Kitts and Nevis, Saint Lucia, Saint Vincent and the Grenadines, Sao Tome and Principe, Somalia, Sudan and Yemen.

5. Although members of the Authority which are not parties to the 1994 Agreement necessarily participate in the work of the Authority under arrangements based on the Agreement, becoming a party to the Agreement would remove an incongruity that currently exists for those States. For this reason, each year since 1998, at the request of the Assembly, the Secretary-General has circulated a letter to all members in this position urging them to consider becoming parties to the 1994 Agreement. In the last such letter, sent on 21 January 2009, attention was drawn to the relevant paragraphs of the report of the Secretary-General for 2008 (ISBA/14/A/2) and to paragraph 3 of United Nations General Assembly resolution 63/111 calling upon all States to become parties to both the Convention and the Agreement in order to achieve the goal of universal participation in the two instruments. The Secretary-General encourages all those members of the Authority that are not yet parties to the 1994 Agreement to become parties at the earliest possible opportunity.

III. Permanent missions to the Authority

6. As at 15 March 2009, the following 21 States and the European Community had established permanent missions to the Authority: Argentina, Belgium, Brazil, Cameroon, Chile, China, Cuba, France, Gabon, Germany, Haiti, Honduras, Italy, Jamaica, Mexico, Nigeria, Republic of Korea, Saint Kitts and Nevis, South Africa, Spain and Trinidad and Tobago.

IV. Previous session of the Authority

7. The fourteenth session of the Authority was held in Kingston from 26 May to 6 June 2008. Ryszard Kotliński (Poland) was elected President of the Assembly for the fourteenth session. Liesbeth Lijnzaad (Netherlands) was elected President of the Council.

8. The work of the Assembly during the fourteenth session included a general debate on the annual report of the Secretary-General, consideration and adoption of

the budget and scale of assessments for the financial period 2010-2011, an election to fill vacancies on the Council and the election of the Secretary-General.

9. The main work of the Council during the fourteenth session was to continue its detailed examination of the revised draft regulations on prospecting and exploration for polymetallic sulphides in the Area, as contained in document ISBA/13/C/WP.1. To facilitate its work, the Council was provided with an informal text showing the revisions to the draft regulations agreed at the thirteenth session (ISBA/13/C/CRP.1) and an additional document prepared by the secretariat dealing in more detail with the remaining outstanding issues with respect to the draft regulations (ISBA/14/C/4).

10. By the end of the fourteenth session, the Council had completed a review of those draft regulations that had been left pending at the end of the thirteenth session, as well as a review of the informal texts of annexes 1 and 2 (ISBA/14/C/CRP.3) and annex 4 (ISBA/14/C/CRP.4), aligned with the informal text of regulations 1 to 44. The Council agreed to continue its work on the outstanding regulations at the fifteenth session and also requested the secretariat to provide additional background material, as appropriate, on the remaining outstanding issues with respect to the draft regulations as well as a revised text of the whole of the draft regulations, harmonized in all official languages, incorporating the revisions agreed to date. Such a text has been prepared and is available under the symbol ISBA/15/C/WP.1 and Corr.1. The secretariat has also prepared a review of outstanding issues, including suggested revisions to the relevant provisions of the draft regulations, which is intended to supplement the technical information previously made available to the Council. This document is available under the symbol ISBA/15/C/WP.2.

11. Over the past few years there has developed a practice of arranging technical briefings for the representatives of members of the Authority present in Kingston on matters relevant to the work of the Council and the Assembly. Such briefings enable delegates to gain greater understanding of highly technical matters that are important for the work of the Authority, and are much appreciated. In 2008, the technical briefing covered issues relating to the global economics of mining, including a review of the status and prospects for the global metals markets. In 2009, it is hoped to provide a technical briefing on the work of the International Cable Protection Committee, which is the industry organization responsible for the mapping and routing of submarine cables.

V. Election of the Secretary-General

12. At the 118th meeting of the Assembly, on 5 June 2008, the Assembly elected Nii Allotey Odunton (Ghana) as Secretary-General of the Authority for a four-year term commencing on 1 January 2009. At the same time, the Assembly paid tribute to the outgoing Secretary-General and acknowledged his pioneering efforts with respect to the establishment of the Authority. The Assembly also decided to name the Authority's library the Satya N. Nandan Library in honour of the outgoing Secretary-General.

VI. Protocol on Privileges and Immunities of the Authority

13. The Protocol on Privileges and Immunities of the International Seabed Authority entered into force on 31 May 2003. Since the fourteenth session, three further members of the Authority (Bulgaria, Cuba and Mozambique) have become party to the Protocol, bringing the total number of parties to 31. As at 15 March 2009, the following 31 members of the Authority were parties to the Protocol: Argentina, Austria, Brazil, Bulgaria, Cameroon, Chile, Croatia, Cuba, Czech Republic, Denmark, Egypt, Estonia, Finland, Germany, India, Italy, Jamaica, Mauritius, Mozambique, Netherlands, Nigeria, Norway, Oman, Poland, Portugal, Slovakia, Slovenia, Spain, Trinidad and Tobago, United Kingdom of Great Britain and Northern Ireland and Uruguay.

14. The Protocol, among other things, provides essential protection to representatives of members of the Authority who attend meetings of the Authority or who travel to and from those meetings. It also accords to experts on missions for the Authority such privileges and immunities as are necessary for the independent exercise of their functions during the period of their missions and the time spent on journeys in connection with their missions. In these circumstances, the Secretary-General urges all other members of the Authority to consider becoming parties to the Protocol as soon as possible.

VII. Relations with the host country

15. In the annual report of the Secretary-General for 2008, it was noted that, following discussions between the Secretary-General and the host Government, the Government of Jamaica had allocated funds towards the refurbishment of the Jamaica Conference Centre, including for the replacement of obsolete audio equipment and upgrading of the sound and interpretation systems. Some of the most urgent renovations were completed in time for the fourteenth session and this work continued during the remainder of 2008. As of March 2009, the replacement of the sound and interpretation systems in all conference rooms has been completed and it is anticipated that the remainder of the renovation work, including replacement of carpets in all conference rooms, will be completed prior to the fifteenth session.

16. The Secretary-General wishes to express his appreciation to the Government of Jamaica for its continued commitment to the future of the Jamaica Conference Centre and of the Authority, and also expresses appreciation for the positive and constructive working relationship that has existed between the secretariat and the host Government over the past year.

VIII. Relations with the United Nations and other international organizations

A. United Nations

17. The secretariat continued to maintain a good working relationship with the Department for General Assembly and Conference Management of the United Nations. Under the Relationship Agreement between the United Nations and

the International Seabed Authority (ISBA/3/A/3 and United Nations General Assembly resolution 52/27), the Department has provided translation and interpretation as well as conference services for all the regular sessions of the Authority since 1996. Regrettably, owing to severe difficulties in finding available dates for the fifteenth session that were acceptable to members of the Authority, the Department was unable to provide interpretation for the meeting of the Legal and Technical Commission in 2009 and it was thus necessary to make alternative arrangements. In order to avoid this situation from arising in the future, the secretariat had requested as early as July 2008 that the Authority's needs be taken into account in planning the calendar of United Nations meetings for 2010 and subsequent years.

18. The secretariat also maintained a close relationship with the Division for Ocean Affairs and the Law of the Sea of the Office of Legal Affairs of the United Nations and other relevant departments and services of the United Nations.

B. Other international organizations

19. In 2008, the secretariat was contacted by the secretariat of the OSPAR Commission, a body established by the 1992 OSPAR Convention for the Protection of the Marine Environment of the North-East Atlantic,¹ with respect to a proposal submitted to the Commission of the Convention for the Protection of the Marine Environment of the North-East Atlantic (OSPAR), for the establishment of a marine protected area at the Charlie Gibbs fracture zone, which is an area located beyond the limits of national jurisdiction, but within the OSPAR Convention Area, on the Mid-Atlantic Ridge. In September 2008, an informal meeting took place at secretariat level between the secretariat of the OSPAR Commission, the Authority and the secretariat of the North-East Atlantic Fisheries Commission (NEAFC), which also has regulatory authority over certain high seas fisheries in the proposed marine protected area. At this meeting it was agreed that, taking into account the overlapping jurisdictions and mandates of the organizations concerned, and in particular the Authority's mandate with respect to the seabed beyond the limits of national jurisdiction of the OSPAR Convention Area, a dialogue should be established to ensure that marine protected areas are established with due regard to the rights and duties of States as set out in the 1982 Convention and the 1994 Agreement as well as with full respect for the jurisdiction of the Authority to manage activities in the Area. At the same time, the Authority took note of the comprehensive scientific justification for the establishment of a marine protected area at the Charlie Gibbs fracture zone prepared by the OSPAR Commission.

20. Following this meeting, the secretariat was invited to provide a more detailed commentary on the work of the Authority, with particular reference to the measures taken by the Authority, including through the rules, regulations and procedures established for the conduct of prospecting and exploration in the Area, to the OSPAR Working Group on Marine Protected Areas, Species and Habitats, which met in Spain from 20 to 24 October 2008. In this regard, the secretariat also made a presentation on the measures taken by the Authority for the protection of the marine

¹ The parties to the OSPAR Commission are Belgium, Denmark, Finland, France, Germany, Iceland, Ireland, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, the United Kingdom and the European Community.

environment, to a seminar on the implementation of the European Union Marine Strategy Framework Directive in areas beyond the limits of national jurisdiction, convened by the French Presidency of the European Union at Brest, France, in December 2008.

