



# Assembly

Distr.: General  
6 June 2000

Original: English

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## Resumed sixth session

Kingston, Jamaica

3-14 July 2000

## 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

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## 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 (“the Convention”). The report covers the period from July 1999 to June 2000. The report also contains information which would enable the Assembly to undertake a review of the manner in which the international regime of the Area established under the Convention and the Agreement relating to the implementation of Part XI of the United Nations Convention on the Law of the Sea of 10 December 1982 (“the Agreement”) has operated in practice, as required under article 154 of the Convention.

## II. Membership of the Authority

2. In accordance with article 156, paragraph 2, of the Convention, all States Parties to the Convention are *ipso facto* members of the Authority. As of 5 June 2000, there were 133 States Parties to the Convention.

3. The Agreement was adopted on 28 July 1994 by the General Assembly of the United Nations in its resolution 48/263 and entered into force on 28 July 1996. After the adoption of the Agreement, any instrument of ratification or formal confirmation of or accession to the Convention shall also represent consent to be bound by the Agreement. No State or entity may establish its consent to be bound by the Agreement unless it has previously established or establishes at the same time its consent to be bound by the Convention.

4. It continues to be a matter of concern that, as of 5 June 2000, 35 members of the Authority which became States Parties to the Convention prior to the adoption of the Agreement had not yet completed the necessary procedural steps to become parties to the Agreement. These States are: Angola, Antigua and Barbuda, Bahrain, Bosnia and Herzegovina, Botswana, Brazil, Cameroon, Cape Verde, Comoros, Costa Rica, Cuba, Democratic Republic of the Congo, Djibouti, Dominica, Egypt, the Gambia, Ghana, Guinea-Bissau, Guyana, Honduras, Iraq, Kuwait, Mali, Marshall Islands, Mexico, Saint Kitts and Nevis, Saint Lucia, Saint Vincent and the Grenadines, Sao Tome and

Principe, Somalia, the Sudan, Tunisia, Uruguay, Viet Nam and Yemen.

## III. Sessions of the Authority

5. The fifth session of the Authority was held from 9 to 27 August 1999. The first part of the sixth session was held from 20 to 31 March 2000. Ms. Liesbeth Lijnzaad (Netherlands) was elected President of the Assembly for the sixth session. One of the main achievements of the Assembly during the fifth session of the Authority was the approval of the Agreement between the International Seabed Authority and the Government of Jamaica concerning the headquarters of the Authority. During the same session, the Council adopted the Financial Regulations of the Authority and was able to make further substantive progress on the rules of procedure of the Legal and Technical Commission and the draft regulations for prospecting and exploration for polymetallic nodules. The Council continued its work on the draft regulations during the first part of the sixth session, in March 2000. Also during the fifth session, the Legal and Technical Commission commenced consideration of draft guidelines for the assessment of the possible environmental impacts arising from exploration for polymetallic nodules and the Finance Committee considered and adopted its rules of procedure.

## IV. Election of the Secretary-General

6. At its 72nd meeting, on 31 March 2000, the Assembly elected Mr. Satya N. Nandan (Fiji) Secretary-General of the Authority for a second four-year term of office from 1 June 2000.<sup>1</sup>

## V. Relations with the host country

7. It will be recalled that, on 10 March 1998, the Minister for Foreign Affairs and Foreign Trade of Jamaica informed the Secretary-General by letter that the Government of Jamaica had decided to offer the building currently occupied by the Authority for the permanent use and occupation of the Authority as its headquarters.<sup>2</sup> The Secretary-General informed the Assembly of the offer on 17 March 1998, noting that clarification would have to be obtained from the Government of Jamaica with respect to the terms and

conditions of the offer and that a report on the financial and other implications for the Authority of the offer would be prepared as soon as relevant information was available. Of particular concern were the maintenance costs, the structural condition of the building, the condition of major equipment and the question of refurbishment.

8. The Secretary-General reported to the Assembly on the offer by the Government of Jamaica in August 1999, at the fifth session of the Authority.<sup>3</sup> After consideration of the Secretary-General's report, the Finance Committee recommended to the Assembly that it approve the offer and that the Secretary-General should pursue negotiations with the host country, based on the most complete information available, in order to secure the best terms for the maintenance of the premises.<sup>4</sup>

9. At its 67th meeting, on 25 August 1999, the Assembly approved the Agreement between the International Seabed Authority and the Government of Jamaica concerning the headquarters of the Authority and accepted with appreciation the offer of the Government of Jamaica for a long-term lease of the second floor and such other space as may be required in the building, for the use and occupation by the Authority as its permanent headquarters.<sup>5</sup> The Assembly further requested the Secretary-General to negotiate with the Government of Jamaica, pursuant to article 2 of the Headquarters Agreement, a supplementary agreement concerning the use and occupation of the permanent headquarters. At the 68th meeting, on 26 August 1999, in a formal ceremony, the Headquarters Agreement was signed by the Secretary-General, on behalf of the Authority, and by the Deputy Prime Minister and Minister for Foreign Affairs of Jamaica, the Hon. Seymour Mullings, on behalf of the Government of Jamaica.

10. In October 1999, the Secretary-General invited the Government of Jamaica to commence as soon as possible the negotiations on the supplementary agreement. In November 1999, the Government of Jamaica indicated that it was making the necessary internal arrangements for the internal transfer of the title to the proposed headquarters building. Consequently, it was not until May 2000 that a preliminary round of discussions could take place between the Authority and the Government. As at the date of the present report, the supplementary agreement was not complete.