21. It is understood that a proposal for the protection of the marine environment of the Charlie Gibbs fracture zone will be further refined and taken up by the OSPAR Commission during 2009. In the meantime, at their meeting of 11 to 12 November 2008, the OSPAR Heads of Delegation acknowledged the mandate of the Authority as the competent organization to regulate deep seabed mining and welcomed a suggestion to develop a memorandum of understanding between the OSPAR Commission and the Authority in order to ensure appropriate coordination of measures between the two organizations. A similar memorandum of understanding was concluded between the OSPAR Commission and NEAFC in 2008. Subject to direction by the Assembly, the secretariat proposes to work with the secretariat of the OSPAR Commission to develop such a memorandum of understanding during 2009.

22. In December 2008, the secretariat held informal discussions with representatives of the International Cable Protection Committee, which is the global organization representing the telecommunications and cable-laying industry. The International Cable Protection Committee exists to promote the safeguarding of submarine cables against man-made and natural hazards. It also provides a forum for the exchange of technical and legal information pertaining to submarine cable protection methods and programmes, including exchanging information on the location of existing and proposed cables. While noting that the laying of submarine cables is a freedom of the high seas, it was observed during the discussions that it was in the interests of both the Authority and the members of the Committee to avoid potential conflicts between the laying of cables and activities in the Area. Both organizations also had a strong interest in the protection of the marine environment from adverse impacts arising from their respective activities. With these objectives in mind, the Committee offered to make a presentation to members of the Authority at the fifteenth session on the activities of the Committee and its members. An invitation was also extended to the Authority to make a reciprocal presentation on the work of the Authority to the next plenary meeting of the International Cable Protection Committee.

IX. Secretariat

23. The only change to the secretariat during the period under review was the recruitment of a Finance Officer (P-4) to fill the vacancy that had arisen in the approved staffing table owing to the retirement of the previous incumbent.

24. It was noted in the annual report of the Secretary-General for 2008 that a Joint Appeals Board, consisting of a chairman and four members, had been established pursuant to rule 111.1 of the Staff Rules to consider and advise the Secretary-General regarding appeals by staff members against administrative decisions alleging the non-observance of their terms of appointment. In the light of the potential for conflict of interest given the small size of the secretariat, it was subsequently decided to appoint a further two members to the Joint Appeals Board in order to increase the available pool of members. The members so appointed, for a

two-year period with effect from 14 July 2008, are Samia Ladgham (appointed by the Secretary-General) and Anthony J. Miller (appointed by representatives of the staff). Both new members have substantial experience in the United Nations common system.

25. In common with other international organizations within the United Nations common system, the secretariat continues to observe the minimum operational security standards established from time to time by the Department of Safety and Security of the United Nations Secretariat. These require, among other things, the implementation of residential security measures for all internationally recruited staff members. In a change to the previous situation, in January 2009, the Department of Safety and Security declared the whole of the island of Jamaica under Security Phase I. Previously, only the downtown Kingston area, including the Authority's headquarters and the Jamaica Conference Centre, had been designated as Security Phase I areas requiring enhanced security measures. This had previously been cited as one of the primary obstacles that had prevented the United Nations agencies in Jamaica from taking up the unutilized space in the Authority's headquarters. Since the Authority, and its staff, were already subject to Phase I security measures, it is not expected that the expansion of the security phase to cover the entire island of Jamaica would have any financial or other implications for the Authority.

X. Budget and Finance

A. Budget

26. For the financial period 2009-2010, the Assembly of the Authority adopted a budget of \$12,516,500. This represents a nominal average increase of 6.2 per cent against the 2007-2008 budget. However, when inflationary factors are considered, it actually represented a decrease in the budget in real terms.

27. The approved budget for the financial period 2007-2008 was \$11,728,363. As of 31 December 2008, there was an accumulated surplus overexpenditure of \$458,008. This was combined with income from other sources of \$360,222 to reduce the overall level of assessed contributions to the approved budget for 2009-2010 by \$868,000.

B. Status of contributions

28. In accordance with the Convention and the 1994 Agreement, the administrative expenses of the Authority shall be met by assessed contributions of its members until the Authority has sufficient funds from other sources to meet those expenses. The scale of assessments shall be based on the scale used for the regular budget of the United Nations, adjusted for differences in membership. As at 1 March 2009, 52 per cent of the value of contributions to the 2009 budget due from member States and the European Community had been received from 46 members of the Authority.

29. Contributions outstanding from member States for prior periods (1998-2008) totalled \$272,422. Notices are regularly sent to member States reminding them of the arrears. In accordance with article 184 of the Convention and rule 80 of the rules of procedure of the Assembly, a member of the Authority that is in arrears in the

payment of its financial contribution shall have no vote if the amount of its arrears equals or exceeds the amount of financial contribution due from it for the preceding two years. As at 1 March 2009, 49 members of the Authority were in arrears for a period of two years or more. They were: Bahrain, Belarus, Belize, Benin, Bolivia, Burkina Faso, Cape Verde, Comoros, Cook Islands, Côte d'Ivoire, Democratic Republic of the Congo, Djibouti, Dominica, Equatorial Guinea, Gambia, Guinea, Guinea-Bissau, Honduras, Iraq, Lesotho, Maldives, Mali, Mauritania, Micronesia (Federated States of), Montenegro, Mozambique, Myanmar, Niue, Pakistan, Palau, Panama, Papua New Guinea, Paraguay, Qatar, Republic of Moldova, Saint Kitts and Nevis, Saint Lucia, Saint Vincent and the Grenadines, Sao Tome and Principe, Serbia, Seychelles, Sierra Leone, Solomon Islands, Somalia, Sudan, Togo, Vanuatu, Zambia and Zimbabwe.

30. Also as at 1 March 2009, the balance of the Working Capital Fund stood at \$438,069, thus exceeding its approved ceiling of \$438,000 by \$69.

C. Voluntary trust fund

31. The voluntary trust fund to enhance the participation of members of the Finance Committee and the Legal and Technical Commission from developing countries was established in 2002. Prior to the establishment of the fund, attendance at meetings of the two bodies by members from developing countries had been generally poor, ostensibly for financial reasons. That situation has improved since the fund was established. The fund is made up of voluntary contributions from members of the Authority and others. Over the life of the fund, contributions totalling \$108,318 have been received into the fund. The most recent contribution, in 2009, was from China (\$20,000).

32. Provisional terms and conditions for the use of the fund were adopted by the Assembly, on the recommendation of the Finance Committee, in 2003 and amended in 2004 (see ISBA/9/A/9, para. 14; and ISBA/9/A/5-ISBA/9/C/5).

33. In 2003, to supplement the voluntary contributions, the Assembly, on the recommendation of the Finance Committee, authorized an advance of \$75,000 to be paid into the fund from the interest from the fund for application fees paid by former registered pioneer investors (see ISBA/9/A/5-ISBA/9/C/5). At the eleventh session, the Assembly, on the recommendation of the Finance Committee, authorized the Secretary-General to advance, to the extent necessary, a further \$60,000 from the same source (see ISBA/11/A/8). Subsequently, at the fourteenth session, following the transfer of the balance remaining in the pioneer fund to the International Seabed Authority Endowment Fund, the Assembly, on the recommendation of the Finance Committee, authorized the Secretary-General to advance, to the extent necessary, a further \$60,000 from interest accrued from the Endowment Fund to supplement the voluntary trust fund in 2009 (see ISBA/14/A/8). Pursuant to such authorization, the sum of \$20,000 was transferred to the voluntary trust fund on 31 December 2008.

34. As at 1 March 2009, the balance of the voluntary trust fund stood at \$77,675, including accrued interest of \$6,492. The total amount paid out of the fund to date is \$192,135.

D. Endowment Fund for Marine Scientific Research in the Area

35. The International Seabed Authority Endowment Fund for Marine Scientific Research in the Area was established by the Assembly in 2006 (see ISBA/12/A/11). The purpose of the Fund is to promote and encourage the conduct of marine scientific research in the Area for the benefit of mankind as a whole, in particular by supporting the participation of qualified scientists and technical personnel from developing countries in marine scientific research programmes and by providing them with opportunities to participate in international technical and scientific cooperation, including through training, technical assistance and scientific cooperation programmes.

36. In accordance with the decision of the Assembly, the initial capital of the Endowment Fund consisted of the balance remaining as at 18 August 2006 from the application fees paid by the registered pioneer investors, under resolution II of the Third United Nations Conference on the Law of the Sea, to the Preparatory Commission for the International Seabed Authority and for the International Tribunal for the Law of the Sea, pursuant to paragraph 7 (a) of resolution II, together with interest accrued thereon. Additional contributions to the Fund may be made by the Authority, members of the Authority, other States, relevant international organizations, academic, scientific and technical institutions, philanthropic organizations, corporations and private persons. Since its establishment, additional contributions to the Fund have been made by the Governments of Mexico (\$2,500), Spain (\$25,514) and the United Kingdom (\$29,800). As at 31 December 2008, the capital of the Fund stood at \$2,689,603, with accumulated interest of \$289,022.

37. In 2007, the Assembly, on the recommendation of the Finance Committee, adopted detailed rules and procedures for the administration and utilization of the Endowment Fund (see ISBA/13/A/6, annex). They provide detailed guidance on the process for making applications for assistance from the Fund, the information that must be submitted, the type of activities that may be eligible for funding and the dissemination and reporting of the outcomes of marine scientific research programmes and scientific cooperation programmes. Applications for assistance from the Fund may be made by any developing country or by any other country if the purpose is to benefit scientists from developing countries. There is to be an advisory panel appointed by the Secretary-General to evaluate applications for assistance from the Fund. The panel is composed of: (a) permanent representatives to the Authority; (b) representatives of educational institutions or organizations of an international character; (c) individuals closely associated with the work of the Authority. The members of the panel are to be appointed with due regard to equitable geographic representation. In accordance with the guidelines, the first appointments to the panel were made by the Secretary-General in March 2008. The names of the persons appointed to the panel as at 1 March 2009 are contained in the annex to the present report.

38. The Fund is administered by the secretariat of the Authority, which is required to endeavour to make arrangements with universities, scientific institutions, contractors and other entities for opportunities for scientists from developing countries to participate in marine scientific research activities. Such arrangements shall include arrangements for the reduction or waiver of fees for training. Since February 2008, the secretariat has carried out a number of activities designed to draw the attention of the international donor community to the opportunities offered

by the Fund and to encourage additional contributions. These include the issue of a press release and related promotional materials, the launch of a specially designed area on the Authority's website at <http://www.isa.org.jm/en/efund>, and the establishment of a network of cooperating institutions that may be interested in offering places on courses or research opportunities. Among the institutions that have indicated an interest in cooperating with the Authority in relation to the Fund are the following: National Oceanography Centre (United Kingdom), National Institute of Ocean Technology (India), French Institute for the Exploration of the Sea (IFREMER), Federal Institute for Geosciences and Natural Resources (Germany), National Institute of Oceanography (India), Natural History Museum (United Kingdom) and InterRidge.

39. Since the Fund was launched, six applications for assistance have been received and evaluated. These included proposals from InterRidge, the National Oceanography Centre (United Kingdom), the Rhodes Academy of Oceans Law and Policy, the National Institute of Oceanography (India) and the State Oceanic Administration of China. Each of these proposals has been reviewed by the Advisory Panel, which in some cases has requested further information or clarification from the proposers. The Panel has met three times to date, and will meet again during the fifteenth session of the Authority. Meetings of the Panel are convened as necessary, as far as possible using teleconferencing.

40. Two awards have been made from the Endowment Fund. The first award was made in December 2008. The sum of \$30,000 was awarded to InterRidge to contribute towards the funding of two marine science fellowships each year for the next three years (2009-2011). Under the programme, and in accordance with the terms of reference of the Endowment Fund, these fellowships are only available to graduate or postdoctoral students from developing countries. A further fellowship, funded by InterRidge, is available to a similar individual from any country. The fellowships can be used for any field of ridge-crest science. In particular the awards are encouraged to be used for international cruise participation, international laboratory use, and for adding an international dimension to the candidate's research work. The award was announced in January 2009 through the issue of a note verbale to all members of the Authority as well as through the posting of linked web pages, including electronic application forms for the two fellowships available in 2009, on the Authority's website and on the InterRidge website at <http://www.interridge.org/node/5675>.

41. In March 2009, an award of 25,000 euros was made to the Rhodes Academy of Oceans Law and Policy to fund a number of student fellowships for individuals from developing countries as well as to expand the Academy's training programme to cover issues relating to marine science. The Rhodes Academy was founded in 1995 and entails an intensive, three-week course of study, with lectures by leading jurists, practitioners, and international law faculty from around the world. It is a cooperative undertaking sponsored jointly by the Centre for Oceans Law and Policy (University of Virginia, Charlottesville, United States), the Aegean Institute of the Law of the Sea and Maritime Law (Rhodes, Greece), the Law of the Sea Institute of Iceland (Reykjavik), the Max Planck Institute for Comparative Public Law and International Law (Heidelberg, Germany), and the Netherlands Institute for the Law of the Sea (Utrecht, the Netherlands). More than 400 students from 96 different countries have graduated from the Academy since its establishment.

42. The Secretary-General encourages other Governments and institutions to participate in the Authority's network and also invites members of the Authority, other States, relevant international organizations, academic, scientific and technical institutions, philanthropic organizations, corporations and private persons to contribute to the Fund.

XI. Library, publications and website

A. Satya N. Nandan Library

43. The Satya N. Nandan Library manages the Authority's specialized collection of reference and research materials focusing on matters relating to the law of the sea, ocean affairs and deep seabed mining. The library serves the needs of members of the Authority, permanent missions and researchers interested in information on the law of the sea and ocean affairs, as well as providing essential reference and research assistance to support the work of the staff of the secretariat. In addition, the library is responsible for the archiving and distribution of the official documents of the Authority and assists with the publications programme.

44. The facilities available in the Satya N. Nandan Library include a reading room with access to the collection for reference purposes only and computer terminals for e-mail and Internet access. The specialized research capability of the existing collection continues to improve through an acquisitions programme that is aimed at building upon and strengthening the library's comprehensive collection of reference materials. During the reporting period, approximately 94 books, CD-ROMs and over 375 journal issues were acquired. A number of donations were received from institutions, libraries and individuals, including from the Division for Ocean Affairs and the Law of the Sea of the Office of Legal Affairs of the United Nations, the International Tribunal for the Law of the Sea, the United Nations Educational, Scientific and Cultural Organization, the United Nations Environment Programme, the Food and Agriculture Organization of the United Nations, and the United States Institute of Peace. Individual donations were received from Kaiser Gonçalves de Souza, Chief, Division of Marine Geology, Geological Survey of Brazil, and a generous donation of 25 books was received from the Embassy of the Federal Republic of Germany, handed over by Ambassador Jürgen Engel.

45. During the period under review, the library continued to receive an increasing number of requests for copies of the publications and documents of the Authority. The library also continued to respond to requests for information, and to offer guidance on sources of information on subject areas related to the activities of the Authority, law of the sea and deep seabed mining from institutions, non-governmental organizations, academics, government departments and the general public. Some of the areas for which requests were received included: general information on the current activities and the functions of the Authority; law of the sea conferences; contracts for hydrocarbon exploration; general information on seismic activities in the deep seabed; microorganisms on the seabed and the legal implication of their use for pharmaceuticals; genetic resources, biotechnology and bioprospecting; and patents for seabed mining technologies. Most requests are received electronically. Requests came from individuals from a number of countries and a variety of academic and research institutions, including from the Federal

Institute for Geosciences and Natural Resources of the Federal Republic of Germany, the Max-Planck-Institut für ausländisches und internationales Privatrecht Bibliothek; the Attorney-General's Department, Jamaica; the National Environment and Planning Agency of Jamaica; the Ministry of Foreign Affairs of Jamaica; the Permanent Mission of Jamaica to the United Nations; the University of Technology; and the Department of Government of the University of the West Indies.

B. Publications

46. The regular publications of the Authority include an annual compendium of selected decisions and documents of the Authority (published in English, French and Spanish) and a handbook containing details, inter alia, of the membership of the Assembly and the Council, the names and addresses of permanent representatives and the names of the members of the Legal and Technical Commission and the Finance Committee. The annual compendium of selected decisions for 2008 was further improved by the addition of a consolidated index to the main documents of the Assembly and Council from 1994 to 2008.

47. The Authority also publishes the proceedings of its workshops and a range of specialized legal and technical reports. Publications issued since the fourteenth session include the proceedings of the international workshop on technical and economic considerations for mining of cobalt-rich ferromanganese crusts and polymetallic sulphide deposits, as well as a consolidated text, in English and French, of the Staff Regulations and Rules of the Authority. It is anticipated that the proceedings of the 2006 workshop on cobalt-rich crusts and the diversity of distribution patterns of seamount fauna, and the proceedings of the 2003 workshop on the development of a geological model of the polymetallic nodule resources in the Clarion-Clipperton fracture zone will also be published during 2009. For a complete list of all the current and forthcoming publications, see www.isa.org.jm.

48. In November 2008, the secretariat launched the first issue of an "ISA Newsletter", designed to keep member States and other stakeholders informed of new initiatives and current developments with respect to the Authority's work programme. The newsletter is available by electronic mailing list or may be downloaded from the Authority's website. So far, more than 100 individuals have subscribed to the mailing list.

C. Website

49. The Authority's website contains essential information on the activities of the Authority, primarily in English, French and Spanish. The texts of all the official documents and decisions of the organs of the Authority are available in the six official languages of the United Nations. Press releases are available in English and French. The Authority's workshop proceedings, technical reports and joint publications are also published electronically in downloadable format.