## **VI. Protocol on Privileges and Immunities**

11. The Protocol on the Privileges and Immunities of the International Seabed Authority, adopted by the Assembly at its 54th meeting, on 26 March 1998,<sup>6</sup> was opened for signature in Kingston on 26 August 1998. The Protocol was signed on that day by the representatives of the Bahamas, Brazil, Indonesia, Jamaica, Kenya, the Netherlands and Trinidad and Tobago. Since then, the Protocol has been signed at United Nations Headquarters by Chile, Côte d'Ivoire, Egypt, Finland, Ghana, Greece, Italy, Namibia, Oman, Pakistan, Portugal, Saudi Arabia, Senegal, Spain, Slovakia, the Sudan, the former Yugoslav Republic of Macedonia, the United Kingdom of Great Britain and Northern Ireland and Uruguay. On 20 April 2000, the Protocol was ratified by Slovakia. In accordance with its article 16, the Protocol will be open for signature at United Nations Headquarters in New York until 16 August 2000. It is subject to ratification or accession and will enter into force 30 days after the date of deposit of the tenth instrument of ratification or accession. It is hoped that States members of the Authority will give consideration to the early signature of the Protocol and its ratification.

## **VII. Permanent representatives to the Authority**

12. As of 5 June 2000, the Ambassadors of Brazil, Chile, China, Costa Rica, Cuba, Gabon, Germany, Haiti, Jamaica, Mexico and the Netherlands had presented their credentials to the Secretary-General as permanent representatives to the Authority.

## **VIII. Relations with the United Nations and other international organizations**

13. In May 2000, the Secretary-General of the Authority and the Executive Secretary of the Intergovernmental Oceanographic Commission (IOC/UNESCO) signed a Memorandum of Understanding concerning cooperation between the two organizations in promoting the conduct of marine scientific research in the international seabed area. Under the Memorandum of Understanding, the two

organizations will, where appropriate and practical, consult on matters of mutual interest in the field of marine scientific research and cooperate in the collection of environmental data and information. In accordance with the relevant provisions of the Convention, the Secretary-General will continue to develop cooperative arrangements between the Authority and other competent international organizations where appropriate and necessary in order to ensure the effective discharge of their respective responsibilities under the Convention.

## IX. The secretariat

14. The secretariat is organized into four main functional areas: Office of the Secretary-General, Office of Administration and Management, Office of Legal Affairs and Office of Resources and Environmental Monitoring. The approved establishment of the secretariat for 2000 was 37 posts. Owing to rapid turnover of staff in the latter half of 1999, a number of Professional posts were vacant as of May 2000. However, recruitment was under way for all vacant posts and it is anticipated that all posts would be filled by the end of 2000.

15. Pending the adoption of its own regulations, the Authority has been applying, *mutatis mutandis*, the Staff Regulations of the United Nations. Draft staff regulations for the Authority were prepared in 1998. However, in view of the changes which were made to the Staff Regulations of the United Nations during 1998, the draft regulations were substantially revised. The draft regulations were reviewed by the Finance Committee in 1999. It is anticipated that the draft will be considered by the Council during the resumed sixth session of the Authority in July 2000.

## X. Budget and finance

### A. Budget

16. In accordance with the Convention and the 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.

17. The proposed budget for 2000 had amounted to \$5,679,400.<sup>7</sup> The draft budget was considered by the

Finance Committee, which recommended certain amendments and submitted a report to the Council and the Assembly.<sup>8</sup> Subsequently, taking into account the recommendations of the Finance Committee and the Council, the Assembly adopted a revised budget for 2000 in the sum of \$5,265,000 (\$4,065,200 for the administrative expenses of the Authority and \$1,210,000 for conference services).<sup>9</sup>

18. The proposed budget of the Authority for the financial period 2001-2002 will be the first budget to cover a two-year financial period, as envisaged in the Financial Regulations of the Authority. Following a careful review of the Authority's budgetary requirements for the period 2001-2002, the Secretary-General proposes to maintain the total proposed budget at a level similar to that for 2000, with necessary allowances for inflation and other incremental costs. Adjustments are proposed to the allocation of funds under the various parts of the proposed budget to reflect more accurately the actual expenditures incurred during previous years and the anticipated needs of the Authority during the forthcoming financial period. The proposals of the Secretary-General relating to the budget of the Authority for the financial period 2001-2002 are contained in document ISBA/6/A/7-ISBA/6/C/4.

### B. Scale of assessment

19. In accordance with the recommendation of the Finance Committee, the scale of assessment for the contribution of members of the Authority to the administrative budget for 2000 was based on the scale of assessment to the regular budget of the United Nations for 1999, with a floor rate of 0.01 per cent and a ceiling of 25 per cent.<sup>10</sup>

### C. Status of contributions

20. As at 31 May 2000, contributions to the 2000 budget had been received from 35 members of the Authority. The total amount received was \$2,117,895, or 41 per cent of the total assessed contributions. As at the same date, contributions to the 1999 budget had been received in full from 64 members of the Authority and in part from 9 members of the Authority. The total amount received was \$4,801,465, or 96 per cent of the total budget for 1999. The Working Capital fund as at

31 May 2000 stood at \$272,612 (69 per cent of the total).

21. As at 31 May 2000, 40 members of the Authority were in arrears of contributions for a period exceeding two years. In respect of the budget for 1999, contributions of \$217,814 (4 per cent of the budget) remained outstanding from 68 members of the Authority, while in respect of the 1998 budget, contributions of \$1,311,409 (27 per cent of the budget) remained outstanding from 46 members of the Authority. In accordance with article 184 of the Convention and rule 80 of the Rules of Procedure of the Assembly, a member of the Authority which is in arrears in the payment of its financial contribution to the Authority shall have no vote if the amount of its arrears equals or exceeds the amount of the contribution due from it for the preceding two full years.