50. The website provides access to specialized databases, such as the central data repository, the Internet-based geographical information system (GIS), the bibliographical database and the library catalogue. The Internet-based graphical interface to the central data repository currently allows some interactive production of various maps and a GIS Atlas, however the central data repository will undergo a

reconstruction in 2009 to provide greater emphasis on building interactive components through both text and graphic interfaces. Initially, the central data repository will be based on three focal points: the nodules interactive database, the sulphides and cobalt-rich ferromanganese crust interactive database and a video and image gallery.

XII. Substantive work programme of the Authority

51. The substantive work programme of the Authority for the period 2008-2010 was presented to the Assembly at the thirteenth session in 2007 (see ISBA/13/A/2). The programme of work, which was approved by the Assembly, continues to focus primarily on the scientific and technical work necessary to carry out the functions of the Authority under the Convention and the 1994 Agreement and in particular aims to promote a better understanding of the potential environmental impact of deep seabed mining.

52. The substantive functions of the Authority are set out in the Convention and in the 1994 Agreement. Pending the approval of the first plan of work for exploitation, the Authority is to concentrate on the 11 areas of work listed in paragraph 5 of section 1 of the annex to the 1994 Agreement. Given the limited resources available to the Authority, the relative priority to be given to each of those areas of work is dependent on the pace of development of commercial interest in deep seabed mining. The programme of work for the period 2008-2010 is based on the implementation of subparagraphs (c), (d), (f), (g), (h), (i) and (j) of paragraph 5 of section 1 of the 1994 Agreement, in particular the following main areas:

(a) The supervisory functions of the Authority with respect to existing contracts for exploration for polymetallic nodules;

(b) Monitoring of trends and developments relating to deep seabed mining activities, including world metal market conditions and metal prices, trends and prospects;

(c) 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 ferromanganese crusts, including standards for the protection and preservation of the marine environment during their development;

(d) The promotion and encouragement of marine scientific research in the Area through, inter alia, an ongoing programme of technical workshops, the dissemination of the results of such research and collaboration with contractors and the international scientific community;

(e) Information-gathering and the establishment and development of unique databases of scientific and technical information with a view to obtaining a better understanding of the deep ocean environment;

(f) Ongoing assessment of available data relating to prospecting and exploration for polymetallic nodules in the Clarion-Clipperton zone.

53. Progress and developments in relation to each aspect of the work programme is described in paragraphs 54 to 93 below.

A. Status of contracts for exploration

54. There are presently eight contractors for exploration for polymetallic nodules in the Area. These are Yuzhmorgeologiya (Russian Federation), Interoceanmetal Joint Organization (IOM) (Bulgaria, Cuba, Slovakia, Czech Republic, Poland and Russian Federation), the Government of the Republic of Korea, China Ocean Mineral Resources Research and Development Association (COMRA) (China), Deep Ocean Resources Development Company (DORD) (Japan), IFREMER (France), the Government of India and the Federal Institute for Geosciences and Natural Resources of Germany (BGR). The first six contracts were signed in 2001; the contract with the Government of India was signed in 2002 and the contract with BGR was signed in 2006.

1. Annual reports and periodic review of implementation of the plans of work for exploration

55. In accordance with the terms of the contract, each contractor is under an obligation to submit an annual activity report. Annual reports are due on 31 March of each year. The objective of the reporting requirement is to establish a mechanism whereby the Secretary-General and the Legal and Technical Commission are properly informed of the contractors' activities so as to be able to exercise their functions under the Convention, particularly those relating to the protection of the marine environment from the harmful effects of activities in the Area. To facilitate reporting, in 2002 the Commission recommended a format and structure for annual reports (see ISBA/8/LTC/2, annex), including a standardized contents list (general, exploration work, mining tests and mining technology, training, environmental monitoring and assessment, financial statement, proposed adjustment to the programme of work, conclusions and recommendations) which is based on the standard clauses set out in annex 4 to the Regulations on Prospecting and Exploration for Polymetallic Nodules in the Area (see ISBA/6/A/18, annex). Additional assistance for contractors in preparing their annual reports appears in the recommendations for the guidance of contractors for the assessment of the possible environmental impacts arising from exploration for polymetallic nodules in the Area issued by the Commission in 2001 pursuant to regulation 38 (ISBA/7/LTC/1/Rev.1).

56. Although the contents of the annual reports are confidential, any relevant findings and recommendations of the Commission on the annual reports are presented in a report to the Secretary-General including, as appropriate, requests for clarification or further information. The Secretary-General conveys any such requests to the contractors by letter. Comments of a general nature with respect to the evaluation of the annual reports of the contractors may also be included in the report on the work of the Commission that the Chairman of the Commission presents to the Council.

57. In addition, the Regulations provide for periodic review of the implementation of plans of work for exploration at intervals of five years. This is to be achieved through consultations between contractors and the Secretary-General. As part of the review, the contractor shall indicate its programme of activities for the following five years, making such adjustments to its previous programme of activities as are necessary. The Secretary-General may request the contractor to submit such additional data and information as may be necessary for the purposes of the review and is also required to report on the review to the Commission and the Council.

58. For all the contractors except BGR, the first such periodic review took place in 2006 or 2007. A report on the periodic review was presented to the Legal and Technical Commission by the Secretary-General at the thirteenth session. A similar report was also presented to the Council (see ISBA/13/C/4). The contents of these reports are summarized in the report of the Secretary-General to the fourteenth session (see ISBA/14/A/2, paras. 54-60). Subsequently the Secretary-General wrote to all contractors concerned formally accepting their proposed programme of activities for the second five-year period and proposing a revision to the contract, by means of an exchange of letters, in order to reflect the new programme of activities. As at 10 March 2009, the proposed revisions had been accepted by all contractors concerned as follows: DORD (received 16 August 2007), the Government of India (received 3 December 2007), COMRA (received 18 September 2007), IOM (received 18 October 2007), IFREMER (received 11 March 2008), Yuzhmorgeologiya (received 5 June 2008) and the Government of the Republic of Korea (received 22 October 2008).

59. At its meeting during the fourteenth session, the Legal and Technical Commission carried out an evaluation of the annual reports submitted by the eight contractors. In addition to evaluating each of the annual reports, the Commission made several comments of a general nature. In particular, the Commission once again emphasized the need for reported expenditure to be properly itemized and to relate only to the actual and direct costs of exploration as established in section 10.2 (c) of annex 4 to the Regulations. In situations where lump-sum expenditures were reported, without any breakdown, it was impossible for the Commission to equate the expenditures with the exploration work actually being carried out. Noting that this had been a persistent concern for the Commission, the Commission requested the secretariat to prepare, for the next session, a more detailed report and analysis of the actual and proposed financial expenditures reported by contractors to date. The Commission also noted with concern that there is still a lack of raw data being provided by contractors despite repeated requests from both the Commission and the Secretary-General. With respect to the classification into nodule types, the Commission noted that there is no uniformity in classifications used by different contractors and suggested that it may be useful for contractors to collaborate to standardize such classifications.

2. Training programme of the Federal Institute for Geosciences and Natural Resources of the Federal Republic of Germany

60. Under its contract with the Authority, signed in July 2006, and in accordance with the standard clauses set out in the regulations, the Federal Institute for Geosciences and Natural Resources of the Federal Republic of Germany was required to propose a training programme as part of its programme of work. Under the original programme of work, two trainees were to be offered traineeship in a research cruise in September 2006. However, given the delay in signing the contract, there was insufficient time to conduct the selection process to meet that schedule. In January 2008, the institute submitted a revised training proposal allowing for four trainees to take part in a cruise to the contract area of the institute from 14 October to 25 November 2008, to conduct a bathymetric survey for the exploration of polymetallic nodules and the recovery of nodule samples. The training would be completed by a four-week post-cruise training programme to analyse the results of the cruise at the institute in Hannover, Germany.

61. By a note verbale dated 21 January 2008, the secretariat circulated the training proposal to all members of the Authority, who were invited to submit nominations of up to two candidates each for the four traineeships not later than 30 April 2008 and informed that nominations received after that date would not be considered.

62. Forty-two nominations for training were submitted from 18 members of the Authority. The names and curricula vitae of all candidates were submitted to the Legal and Technical Commission at the fourteenth session. Having considered the applications in detail, the Commission selected eight candidates (four candidates and four alternates) for training. The candidates selected were: Heliarivonjy Rakotondramano (Madagascar), Hla Myo Tun (Myanmar), Yaya Djire (Mali) and Suzan Mohamed El-Gharapawy (Egypt). Unfortunately, Mr. Tun was not able to take up the place offered to him and an alternate candidate, Nesha Nurse (Barbados), was selected in his place. A report on the training programme is to be provided to the Legal and Technical Commission at the fifteenth session.

B. Monitoring of trends and developments relating to deep seabed mining activities

63. In the annual report of the Secretary-General to the fourteenth session, it was suggested that the outlook for commercial development of marine minerals was optimistic. In particular, it was noted that the trend in prices for cobalt, copper, nickel and manganese, which are the main metals that would be derived from seabed mining, had shown strong and sustained upward movement, primarily as a result of sharply rising demand caused by rapid industrialization (see ISBA/14/A/2, paras. 96-101). A similar conclusion was reached by technical experts at the Authority's international workshop to develop a preliminary cost model for a deep seabed polymetallic nodule mining and processing venture, held in February 2008, who developed a series of alternative scenarios for the successful commercial operation of a first-generation polymetallic nodule mining venture. Furthermore, during an informal presentation to the Council by experts at the fourteenth session of the Authority, including a presentation by the former chief economist for Rio Tinto Limited, Phillip Crowson, on the market conditions for seabed minerals and metals, it was noted that global demand was rising and that new mine capacity would be needed not only to fulfil that demand but also to replace the depletion of existing mines. In broad terms, it was estimated that some 70,000-90,000 tons of new nickel mine capacity would be required annually, 0.8 million tons of copper, 5,000 tons of cobalt, and 1.5 million-2 million tons of manganese ore, on a gross tonnage basis. These requirements would grow over time with rising demand and it may be expected that seabed mining would contribute to meeting global demand alongside land-based mining.