#### **D. Financial regulations**

22. The Finance Committee completed its work on the draft financial regulations of the Authority at the resumed fourth session of the Authority in August 1998. The draft financial regulations were taken up by the Council at the fifth session in August 1999. At its 57th meeting, on 26 August 1999, the Council decided to adopt and apply provisionally the draft financial regulations, pending their approval by the Assembly.<sup>11</sup> The Assembly approved the Financial Regulations at its 71st meeting, on 23 March 2000.<sup>12</sup>

#### **E. Audit**

23. In accordance with article 175 of the Convention, the records, books and accounts of the Authority, including its annual financial statements, shall be audited annually by an independent auditor appointed by the Assembly. At the fifth session, in 1999, the Assembly appointed KPMG Peat Marwick to audit the Authority for 1999. An audit was conducted in March 2000. Having reviewed the accounts, transactions and operations of the Authority, the auditors were satisfied that the financial statements presented fairly, in all material respects, the financial position of the Authority and that the financial business of the Authority had been conducted in accordance with the Financial Regulations.

## **XI. Substantive work of the Authority**

### **A. Formulation of the rules, regulations and procedures for prospecting and exploration for polymetallic nodules in the Area**

24. According to the mandate provided by the Convention and the Agreement, the elaboration and adoption of rules, regulations and procedures for exploration for polymetallic nodules is one of the major legislative tasks of the Authority. Such rules, regulations and procedures shall incorporate applicable standards for the protection and preservation of the marine environment.

25. The Legal and Technical Commission commenced work on the draft regulations for prospecting and exploration for polymetallic nodules in March 1997. As the basis for its work, the Commission used the working papers prepared by Special Commission 3 of the Preparatory Commission for the International Seabed Authority and for the International Tribunal for the Law of the Sea between 1984 and 1993. The Commission also took into account the provisions of the Agreement and the special situation of the registered pioneer investors under resolution II of the Final Act of the Third United Nations Conference on the Law of the Sea (UNCLOS III). The Commission worked extensively on the draft regulations during its meetings in March 1997, August 1997 and March 1998 (the third and fourth sessions of the Authority), completing its work in March 1998.

26. The draft regulations proposed by the Commission were submitted to the Council under the symbol ISBA/4/C/4/Rev.1 and were considered by the Council at the resumed fourth session of the Authority in August 1998. The Council met in informal session, open to all interested members of the Authority, to examine the text regulation by regulation. Following the examination of the text, an informal revision of the preamble and regulations 2 to 21 of the draft regulations was prepared by the secretariat together with the President of the Council and issued under the symbol ISBA/4/C/CRP.1.

27. During the fifth session of the Authority in August 1999, the Council held further informal meetings to continue the examination of the text of the draft regulations proposed by the Legal and Technical

Commission. The Council introduced revisions of a substantive nature, as well as numerous editorial changes. In the light of the discussions, the secretariat, together with the President of the Council, prepared a revised text issued under the symbol ISBA/5/C/4 and Add.1.<sup>13</sup>

28. At the end of the fifth session, the Council decided that, with respect to the organization of work for the sixth session of the Authority, priority would be given to the work of the Council on the draft regulations, with a view to adopting the regulations during 2000. Accordingly, most of the time available during the first part of the sixth session, in March 2000, was devoted to the work of the Council. Having identified the key outstanding issues, the Council continued to meet informally and was able to make considerable progress in addressing the areas of most difficulty in the draft regulations. In particular, the Council reviewed the provisions in the draft regulations dealing with the application of the precautionary principle, the protection and preservation of the marine environment, the reporting of exploration data and confidentiality of data and information. In the light of the discussions, the secretariat, together with the President, prepared a further revised text of the draft regulations.<sup>14</sup> The Council agreed to continue its discussions on the draft, together with other outstanding issues in relation to the draft regulations, during the second part of the session, with a view to adopting the regulations.

29. The draft consists of 40 regulations, organized into nine parts, and four annexes. Part I of the regulations consists of introductory material and definitions. Part II deals with prospecting. Part III deals with the process of applying for approval of a plan of work for exploration, including the content of the plan of work, the form of the application and the procedure for consideration of applications by the Legal and Technical Commission and the Council. Part IV describes the form and content of the contract for exploration. Parts I to IV of the draft regulations are basically an elaboration of Annex III of the Convention, which contains the basic conditions of prospecting, exploration and exploitation. Annex III itself elaborates upon the provisions of article 153 of the Convention by describing the procedures by which States, state enterprises and other entities may apply for prospecting, exploration and exploitation in the international seabed area, the procedures for approval

of plans of work and the basic legal and contractual conditions attached to such plans of work.

30. Part V of the draft regulations deals with protection and preservation of the marine environment, including the procedure for the application of emergency orders pursuant to article 162, paragraph 2 (w), of the Convention. Part VI deals with confidentiality. Part VII contains general procedures for the implementation of the regulations. Part VIII deals with settlement of disputes and Part IX sets out the procedure to be followed should the prospector or contractor locate resources other than polymetallic nodules. Annexes 1 and 2 are the forms used to notify the Authority of prospecting and to apply for a plan of work for exploration. Annex 3 is the contract for exploration and Annex 4 contains the standard clauses of the contract for exploration.

31. Once adopted by the Council, the regulations will be provisionally applied pending approval by the Assembly in accordance with article 162, paragraph 2 (o), of the Convention. The Secretary-General will also then be able to issue contracts to the seven registered pioneer investors whose plans of work for exploration were considered to be approved by the Council on 27 August 1997.<sup>15</sup> The seven registered pioneer investors are: Government of India, Institut français de recherche pour l'exploitation de la mer/l'Association française pour l'étude et la recherche des nodules (IFREMER/AFERNOD) (France), Deep Ocean Resources Development Company (DORD) (Japan), Yuzhmorgeologiya (Union of Soviet Socialist Republics (now the Russian Federation)), China Ocean Mineral Resources Research and Development Association (COMRA) (China), Interoceanmetal Joint Organization (Bulgaria, Cuba, Czech and Slovak Federal Republic (now the Czech Republic and Slovakia), Poland and Union of Soviet Socialist Republics (now the Russian Federation)) and Republic of Korea.

## **B. Status of registered pioneer investors**

32. Since its establishment in August 1997, the Legal and Technical Commission has considered the periodic reports and relinquishments submitted to the Authority by the registered pioneer investors pursuant to resolution II. Periodic reports on activities up to December 1997 have been submitted by India, Yuzhmorgeologiya and COMRA. Periodic reports on activities up to December 1998 have been submitted by

Interoceanmetal Joint Organization. The Republic of Korea has submitted periodic reports on activities up to July 1999. The most recent reports submitted by DORD and IFREMER/AFERNOD cover activities up to 1994 and 1993 respectively. All registered pioneer investors have completed the schedule of relinquishments specified in their certificates of registration with the exception of Interoceanmetal Joint Organization and India. Interoceanmetal Joint Organization is due to relinquish the final portion of the area allocated to it in 2000. India is yet to relinquish the final 20 per cent of the area allocated to it. Information of a general nature regarding the plans of work for exploration submitted by the registered pioneer investors, including details of all reports submitted both to the Preparatory Commission and to the Authority, is contained in ISBA/4/A/1/Rev.2.<sup>16</sup>

### **C. Training**

33. Resolution II, paragraph 12 (a) (ii), requires every registered pioneer investor to provide training at all levels for personnel designated by the Preparatory Commission. The Special Commission for the Enterprise, Special Commission 2, was established in accordance with paragraph 8 of resolution I of UNCLOS III and was entrusted with the functions referred to in paragraph 12 of resolution II. All registered pioneer investors, with the exception of the Government of the Republic of Korea, had fulfilled their obligations with regard to training by the time the Preparatory Commission completed its work.

34. By paragraph 2 of LOS/PCN/L.115/Rev.1, annex, the Government of the Republic of Korea, as a registered pioneer investor, was required to provide training in conformity with the specific programme for training approved by the Preparatory Commission. It was agreed that the cost of such training shall be borne by the Government of the Republic of Korea. The precise number of trainees, the duration and the fields of training were to have been agreed upon between the Preparatory Commission and the Government of the Republic of Korea according to its capabilities. It was further agreed that the first group of trainees should consist of no less than four individuals. The Republic of Korea submitted its proposal for a training programme to the Authority on 6 March 1995, after the training panel had concluded its work and presented its

final report to the General Committee of the Preparatory Commission.<sup>17</sup>

35. The proposal of the Republic of Korea was considered and approved by the Legal and Technical Commission at its meeting in August 1997.<sup>18</sup> Subsequently, the Secretary-General, by a note verbale dated 14 April 1998, requested members of the Authority to nominate candidates for training by, at the latest, 31 July 1998. A total of 60 applications were received by that date. On the basis of the nominations received, the Legal and Technical Commission, at its meetings on 24 and 25 August 1998, selected four candidates, and four alternate candidates for the training programme.<sup>19</sup>

36. The training programme commenced in March 1999 and continued until December 1999. Four trainees from Cameroon, Kenya, Malaysia and the Philippines completed the course satisfactorily and a final report on the training programme will be presented to the Legal and Technical Commission in due course. At the same time, the secretariat aims to complete an evaluation of all the training carried out pursuant to resolution II with a view to presenting a comprehensive report to the Legal and Technical Commission in 2001.

### **D. Guidelines for the assessment of the possible environmental impacts arising from exploration for polymetallic nodules**

37. At the fifth session, in August 1999, the Legal and Technical Commission began consideration of draft guidelines for the assessment of the possible environmental impacts arising from exploration for polymetallic nodules.<sup>20</sup> The draft guidelines had been prepared on the basis of the recommendations of a workshop convened by the Authority in June 1998.<sup>21</sup> The Legal and Technical Commission could not complete its work on the draft guidelines in the time available during the fifth session and the draft will be considered further during the resumed sixth session.

### **E. Information and data relating to the international seabed area**

38. Among the substantive functions of the Authority are the promotion and encouragement of marine



scientific research with respect to activities in the Area and the collection and dissemination of the results of such research. The Authority uses information and data obtained from marine scientific research and from contractors for the preparation of assessments of the resource potential of minerals to be found in the Area as well as studies of the environmental implications of activities in the Area.