64. One year later, it is apparent that the depth of the current global recession has had an unexpectedly profound and severe impact upon metal markets and hence the prospects for seabed mining, as well as future development of land-based mines. A precipitous fall in demand for metals, particularly by newly industrialized countries such as China and India, has led to sharp falls in prices. For example, the price of copper on the London Metals Exchange (LME) fell from \$8,400 per ton in March 2008 to \$3,480 per ton in March 2009, a decline of 58 per cent. The price of nickel has fallen from a high of \$32,155 per ton in March 2008 to \$9,760 per ton in March 2009. The metals index (LMEX) has declined from \$4,248 in March 2008 to \$1,727

in March 2009, a fall of 59 per cent. Current expectations are for a prolonged and severe downturn in the mining industry.² The Fraser Institute, an independent research organization based in Vancouver, Canada, forecasts a severe pull back in exploration activity with at least 30 per cent of exploration companies going out of business during the current recession (<http://www.fraserinstitute.org>). In the meantime, several major multinational mining companies, including Anglo American, Rio Tinto and BHP Billiton, have recently announced substantial job losses and delays in new projects.

65. Nautilus Minerals Inc., which in 2008 had indicated that it hoped to commence commercial production from its Solwara 1 site in the territorial waters of Papua New Guinea by 2010, announced in December 2008 that, because of the unprecedented speed and severity of the global economic downturn and the uncertainty in the financial and commodity markets, it has decided to delay or cancel existing contracts for the construction of the equipment for the Solwara 1 mining system and to reduce its workforce by approximately 30 per cent. Nautilus has nevertheless stated that it remains committed to its objective of developing the world's first seafloor massive sulphide recovery operation and will continue to move forward with the process of gaining government approval for its mining licence application and for its environmental permit. In addition, the company intends to continue its focused exploration programme to increase its resource base. In this regard, it was announced in February 2009 that Nautilus had identified and characterized a total of 10 new sea floor massive sulphide systems in waters under the jurisdiction of Tonga (source: www.nautilusminerals.com). Another exploration company, Bluewater Metals Pty. Ltd., an Australian private company incorporated in the state of New South Wales, announced in February 2009 that it proposed to conduct an exploration campaign for high-grade sea floor massive sulphides in waters under the jurisdiction of Tonga. According to Matangi Tonga, an online news service, the company was granted a mineral prospecting licence in 2008 and conducted initial research involving a comprehensive review and reassessment of previous investigations in over 300 published papers and reports. It now intends to conduct a detailed survey of a number of selected areas, which will entail mapping of targeted areas and a shipborne survey using high definition sonar multibeam mapping, high resolution side scan sonar, two remotely operated vehicles and a submersible drill rig.

66. On the other hand, the pessimistic outlook for the mining sector does not appear to be shared by the offshore oil and gas industry. Leading energy business analyst Douglas-Westwood forecasts that the deepwater oil and gas sector will continue its recent aggressive growth trend and will spend \$162 billion over the period 2009-2013, with particularly strong growth in Latin America and Asia.³ This reflects the fact that the bulk of deepwater developments are being led by major oil companies that are less dependent on external project finance than smaller exploration companies and are thus able to take a long-term view of demand and prices for oil. World deepwater production is expected to grow from 6 million barrels of oil equivalent per day in 2007 to 11 million barrels of oil equivalent in 2011. Key drivers of expenditure forecast over the next five years include the

² Reuters Global Mining and Steel Summit, 9-11 March 2009, see <http://www.reuters.com/summit/GlobalMiningandSteel09?PID=500>.

³ Douglas-Westwood, *The World Deepwater Market 2009-2013* (February 2009), available from <http://www.dw-1.com>.

opening up of reserves further from the coast and the drilling and completion of subsea development wells, together accounting for nearly 70 per cent of all expenditure. It is evident that a substantial amount of research and development funding is being directed towards technology that will make production at greater water depths possible. Petrobras, for example, in its 2009-2013 business plan announced in January 2009 that it plans to increase its investment in exploration and production by up to 71 per cent, with \$28 billion allocated to evaluation, development and production of discoveries in the so-called pre-salt layer of the Santos and Espírito Santos basins.⁴ In Western Europe, it was announced recently that StatoilHydro of Norway had made a major discovery of gas in the Asterix prospect, which lies in 1,360 metres of water 345 kilometres west of Sandnessjøen in the Norwegian Sea. Preliminary estimates put the proven recoverable volume at about 16 billion cubic metres (100 million barrels of oil equivalent).⁵

67. Also on a more positive note, recent scientific work, particularly in relation to submarine hydrothermal systems, has helped to extend and improve current knowledge of the hydrothermal mineral potential of the world's oceans. For example, two new major hydrothermal fields were recently discovered and analysed by Russian scientists in the rift valley of the Mid-Atlantic Ridge. The Ashadze hydrothermal field, located on the western slope of the Mid-Atlantic Ridge rift valley consists of three closely related active hydrothermal sites located at the greatest depth in the ocean (4,200 metres) at which a hydrothermal field has been found. The Krasnov field, in contrast, is an inactive hydrothermal site, originally identified in 2004, but which is now thought to be the oldest and the largest hydrothermal deposit on the Mid-Atlantic Ridge, containing some 17.4 million tonnes of sulphide resource.⁶ At the East Blanco Depression (a site in the Eastern Pacific Ocean between the Juan de Fuca and Gorda Ridges), recent scientific investigations using a remote operated vehicle have increased the mapped extent of this known hydrothermal site by an order of magnitude (from 100 m to 1,000 m) and have provided important new information regarding the mineralization of the sulphide deposits.⁷

C. Regulations on prospecting and exploration for polymetallic sulphides and cobalt-rich ferromanganese crusts in the Area

68. As noted in paragraphs 9 and 10 above, the Council will continue its work on the draft regulations on prospecting and exploration for polymetallic sulphides in the Area at the fifteenth session. In order to facilitate the discussion, the secretariat has prepared a revised text of the draft regulations, harmonized in all official languages, incorporating all revisions agreed to date during the twelfth, thirteenth and fourteenth session (ISBA/15/C/WP.1 and Corr.1). The secretariat has also prepared a review of outstanding issues, including suggested revisions to the relevant provisions of the draft regulations, which is intended to supplement the

⁴ See <http://www.oilvoice.com>.

⁵ Ibid., 16 March 2009.

⁶ Cherkashov and others, "Two new hydrothermal fields at the Mid-Atlantic Ridge", *Marine Georesources and Geotechnology*, vol. 26, No. 4 (December 2008).

⁷ Hein and others, "Metalliferous sediment and a silica-hematite deposit within the Blanco Fracture Zone, Northeast Pacific", *Marine Georesources and Geotechnology*, vol. 26, No. 4 (December 2008).

technical information previously made available to the Council (ISBA/15/C/WP.2). The latter document also contains necessary background information and a summary of progress to date, as well as references to relevant documents. It also draws the attention of the Council to paragraph 33 of General Assembly resolution 63/111 in which the General Assembly encouraged the finalization of the regulations as soon as possible.

69. With respect to the draft regulations on prospecting and exploration for cobalt-rich ferromanganese crusts in the Area, it will be recalled that the Legal and Technical Commission began consideration of the draft regulations during the thirteenth session (2007) in accordance with a request made by the Council in 2006; the Commission having previously submitted (in 2004) draft regulations on prospecting and exploration for both cobalt-rich crusts and polymetallic sulphides. At the twelfth session in 2006, the Council had decided to separate the draft regulations dealing with cobalt-rich crusts from those dealing with polymetallic sulphides and to remit the former to the Commission for further and more detailed consideration in light of the discussions that had taken place in the Council in 2005 and 2006 as well as any new or updated technical information that may have become available.

70. The Commission continued its work on the draft regulations at the thirteenth and fourteenth sessions. After reviewing all the information available to it, including additional material prepared by the secretariat, as well as the document prepared for the Council relating to the draft regulations for prospecting and exploration for polymetallic sulphides in the Area (ISBA/14/C/4), the Commission decided that, in the light of the current state of knowledge, and taking account of the need to complete its work on the draft regulations in a timely manner, it was appropriate to proceed to finalize a recommendation to the Council. The Commission's recommendation to the Council would be to adopt regulations on prospecting and exploration for cobalt-rich crusts on the basis of the draft regulations contained in document ISBA/13/LTC/WP.1, but with a number of specific proposed revisions, which are set out in detail in the summary report of the chairman of the Commission to the Council at the fourteenth session (ISBA/14/C/8).

71. At the end of its meeting during the fourteenth session, the Commission requested the secretariat to prepare a revised text of the proposed draft regulations for prospecting and exploration for cobalt-rich crusts incorporating the Commission's recommendations and also fully aligning the text of the draft regulations with the adjustments to the text of the draft regulations on polymetallic sulphides agreed by the Council in 2007 and 2008. Such a document has been issued as ISBA/15/LTC/CRP.1. The Commission indicated that it intends to review the revised text at the fifteenth session, with a view to formally adopting it for submission to the Council, taking into account the requirements under articles 162(2) (o) (ii) of the Convention together with section 1, paragraph (15)(a) of the annex to the 1994 Agreement, that such rules, regulations and procedures are to be adopted within three years following the decision to undertake their elaboration upon a request being made by a member of the Authority.

D. Promotion and encouragement of marine scientific research in the Area

72. Under article 143 of the Convention, the Authority has a general responsibility to promote and encourage the conduct of marine scientific research in the Area and to coordinate and disseminate the results of such research when available. It also has a duty under article 145 to ensure effective protection of the marine environment from harmful effects which may arise from activities in the Area. The most immediate and practical way in which the Authority has begun to implement its responsibilities under the Convention and to fulfil its various mandates under paragraph 5 of section 1 of the annex to the 1994 Agreement, particularly under subparagraphs (f) to (j), has been the establishment of a series of expert workshops, seminars and meetings.

73. A key factor for the Authority is that, although a significant amount of basic and applied research has been done in the past or is still in progress, it is broadly accepted that the current level of knowledge and understanding of deep-sea ecology is not yet sufficient to allow conclusive risk assessment of the effects of large-scale commercial seabed mining, as opposed to exploration. In order to be able in future to manage the impact of mineral development in the Area in such a way as to prevent harmful effects to the marine environment, it will be essential for the Authority to have better knowledge of the state and vulnerability of the marine environment in mineral-bearing provinces. This includes, *inter alia*, knowledge of baseline conditions in these areas, the natural variability of these baseline conditions and the relationship with impacts related to mining.

74. In its technical workshops, the Authority has focused on obtaining a better understanding of the mineral resources to be found in the international seabed area and the environment in which they are found in order to better prepare it to manage the impact of exploration and mining on the environment. At all of the workshops, the need for cooperation between scientists and coordination of their efforts has been raised repeatedly; hence the second major element in the Authority's efforts to promote marine scientific research has been to act as a catalyst for international collaboration in projects which will help to manage the impact of deep seabed mining and related activities. The outcomes of these workshops have also been submitted to the Legal and Technical Commission to assist it in its work.

1. Technical workshops

75. The objective of the technical workshops convened by the Authority is to obtain the views of recognized experts in the protection of the marine environment and other specific subjects under consideration and to obtain the most recent marine scientific research results pertinent to the subject matter. In order to disseminate the results as broadly as possible, the proceedings of the workshops are published in book format and on the Authority's website. They are increasingly recognized by the international scientific and research community as important and authoritative contributions to the specialized scientific literature on deep seabed mining.

76. The most recent workshop took place in February 2008 in Chennai, India, at the National Institute for Ocean Technology. The objective of this workshop, as stated in the report of the Secretary-General to the fourteenth session, was to develop a preliminary cost model for a deep seabed polymetallic nodule mining and

processing venture. As part of the work programme for the period 2008-2010, it is proposed to convene two further international workshops in 2009 and 2010. The objective of the first workshop, scheduled for 2009, will be to review the geological model of polymetallic nodule deposits in the Clarion-Clipperton zone (see paras. 91-93 below). The objective of the second workshop, which will be convened in 2010, will be to ascertain the modalities for scientific collaboration in research on cobalt-rich ferromanganese crusts deposits in the Area with a view to addressing the standardization requirements for the environmental data required for mining.

77. Five of the international workshops convened by the Authority have covered issues associated with managing the possible impacts of mining on the marine environment. Specific recommendations from these workshops relating to collaborative scientific research have included proposals for:

(a) Collaborative studies on the natural variability of the deep-sea ecosystem, consisting of interdisciplinary variability studies of areas under contract, and unification and standardization of research and development methods;

(b) Cooperative biological research on the typical latitudinal and longitudinal ranges of benthic species, the rate and spatial scales of gene flow and the natural patterns and scales of benthic community variability in space and time;

(c) Taxonomic coordination utilizing recognized experts to assist in the correct identification of animal fauna living on the deep seabed for the purposes of establishing the geographical ranges of species and thus the likelihood of their extinction by a mining operation;

(d) The creation of databases by the Authority to enable contractors of keep up to date with the environmental data and information collected by other contractors and researchers, and to facilitate the work of the Legal and Technical Commission and the other organs of the Authority.

78. The Authority has taken steps to progressively address these recommendations in its substantive programme of work (see paras. 82-93 below). However, it is clear that much more collaborative work among contractors, marine research organizations and the Authority is required if the international community is to be able to take informed decisions on matters ranging from managing impacts to establishing marine protected areas in the Area.

2. Regional seminars

79. During the debate on the report of the Secretary-General to the fourteenth session, many members of the Authority expressed support for the newly developed programme of regional sensitization seminars on marine minerals and other issues relevant to the work of the Authority. The purpose of these seminars is to inform government officials, marine policymakers and scientists at national and regional institutions of the work of the Authority and to promote the participation of scientists from institutions in developing countries in marine scientific research being undertaken in the Area by international research organizations.

80. The first such seminar had taken place in March 2007 in Manado, Indonesia. A second seminar was convened in Rio de Janeiro, Brazil, from 26 to 28 November 2008, in collaboration with the Ministry of Mines and Energy of Brazil, the Ministry of Foreign Affairs of Brazil, the Ministry of Defence and the Division of Marine

Geology of the Geological Survey of Brazil. Additional sponsorship was provided by Petrobras. The seminar attracted 115 participants from Brazil and other countries of the South and Equatorial Atlantic Ocean. It was also broadcast live over the Internet, with interactive question and answer sessions. One of the important issues discussed was the possibility for international and regional cooperation in marine scientific research on the South and Equatorial Atlantic Ocean seabed.

81. The third seminar is to be convened in Abuja, from 24 to 26 March 2009, by kind invitation of the Government of Nigeria. A report on the outcomes of this seminar will be provided to members of the Authority at the fifteenth session.

3. International cooperation in marine scientific research

82. One of the core recommendations of the Authority's first international workshop (held in Sanya, China, in 1998) was for the Authority to work with the international scientific community, and contractors, to identify critical issues suitable for international collaboration. Such common studies would encourage cooperation and economy and would be cost-effective for all concerned. This was followed up in 2002 with a workshop specifically aimed at identifying the prospects for international collaboration in marine scientific research. That workshop led directly to the development of the Kaplan project (the outcomes of which were described in detail in the report of the Secretary-General to the fourteenth session) as well as to efforts to establish other avenues for international collaboration. These include ongoing collaboration with the Census of Marine Life (described below). However, based on the experience gained with previous collaborations, a number of other potential collaborations have been identified and are in the process of being developed. These include collaboration with the Biogeography of Deep-Water Chemosynthetic Ecosystems programme of the Census of Marine Life to obtain relevant species lists for fauna associated with polymetallic sulphides deposits in the Area.

83. The Census of Marine Life is a global network of researchers in more than 80 nations engaged in a 10-year scientific initiative to assess and explain the diversity, distribution and abundance of life in the oceans. The work of the Census is split into a series of programmes, each of which considers a specific type of environment. The Authority has been actively involved in three programmes that are directly relevant to the work of the Authority, namely:

(a) The Census of Diversity of Abyssal Marine Life (CeDAMar), which is concerned with the biodiversity of the abyssal plain (where polymetallic nodules are found);

(b) Biogeography of Deep-Water Chemosynthetic Ecosystems (ChEss), which is concerned with the diversity, distribution and abundance of fauna in relation to chemosynthetic ecosystems such as hydrothermal vents (where polymetallic sulphides are found);

(c) The Global Census of Marine Life on Seamounts (CenSeam), which is concerned with the biodiversity of seamounts (where cobalt-rich crusts are found).

84. During the Authority's 2006 workshop on cobalt-rich crusts and the diversity and distribution patterns of seamount fauna, participants identified the Western Central Pacific Ocean as one of the major ocean regions where large seamounts exist that have sufficiently thick cobalt-rich crusts to be of commercial interest. The

area identified as being of greatest interest, and where very few seamounts have been sampled, stretches west from the Hawaiian Islands to the Marianas Trough in a band between approximately 8°N and 24°N. It was suggested that there was scope for collaborative arrangements between the Authority and CenSeam to improve knowledge of the biodiversity of seamounts in this area. Following initial discussions in 2006 and 2007, the Authority entered into a collaborative arrangement with CenSeam in 2008. Under the arrangement, CenSeam will provide the Authority with data on seamount biodiversity in the Western Pacific Ocean, including lists of species associated with cobalt-rich ferromanganese crusts deposits and species associated with seamounts in general. The data to be provided will include, inter alia, a list of species found at crusts and non-crusts locations, a representative image of each species listed, a reference to the original taxonomic description, full sample data (latitude and longitude, seamount name, depth and other appropriate information) and recommendations to input into the formulation of environmental guidelines for future mining contractors.