39. The Authority has acquired a substantial amount of geological and other information relating to polymetallic nodules specific to the areas reserved for the conduct of its activities. These areas are located in the Clarion-Clipperton fracture zone between latitudes 7°15'N and 17°15'N and longitudes 120°W and 156°40'W and in the Indian Ocean between latitudes 10°N and 17°N and longitudes 73°W and 82°W. The Authority's database of data and information on polymetallic nodules in the reserved areas is known as POLYDAT. The information contained in POLYDAT comprises the coordinates of areas allocated to registered pioneer investors and the coordinates of areas reserved for the Authority, information on the geological, oceanographic and meteorological characteristics of such areas, details of the methodology and equipment used for data acquisition, and mining data relating to the nature, abundance, metal content and grade of resources.

40. Polymetallic nodules are to be found in other parts of the international seabed area. Since their discovery, thousands of samples have been collected in all oceans. The repositories of these data are widespread and in many cases not readily accessible to all potential users. There is also no uniform format for the data. The situation with respect to other mineral occurrences to be found in the Area is similar, in particular with respect to polymetallic massive sulphide deposits and cobalt-rich ferromanganese crust deposits. Similar problems are encountered with respect to environmental data that can be utilized to establish baselines against which to assess the impact of activities in the Area.

41. Over the next two years, therefore, the Authority intends to carry out the following activities with respect to the collection and organization of relevant data and information.

## **1. Resource assessment of the areas reserved for the Authority**

42. As noted in the report of the Secretary-General to the Authority at its fourth session<sup>22</sup> the Authority commenced work in 1998 on a detailed assessment of the resource potential of the areas reserved for the Authority. This included a systematic review of POLYDAT, including a critical analysis of the data and information it contained.

43. For the purposes of the resource assessment, the reserved areas were divided into different sectors and blocks according to their different geographic locations and characteristics. Based on the available information and data, a detailed resource assessment of Block 15 was conducted. A report on the overall resource assessment of the reserved areas has been prepared, including the detailed assessment of Block 15. The report contains, *inter alia*, details of the methodology used for the resource assessment, the origin, critical analysis and validation of the data contained in POLYDAT and the elements that were found to be missing in the original submissions for registration as pioneer investors made under resolution II.

44. Some of the missing elements and their effects on resource assessment include insufficient information on the methods used for seabed topography, making a proper analysis of the correlation between topography and nodule abundance difficult, and discrepancies between data sets provided by different registered pioneer investors. It is therefore proposed to establish a cooperative arrangement with the registered pioneer investors in order to obtain from them the necessary complementary data and information to enable the assessment of all reserved areas. In addition, it is proposed during 2001 to increase the capability of POLYDAT to enable it to perform complex analytical processes and to allow customization and programming of additional modules. This will involve updating it with relevant marine geological data available in the public and private domain.

## **2. Central data repository**

45. The Authority intends to establish a central data repository not only for polymetallic nodules but also for all marine minerals in the Area. Such a central data repository would be accessible by all members of the Authority, would display the acquired data and information, would include quantitative resource

assessments and would enable the Authority, among other things, to process information for the purposes of preparing technical reports, producing CD-ROMs and uploading to the Authority's Web site.

46. The Authority has made significant progress towards the establishment of the central data repository. It has assembled information concerning the form and availability of relevant data from 18 institutions. Significant amounts of data have been acquired and collection efforts are ongoing. Work is currently under way to assess the content and status of existing non-proprietary data and to estimate the initial capacity required for the repository. Alongside this effort is the definition of the type of hardware and software that should be acquired to store and allow ready access to the database, and the types of outputs to be expected from the central data repository.

47. It is anticipated that by the end of 2001, work would have been completed in the following areas:

(a) Establishment of the appropriate interfaces between the database and the Authority's Web site, including interrogation software which will provide access to the database over the Internet and security measures which will protect the integrity of the data;

(b) Development of protocols, procedures and redundant measures used to compile data and verify their accurate transcription and representation in the database system;

(c) Acquisition of data from all 18 institutions with which the Authority has corresponded;

(d) Inputting of all acquired data and information on polymetallic nodules from sources within the United States of America;

(e) Acquisition of all data and information from other sources;

(f) Testing of the Web interface to ensure its proper operation.

48. The second phase of the development of the central data repository would be to acquire information and data on seafloor massive polymetallic sulphides and seafloor cobalt-rich ferromanganese crust deposits.

### **3. Environmental database**

49. A variety of information and data has to be collected and analysed to establish the baseline

conditions of the marine environment in potential mine sites within the Area. Parameters relating to the physical, chemical and biological characteristics of water masses from the ocean surface to the near seafloor have to be collected and studied to evaluate the baseline conditions in such areas. To support the work of the organs of the Authority, in particular the Legal and Technical Commission, it is intended to develop environmental databases containing, *inter alia*, information on the basic biology of the deep sea benthos in the Clarion-Clipperton fracture zone, such as the distribution of fauna, faunal densities and spatial distribution of oceanographic parameters. Such databases will assist in the evaluation of data and information received from monitoring programmes established by contractors for the purpose of observing and measuring the effects of exploration activities on the marine environment.