85. The first progress report for this collaboration was received in November 2008. This initial report contained a listing of species found at sites with and without cobalt-rich ferromanganese crusts and some basic analysis of the biogeographic variation within and between seamounts. It is expected that the final report from the collaboration will be received in 2009 and will contain a complete species list of organisms found at the crust and non-crust locations examined including images where available. The report will also identify information that is still unknown and make suggestions on how best to increase the knowledge of communities associated with cobalt-rich crusts and their vulnerability to commercial activity associated with these minerals.

86. As noted in paragraph 76 above, the Authority intends to convene an international workshop in 2010 to review the results of this project and to identify and promote future collaborations. It is expected that the results will facilitate efforts by the Authority to establish appropriate databases and enable future contractors for cobalt-rich ferromanganese exploration with the Authority to establish environmental baselines in their contract areas.

87. The value to the Authority of international collaboration in scientific research is clearly demonstrated by the outcomes of the Kaplan project. As a direct result of the investigations on the levels of biodiversity, species range and gene flow of the Pacific nodule province carried out during that project, a proposal was developed for the designation of specific areas within the nodule province for the purposes of conserving representative habitats and biodiversity. This proposal was considered by the Legal and Technical Commission at its meeting during the fourteenth session, which subsequently requested a sub-group of ecological and legal experts from the Commission to continue to work on the proposal, with the assistance of the secretariat, with a view to formulating a more complete proposal for consideration by the Commission at the fifteenth session. In this way, international collaboration in scientific research will enable the Commission to fulfil its role under article 165 of the Convention to assess the environmental implications of activities in the Area and make appropriate recommendations to the Council on the basis of research and sound scientific principles.

E. Information-gathering and the establishment of unique databases of scientific and technical information

88. Globally, the data situation on resource potential and other features of the seabed is still very unsatisfactory. It is, however, believed that this situation can be significantly improved by centralizing the available information. Since the last annual report was compiled, the secretariat's geographic information base on the seabed and its resources has been significantly enhanced. Existing datasets have been updated and additional types of geographic information have been collected, analysed and integrated into the geospatial database. The newly compiled databases include:

- (a) Biological databases related to the different types of mineral deposits;
- (b) Resource data including offshore petroleum systems, oil and gas fields;
- (c) Global maritime boundaries and maritime delimitation agreements;
- (d) Local-scale bathymetric information;
- (e) Sedimentary data and information on other seabed features.

89. A digital atlas (GIS Atlas) has been developed to accommodate geographic information on the Area and regions of potential outer continental shelf. The GIS Atlas features thematic maps, educational posters and other background information on particular issues related to resource management. As an integral part of the GIS Atlas an interactive web interface has been developed. The system is the most comprehensive global geographic information system on the deep seabed and its resources. The online tool aims to disseminate the available data on resource potential as well as other physical, political and environmental information. The different seabed features can be interactively displayed in various contexts and visually analysed at different scales. Relevant spatial information is constantly added with the objective to further compile a holistic, public geographical information system.

90. Recognizing the fact that most of the data maintained by the secretariat are spatial data, the central data repository and the GIS has been integrated, allowing for a better understanding of spatial relationships. A common graphical interface for all of the secretariat's public information systems has also been designed. As an integrated information and knowledge management system the redesigned central data repository interface will provide access to the searchable database of minerals sampling data, the digital atlas of the seabed, including its interactive web interface, the bibliographic database and the library catalogue and the patents database, as well as a section for scientific, economic and legal background information. Over the next year, the secretariat will continue its efforts to cooperate with national agencies and other research institutions so that it will be able to better provide geographic information in support of decision-making by the bodies of the Authority.

F. Ongoing assessment of available data relating to prospecting and exploration for polymetallic nodules in the Clarion-Clipperton zone

91. During the period under review, the Authority continued work on the development of a geological model of polymetallic nodule deposits in the Clarion-Clipperton zone. During 2008, Phase I of the project was completed and Phase II was taken up. The main tasks accomplished during 2008 were the following:

- (a) Processing of all available resource data to produce 0.1°-grid averages for posting on the Authority's Virtual Private Network;
- (b) Completion of a series of illustrative maps of available sediment data, using three-dimensional modelling techniques;
- (c) Examination of the tectonic and volcanic maps prepared under Phase I to produce a detailed report;
- (d) Preparation of a report on the morphology of nodules and a study of the growth history of nodules in the Clarion-Clipperton zone;
- (e) Estimation of particulate organic carbonate carbon export fluxes with the study area, based on the available chlorophyll data;
- (f) Preparation of an analysis using the Spatial Decision Support System programme suite to identify promising areas for exploration within the Clarion-Clipperton zone and completion of maps of the potential nodule resources in the Clarion-Clipperton zone from Spatial Decision Support System methods indicating areas with the highest potential;
- (g) Construction of a database of estimated proxies of mineralization favourability in data poor areas;
- (h) Improvement of the resource estimate of metal content and nodule abundances using appropriate methods including three-dimensional modelling techniques, developing local scale maps from the three sites with detailed bathymetry data and examining the apparent relationship between bathymetry, metal content, and nodule abundances.

92. The individual team member reports have subsequently been compiled into a single document of common format and the draft geological model and prospector's guide have already been reviewed by the team members. The two documents are presently being peer-reviewed by experts after which the documents will be finalized. As noted above, it is proposed to hold a workshop during 2009 to present the final results of the project.

93. It is also proposed during 2009 to initiate work on a geological model of polymetallic nodule deposits in the Central Indian Ocean basin. As was the case with the geological model of polymetallic nodules in the Clarion-Clipperton zone, the Authority will engage the services of scientists with expertise in areas such as bathymetry, resources, sedimentation regimes, the calcium carbonate compensation depth in the basin and its relationship with nodule grade and abundance, biological and environmental parameters of relevance to the model. Consultants from India are presently engaged in preparing the project implementation report. A meeting of experts will be convened later in 2009 to draw up a detailed programme of work and to identify possible expert team members and interested scientists from contractors

to begin to work on developing the model throughout 2010. As with the project for the Clarion-Clipperton zone, the main outputs of the project will include a prospectors' guide and a resource assessment of the metals of commercial interest in the polymetallic nodule deposits in the Central Indian Ocean basin.

XIII. Current challenges and future issues for the Authority

94. It may be anticipated that two issues in particular will assume greater importance in the work of the Authority in the near future. These include consideration of the implementation by the Authority of the provisions of article 82 of the Convention and the relationship between the measures taken by the Authority for the protection of the marine environment and the commitments expressed by the international community towards coherent global measures for the protection of biodiversity in areas beyond the limits of national jurisdiction.

A. Implementation of article 82 of the Convention

95. It will be recalled that, in accordance with article 82 of the Convention, States or individual operators are required to contribute a proportion of the revenues they generate from exploiting the non-living resources of the outer continental shelf (i.e., that part of the continental shelf which extends beyond 200 nautical miles from the baselines of the territorial sea) for the benefit of the international community as a whole. This proportion is defined as 1 per cent of the value or volume of production at the site rising by 1 per cent annually until it reaches 7 per cent, at which level it remains. Article 82 gives the Authority responsibility for collecting these revenues and distributing them on the basis of "equitable sharing criteria, taking into account the interests and needs of developing countries, particularly the least developed and the land-locked among them".

96. Article 82 is one of the few provisions of the Convention for which few, if any, steps towards its implementation have been taken, either by potentially affected coastal States or by the Authority. Recent commercial and domestic regulatory interest in non-living resources in deep water areas of the outer continental shelf, however, as well as the prospect of increased certainty as to the outer limits of the continental shelf as a result of the work of the Commission on the Limits of the Continental Shelf, raise the distinct possibility that this provision may soon assume greater prominence. The Authority, as the competent international institution to administer article 82 payments and contributions, will be expected to anticipate and take steps towards the implementation of this provision, a responsibility that it shares with other State Parties to the Convention, and in particular the States with a claim to an outer continental shelf.

97. As a preliminary step in the exploration of issues associated with the implementation of article 82, from 11 to 13 February 2009, the Authority collaborated with the Royal Institute of International Affairs, United Kingdom (Chatham House), an independent policy research institution, in convening a seminar of invited experts to consider some of the technical, legal and policy issues associated with the implementation of article 82. As part of this work, the Authority commissioned two studies: a study of the technical and resource issues associated with the outer continental shelf; and a study of the issues associated with the

implementation of article 82 from a legal and policy point of view. During the seminar, legal, economic and policy experts, including experts from the offshore oil and gas industry and relevant international organizations, including the International Tribunal for the Law of the Sea and the Organization of the Petroleum Exporting Countries, as well as the private sector and academia, reviewed the studies and provided commentaries on specific aspects of the issues concerned.

98. Among the conclusions of the seminar were that, notwithstanding current global economic conditions, exploration and exploitation on the outer continental shelf is moving inexorably closer, particularly in relation to hydrocarbons. Other resources of potential significance include gas hydrates, which are abundant. It could easily be anticipated that the first commercial production of resources from the outer continental shelf would occur by 2015. It was further noted that the implementation of article 82 raises practical issues for the Authority as well as for individual producer States. Among the key issues for the Authority are how it should interact with producer States and how it should devise a scheme for distribution of payments and contributions that may be received in the future. In view of the long lead time needed for mineral development projects, it would be important to address these issues well before the commencement of commercial production from the outer continental shelf.

99. The studies commissioned by the Authority will be revised in light of the views of the experts participating in the seminar and published in due course for the information of all members of the Authority. In addition, as part of the collaborative work with Chatham House, the latter has produced two short briefing notes on the subject for a more general readership.⁸

B. Protection of biodiversity in areas beyond the limits of national jurisdiction

100. As noted in paragraph 72 above, the Convention requires the Authority to ensure effective protection of the marine environment from activities in the Area. Article 145 of the Convention, for example, requires the Authority to adopt rules, regulations and procedures for the “prevention, reduction and control of pollution to and hazards to the marine environment”. Such hazards include, for example, interference with the ecological balance of the marine environment, particular attention being paid to the need for protection from the harmful effects of exploration and mining and the prevention of damage to the flora and fauna of the marine environment. The Authority also has a general responsibility under the Convention to promote and encourage the conduct of marine scientific research in the Area and to disseminate the results of such research, in particular with an emphasis on research related to the protection and preservation of the marine environment.

101. While the competence of the Authority extends only to activities in the Area as defined in article 1 of the Convention, it must equally be recalled that the Area exists as a particular part of ocean space beyond the limits of national jurisdiction that is subject to a specific legal regime under the Convention and the 1994 Agreement. It is important, therefore, that the responsibilities and activities of the

⁸ Available from www.chathamhouse.org.uk.

Authority are placed in the broader context of developments within the law of the sea as a whole, while the activities of other competent bodies are conducted in such a manner as to respect the legal regime of the Area. It may be recalled, for example, that following the fourth meeting of the United Nations Open-ended Informal Consultative Process on Oceans and the Law of the Sea, held in 2003, and subsequent meetings of the Ad Hoc Open-ended Informal Working Group to study issues relating to the conservation and sustainable use of marine biological diversity beyond areas of national jurisdiction, the General Assembly has, in successive resolutions, called upon States and relevant international organizations at all levels to urgently consider ways to integrate and improve, on the basis of the best scientific information available, including the application of precaution as set out in principle 15 of the Rio Declaration on Environment and Development, the management of risks to vulnerable marine biodiversity within the framework of the Convention, consistent with international law and the principles of integrated ecosystem-based management, including the identification of marine ecosystems that warrant priority action.⁹

102. The international community has also expressed in several ways (binding instruments and soft law) and forums that the protection of the environment is a component of sustainable development. In April 2002, at the sixth meeting of the Conference of the Parties to the Convention on Biological Diversity, 123 States committed themselves to actions to “achieve by 2010 a significant reduction of the current rate of biodiversity loss at the global, regional and national level as a contribution to poverty alleviation and to the benefit of all life on earth”.¹⁰ In the Johannesburg Declaration on Sustainable Development, the World Summit on Sustainable Development observed the continuing loss of biodiversity and resolved to protect biodiversity “through decisions on targets, timetables and partnerships”.¹¹ In the Johannesburg Plan of Implementation, the World Summit agreed to action to significantly reduce the rate of biodiversity loss globally by 2010.^{12,13} The Johannesburg Plan of Implementation mentions various approaches and tools for the conservation and sustainable use of marine biodiversity, including the application of an ecosystem approach by 2010 (para. 30 (d)),¹⁴ the establishment of marine protected areas consistent with international law and based on scientific information, including representative networks by 2012, and the development of national, regional and international programmes for halting the loss of marine biodiversity (para. 32 (c) and (d)).

103. The measures taken by the Authority with respect to the Area to date are fully consistent with the sentiments expressed by the General Assembly. The Authority

⁹ General Assembly resolutions 58/240 (para. 52), 59/24 (paras. 70 and 72), 60/30 (paras. 71-77), 61/222 (paras. 96-101), 62/215 (paras. 99 and 109-112) and 63/111 (para. 134).

¹⁰ UNEP/CBD/COP/6/20, annex I, decision VI/26.

¹¹ *Report of the World Summit on Sustainable Development, Johannesburg, South Africa, 26 August-4 September 2002* (United Nations publication, Sales No. E.03.II.A.1 and corrigendum), chap. I, resolution 1, annex, paras. 13 and 18.

¹² *Ibid.*, resolution 2, annex, para. 44.

¹³ The European States committed themselves to an even stronger objective in 2001: to “halt the loss of biodiversity [in the European Union] by 2010” and to “restore habitats and natural systems” (Commission of the European Communities, document COM (2001) 264 final).

¹⁴ The ecosystem approach is defined as “a strategy for the integrated management of land, water and living resources that promotes conservation and sustainable use in an equitable way” (UNEP/CBD/COP/5/23, annex III, decision V/6).

manages risks to deep sea biodiversity by adopting regulations governing activities in the Area, by monitoring the activities of contractors who are carrying out exploration or exploitation and by promoting scientific research, especially on the impacts of mining activities on the environment. Current efforts by the Legal and Technical Commission to develop a proposal for the designation of specific areas within the Pacific nodule province for the purposes of conserving representative habitats and biodiversity should also be viewed in the context of, and as an important contribution to, the global debate on the protection of biodiversity in areas beyond national jurisdiction. Indeed, the approval by the Legal and Technical Commission of scientifically validated criteria for the identification of areas of particular environmental interest could provide a useful contribution to efforts currently under way within the context of the Convention on Biological Diversity, to develop biogeographic classification systems and criteria for the identification of marine areas beyond the limits of national jurisdiction in need of protection.

104. In this regard, the secretariat is seeking to develop a closer working relationship with the secretariat of the Convention on Biological Diversity (which has been an observer to the Authority since 2000). This includes exchanging information and cooperating more closely on issues of mutual interest, including by attending one another's workshops and seminars.

105. Both the Convention and the resolutions of the United Nations General Assembly on ocean affairs and the law of the sea emphasize the fact that activities in the oceans are interrelated and need to be considered as a whole. Better cooperation and coordination between international organizations with mandates over activities in the ocean is therefore essential, not only to ensure consistency of approach, but also to ensure comprehensive protection of the marine environment where necessary. For this reason, it may be considered that increased cooperation between the Authority and organizations such as the OSPAR Commission and the secretariat of the Convention on Biological Diversity with respect to overlapping areas of competence is a valuable step forward for the Authority and its members.

XIV. Concluding remarks

106. The Authority continues to make progress in the implementation of its work programme for the period 2007-2010. The prospects for commercial production of metals from deep seabed mining remain highly uncertain and appear to have suffered a setback as a result of the global economic downturn. Nevertheless, recognizing the future potential of seabed resources, there remains considerable public and private sector interest in exploration work aimed at better understanding and characterizing the mineral resources of the deep seabed. This includes interest in offshore oil and gas deposits, including on the outer continental shelf, which has not been much affected by cyclical economic conditions. In these circumstances, the Authority can play an important role in ensuring that an appropriate regulatory regime is established, in accordance with the Convention and the 1994 Agreement, that provides adequate security of tenure for exploration for the mineral resources of the Area, while ensuring effective protection for the marine environment. The Authority's efforts in this regard to establish an appropriate regulatory framework for the protection and preservation of the marine environment, as well as to provide a catalyst for international cooperation in scientific research aimed at better understanding of the biodiversity of the Area, are widely perceived to be at the

forefront of international efforts to manage risks to vulnerable marine biodiversity. It is likely that the Authority's work will continue to have a substantial focus on the marine environment over the next year.

107. Another important development in the life of the Authority has been the establishment and activation of the Endowment Fund. The high level of interest shown in the work of the Fund by institutions from a wide range of countries indicates that there is a need for an enhanced level of cooperation with developing countries in marine scientific research which is not currently being met by other sources. The first training opportunities under the Endowment Fund will become available in 2009. It is to be hoped that positive results from these training opportunities will encourage further contributions to be made to the Endowment Fund to enable its further development for the long-term benefit of developing State members of the Authority.

108. As noted in previous reports of the Secretary-General, one of the recurrent problems faced by the Authority has been poor attendance at the meetings of the Assembly. The Assembly is considered to be the supreme organ of the Authority, to which the other principal organs are accountable as specifically provided for by the Convention. In particular, the debate on the annual report of the Secretary-General provides an important opportunity for general statements about the Authority's work. The Assembly also adopts the budget of the Authority and elects the Secretary-General, the members of the Council and the members of the Finance Committee.

109. The fourteenth session of the Authority saw a significant improvement in the situation, partly as a result of bringing forward the dates of the session from August to May and partly because of the election for a new Secretary-General. The matter of attendance at meetings of the Authority was also once again taken up during the debate on ocean affairs and the law of the sea held during the sixty-third session of the United Nations General Assembly. In paragraph 36 of its resolution 63/111, the General Assembly urged all States parties to the Convention to attend the sessions of the Authority, and called upon the Authority to continue to pursue all options, including making concrete recommendations on the issue of dates, in order to improve attendance in Kingston and to ensure global participation. In this regard, it will be noted that the pattern of bringing forward the annual session to May has been continued for the fifteenth session. Similar dates have also been requested for 2010.

Annex

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