## **E. Workshop on proposed technologies for seabed mining**

50. From 2 to 6 August 1999, the Authority held a workshop on proposed technologies for deep seabed mining. The objectives of the workshop were to define the current state of seabed mining technology, to identify future trends in the development of such technology and to promote cooperation in the development of technology. The workshop was attended by developers of the various mining subsystems proposed for the recovery of polymetallic nodules, representatives of the registered pioneer investors and independent experts in technology used in the offshore mining industry.

51. The workshop found that much work had been done by registered pioneer investors and others in research and development of technology for deep seabed mining. Those efforts had benefited substantially from the proliferation of technologies developed for other resources, including metalliferous sulphides, cobalt crusts, deep water oil, gas hydrates, diamonds and sand and gravel. Much of the work that had been done in the pioneer areas related to the characterization of environmental factors. The workshop considered however, that there was considerable danger of duplication of effort and that some of the work already done lacked standardization and commonly agreed models. Accordingly, the recommendations of the workshop included proposals for enhanced cooperation

between investors as well as the development under the auspices of the Authority of an appropriate international model for the assessment of environmental impacts and the standardization of data collection, evaluation storage and retrieval. One possibility suggested by the workshop as a means of promoting the development of technology while sharing risk was the formation of a pilot project involving a consortium of investors working together in a mutually agreed site under the guidance of the Authority.

### **G. Resources other than polymetallic nodules**

52. At the resumed fourth session of the Authority in August 1998, the representative of the Russian Federation had made a request to the Authority to adopt rules, regulations and procedures for exploration for polymetallic sulphides and cobalt-rich crusts.<sup>23</sup> In accordance with article 162, paragraph 2 (o) (ii), of the Convention such rules, regulations and procedures shall be adopted within three years from the date of such a request.

53. Polymetallic sulphide mineral deposits are formed by precipitation from hydrothermal solutions that convect through seafloor spreading centres driven by volcanogenic heat sources. The geographical distribution of deposits of polymetallic sulphides is less well known than that for polymetallic nodules, although it is understood that, compared to polymetallic nodules, deposits of sulphides are highly concentrated. Recent discoveries in areas under national jurisdiction have led to the suggestion that mining of such deposits may become technically and economically feasible in the relatively near future.

54. In the light of the request to the Authority by the Russian Federation, the secretariat commenced work in 1999 on a review of the status of knowledge and research on resources other than polymetallic nodules. To further this work, the Authority will convene the third in its series of workshops at Kingston from 26 to 30 June 2000. The objectives of the workshop are to provide information on the occurrence, technical parameters, economic interest and potential resources contained in mineral resources other than polymetallic nodules, to identify existing institutional factors that have contributed to the discovery of such resources and continuing research on them and to provide

information which will assist in drafting rules, regulations and procedures for prospecting and exploration for these mineral deposits, in particular deep sea polymetallic massive sulphide deposits and cobalt-bearing ferromanganese encrustations. The workshop will also review the current status of activities in relation to the conversion of the valuable components of methane hydrates, oil and gas, marine phosphorites and deposits of precious metals into reserves of the commodities which they contain. The proceedings of the workshop will be published.

### **XII. Periodic review under article 154 of the Convention**

55. Article 154 of the Convention requires the Assembly of the International Seabed Authority, every five years from the date of entry into force of the Convention, to undertake a general and systematic review of the manner in which the international regime of the Area established in the Convention has operated in practice. In the light of this review, the Assembly may take, or recommend that other organs take, measures which will lead to the improvement of the operation of the regime. As the Convention entered into force on 16 November 1994, such a review is due in 2000.

56. The international regime is established by the Convention and the Agreement. The Agreement modified de facto a number of provisions of Part XI of the Convention relating to deep seabed mining and, pursuant to article 2 of the Agreement, Part XI of the Convention and the Agreement are to be interpreted and applied as a single instrument.

57. Among the essential elements of the international regime established by the Convention and the Agreement are the following:

(a) The provision that the use of the international seabed area shall be exclusively for peaceful purposes;

(b) The further provision that no State shall claim or exercise sovereignty or sovereign rights over any part of the Area or its resources, nor shall any State or natural or juridical person appropriate any part thereof;

(c) Respect for the legitimate rights and interests of coastal States;

(d) Effective protection of the marine environment from harmful effects which may arise from activities in the Area;

(e) The promotion of marine scientific research concerning the Area and its resources;

(f) The effective participation of developing countries.

58. One of the most important elements of the international regime is the establishment of the institutional framework, namely, the International Seabed Authority, through which States Parties to the Convention shall organize and control activities in the international seabed area, particularly with a view to administering the resources of the Area. The Authority came into existence in November 1994, upon the entry into force of the Convention, and functions as an autonomous international organization. The various steps in the establishment of the Authority are detailed in the reports of the Secretary-General presented to each session of the Authority since 1997.<sup>24</sup>

59. Shortly after the establishment of the Authority, the Secretary-General presented a report to the Assembly that described in detail the substantive work of the Authority and reviewed the status of the exploration work carried out by the registered pioneer investors pursuant to resolution II.<sup>25</sup> The immediate substantive tasks for the Authority were summarized in the first annual report of the Secretary-General, presented to the third session of the Authority in 1997.<sup>26</sup> The tasks identified included:

(a) Formulation of the rules, regulations and procedures for prospecting and exploration for polymetallic nodules;

(b) Implementation of the decisions of the Preparatory Commission relating to the registered pioneer investors;

(c) Evaluation of polymetallic nodule resource data for the Area;

(d) Resource assessment of the areas reserved for the Authority;

(e) Development of environmental baselines.

60. The fundamental basis upon which exploration and exploitation for polymetallic nodules under the Convention and the Agreement has been allowed to proceed is the so-called parallel system, whereby each

prospective contractor is required to propose for exploration two areas of equal estimated commercial value. One such area is reserved for future exploration by the Authority, while the other is to be made available to the contractor under a contract with the Authority. It will be recalled that this was also the basis upon which areas were allocated to the pioneer investors registered pursuant to resolution II.<sup>27</sup>

61. The Authority has made substantial progress in implementing the tasks it identified for itself in 1997. In particular, as detailed elsewhere in the present report,<sup>28</sup> it has made substantial progress in formulating the rules, regulations and procedures for prospecting and exploration for polymetallic nodules. Through the Legal and Technical Commission, it has monitored the implementation by the registered pioneer investors of the remaining obligations established by resolution II and has taken the necessary steps in accordance with the Agreement to give formal recognition to the claims of the registered pioneer investors and bring them within the single regime created by the Convention and the Agreement. The Authority has also commenced work on the development of environmental guidelines and has carried out work on a resource assessment of the areas reserved for the Authority.

62. The purpose of article 154 of the Convention is to allow the Assembly the possibility of recommending changes to the regime set out in the Convention and the Agreement in the light of experience and in order to adapt to changing circumstances. Article 154 itself was adopted on the basis that the regime established by the Convention was completely new and had not been tested either by the international community or by any particular State. The regime established by the Convention was, however, subjected to de facto review and modification both by the Preparatory Commission in its work relating to the elaboration of the rules of procedure for the various organs of the Authority and the registration of pioneer investors, and in the informal consultations of the Secretary-General of the United Nations leading to the adoption of the Agreement.

63. The first four years of operation of the Authority were primarily devoted to consideration of the organizational issues necessary for the proper functioning of the Authority as an autonomous international organization. While the Authority has, with the approval of the plans of work of the registered

pioneer investors<sup>29</sup> and its ongoing work on the regulations for prospecting and exploration for polymetallic nodules (see paras. 24-31), commenced its operational and substantive activities it is too early at the current stage to make a determination as to whether the regime established by the Convention and the Agreement has functioned effectively in practice. In the light of the very short experience that the Authority has had in implementing the regime, the Secretary-General believes that it would be premature to make any recommendations to the Assembly concerning measures which will lead to the improvement of the operation of the regime.

### **XIII. Public information**

#### **A. Web site**

64. The Authority gives publicity to its work by means of press releases. The press releases may also be accessed through the Authority's Web site.<sup>30</sup> A major upgrade of the Web site was carried out during 1999, including the installation of a dedicated Web server and the complete redesign of the Web interface. The site contains essential information about the Authority in English, French and Spanish, as well as official documents and decisions. Press releases are available in English and French. Official documents and press releases are available in a downloadable format so as to enable ready access to them for members of the Authority. Further enhancements will be made to the site during 2000.

#### **B. Publications**

65. The Authority continued to develop its publications programme during 1999. Regular publications include an annual compendium of selected decisions and documents of the Authority (available in English, French and Spanish) and a Handbook, containing details 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. In addition, the Authority has produced a brochure, in English, French and Spanish, explaining the work of the Authority.

66. The Authority also published, during 1999, the proceedings of the workshop on environmental impacts arising from exploration for polymetallic nodules. The publication contains detailed presentations on past and current environmental studies related to deep seabed mining as well as papers and discussions on the biological, chemical and physical environment of the seabed. The proceedings of the workshop on technology will be published in June 2000. One of the objectives of the workshops convened by the Authority is to promote wider dissemination of information. Accordingly, the proceedings of the workshops are freely available to members of the Authority.

67. Future publications will include studies of the legislative history of the Enterprise and of resolution II, as well as a complete set of the official documents of the Authority on CD-ROM. A complete listing of all current publications issued by the Authority appears on the Authority's Web site.

#### **C. Library facilities**

68. The specialized library of the Authority exists to serve the needs of member States, permanent missions and researchers interested in all aspects of the Convention and seabed and marine related affairs. It also provides reference and research assistance to secretariat staff. In addition, the library handles the storage, cataloguing and distribution of the official documents and publications of the Authority. During the period under review, the library continued to handle requests from staff members and external users for information and documents. An increase was seen in external requests for research-related information and for official documents, especially requests received by e-mail. The subjects on which information was sought included general information on the work, history and development of the Authority, issues related to seabed mining and offshore development programmes, hydrothermal vents and crusts, biological diversity and underwater cultural heritage. Information was also sought on other law of the sea issues such as the regime of straits, the continental shelf and the exclusive economic zone. Many requests were handled by electronic transmission of documents, especially those relating to official documents.

69. In late 1999, the library completed the move to its new location. New furniture and shelving was acquired and, as a result, the library is now much better

organized, with room for further expansion. Computer workstations are available for library users, including delegates. An electronic cataloguing system, WINISIS, of the United Nations Educational, Scientific & Cultural Organization (UNESCO) was installed and extensive work is being done on cataloguing the current collection. As at May 2000, bibliographic information on some 800 records had been entered, including new acquisitions and the existing collection. It is expected that the checking and editing of the database would be completed by the end of 2000.

70. The library contains a great deal of archival material relating to the work of the Seabed Committee and UNCLOS III. Much of this material is not available elsewhere. Consequently, in December 1999, the library engaged the services of a specialist conservation librarian to conduct a thorough review and analysis of the preservation needs of the library. The specialist made a number of useful recommendations, which are being implemented. These include the preservation through copying onto acid-free paper and binding of the documents and reports of UNCLOS III and the Preparatory Commission. Once the documents have been reviewed, catalogued and indexed, it is intended to transfer them onto electronic mass storage media.

71. The library continued its acquisition programme with a view to building a comprehensive collection of reference materials and strengthening the research capability of the collection. This is being achieved through the acquisition of specialized and reference publications on the law of the sea and seabed-oriented technical and scientific material, both current and earlier works. During the reporting period the collection was enhanced through the acquisition of approximately 200 books, journals and CD-ROMs. A number of items were acquired through donations. This includes a number of personal donations and donations from related institutions and libraries. The library's association with the International Association of Aquatic and Marine Science Libraries and Information Centers (IAMSLIC) has been of considerable benefit in terms of research assistance and acquisition of specialized technical publications. The Secretary-General expresses his appreciation to all donors for their valuable contributions to the library.

## **XIV. Future work**

72. Although some administrative work remains to be done on the staff rules and related matters, the internal organization of the Authority and its principal organs is substantially complete. The only significant outstanding issue which remains to be negotiated concerns the terms and conditions for the use and occupation of the headquarters building. It is anticipated that this issue could be resolved prior to the seventh session of the Authority. In the light of the experience gained during the first four years of operations, the administrative budget has stabilized taking into account the current activities of the Authority. It is anticipated that with the adoption by the Council of the draft regulations on prospecting and exploration for polymetallic nodules during 2000, the Secretary-General will soon be in a position to issue contracts for exploration to each of the seven registered pioneer investors whose requests for approval of plans of work for exploration were considered approved in August 1997.

73. The future work of the Authority is expected therefore to have a more technical emphasis. One of the most important functions of the Authority will be to monitor the implementation of the plans of work for exploration of the future contractors and to review the reports and other data and information submitted pursuant to the contracts for exploration. It is also proposed to convene a workshop in 2001 for the development of a standardized system of data interpretation, as recommended by the group of scientific experts convened by the Authority in March 1999. In addition, the Authority intends to convene a further workshop in 2002 on the prospects for international cooperation and collaboration in marine scientific research on the deep oceans, with a view to gaining a better understanding of the deep ocean environment.

74. The Authority will continue to develop its substantive work programme in order effectively to carry out the functions assigned to it by the Convention and the Agreement, including promoting and encouraging the conduct of marine scientific research with respect to activities in the Area and monitoring trends and developments relating to deep seabed mining activities, including world metal market conditions. In addition, the Authority will continue to acquire scientific knowledge and monitor the

development of marine technology relevant to activities in the Area, in particular technology relating to the protection and preservation of the marine environment, and collect data and information relevant to the implementation of article 82 of the Convention.

75. One of the mechanisms the Authority intends to use to better carry out its function of disseminating information on scientific research is the publication of a bulletin containing a précis of current information from various sources as well as analyses of trends and developments with respect to seabed mining.

#### Notes

<sup>1</sup> ISBA/6/A/8.

<sup>2</sup> ISBA/4/A/9, annex.

<sup>3</sup> ISBA/5/A/4 and Add.1.

<sup>4</sup> ISBA/5/A/8-ISBA/5/C/7.

<sup>5</sup> ISBA/5/A/11.

<sup>6</sup> ISBA/4/A/8.

<sup>7</sup> ISBA/5/A/2-ISBA/5/C/2.

<sup>8</sup> ISBA/5/A/8-ISBA/5/C/7.

<sup>9</sup> ISBA/5/A/12.

<sup>10</sup> Ibid.

<sup>11</sup> ISBA/5/C/10.

<sup>12</sup> ISBA/6/A/3.

<sup>13</sup> Subsequently, the revised text was reissued with minor technical amendments under the symbol ISBA/5/C/4/Rev.1.

<sup>14</sup> ISBA/6/C/2.

<sup>15</sup> ISBA/3/C/9.

<sup>16</sup> Reproduced in Selected Decisions 4, 1.

<sup>17</sup> LOS/PCN/150.

<sup>18</sup> Reissued under the symbol ISBA/3/LTC/2.

<sup>19</sup> ISBA/4/C/12 and Corr.1.

<sup>20</sup> ISBA/5/LTC/1.

<sup>21</sup> The outcomes of the workshop are summarized in ISBA/5/A/1.

<sup>22</sup> ISBA/4/A/11.

<sup>23</sup> See ISBA/4/A/18, para. 14.

<sup>24</sup> ISBA/3/A/4 (1997); ISBA/4/A/11 (1998); ISBA/5/A/1 and Corr.1 (1999).

<sup>25</sup> ISBA/A/10.

<sup>26</sup> See ISBA/3/A/4, part X, paras. 41-54.

<sup>27</sup> It should be noted, however, that because of overlapping claims by certain pioneer investors, an understanding was reached, following intensive negotiations, under which France, Japan and the former Soviet Union relinquished certain portions of their areas in advance, on the basis of self-selection, with the complementary undertaking to develop one mine site in the areas reserved for the Authority in the North-East Pacific Ocean (see LOS/PCN/L.87).

<sup>28</sup> See paras. 24-31.

<sup>29</sup> See ISBA/4/A/11, paras. 41-43.

<sup>30</sup> www.isa.org.jm/.