The International Seabed Authority
Structure and Functions

Nii Allotey Odunton
Secretary-General

February 2012, Kingston, Jamaica
Structure

- Assembly (161 States Parties and the EU)
- Council (36 elected States Parties)
  - Legal and Technical Commission (21 expert members)\(^1\)/
  - Finance Committee (15 expert members)\(^2\)/
- Secretariat.

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\(^1\)/ Mrs. Laleta Davis - Mattis, an Attorney at Law is the Jamaican member of the Legal and Technical Commission (LTC).

\(^2\)/ Mrs. Trecia Eliot of the Ministry of Foreign and Affairs and Foreign Trade is the Jamaican member of the Finance Committee (FC)
Main Functions

- Administer the mineral resources of the International Seabed Area which is the common heritage of mankind.
- Adopt rules, regulations and procedures for the conduct of activities in the Area.
- Promote and encourage marine scientific research in the Area.
- Protect and conserve the natural resources of the Area and prevent damage to the flora and fauna of the marine environment.
Main Mineral Resources

Polymetallic Nodules
Discovered in 1873.
Commercial interest established in the late 1960s

Cobalt Crusts
Discovered at the same time as nodules. First systematic investigations of cobalt-rich crusts sites was in 1981

Polymetallic Sulphides
Discovered in 1979. Commercial interest established in the late 1980s
Polymetallic Nodules of the Area

- Polymetallic nodules were discovered in 1873 during the historic expedition of the HMS Challenger.

- In 1958, Dr. John Mero, a mining engineer at the Hearst School of mines in the University of California, Berkeley, published an economic discourse on the vast potential of deep seabed polymetallic nodules as sources of manganese, cobalt, copper and nickel.
• In 1967, Dr. Arvid Pardo, the Maltese Permanent representative to the United Nations, made a speech to the UN General Assembly focussing on the mineral resources of the seabed beyond the limits of national jurisdiction, in particular the polymetallic nodules found at great depths and whose exploitation seemed to promise substantial benefits, which he proposed to be declared the “Common heritage of mankind”.

On 5 July 1974, at the 27th meeting of the plenary of the Third U.N. Conference on the Law of the Sea, on behalf of the Government of Jamaica, Senator the Hon. Dudley Thompson offered for consideration a site in Jamaica to accommodate the Headquarters of whatever international machinery was decided upon to manage the resources of the international marine area.

At the 49th meeting of the plenary, the Group of the 77 endorsed the offer of the Government of Jamaica.
• At the 29th session of the General Assembly in September 1974, Malta offered to host the proposed International Seabed Authority. Malta confirming its offer in a letter dated 14 April 1975.

• At the sixth session of the Conference in 1977, Fiji submitted a letter offering to host serve the International Seabed Authority.

• At the tenth session (1981), following lively debate on the need for equality of treatment of the three candidates, the matter was finally decided in informal Plenary through an indicative vote by show of hands. Jamaica defeated Malta after Fiji had withdrawn.
Eminent Jamaicans who participated in the work of the 3rd UN Conference on the Law of the Sea and in the Preparatory Commission

Many eminent Jamaicans contributed to Jamaica’s efforts to secure the seat of the Authority as well as in the negotiations leading up to the adoption of the Convention itself.

These included the aforementioned Senator, the Hon. Dudley Thompson and Ambassador Dr Kenneth Rattray, two former Prime Ministers Mr P.J Paterson and Mr Edward Seaga, H.E Hugh Schearer, Judge Patrick Robinson, Ambassadors Douglas Saunders, Donald Mills and Patricia Durant, Mr Dennis Francis, Mr Hugh Bonnick, Mr Stafford Neil, Mr Allan Kirton and Mr Jeffrey Mordecai among others.
During the period 1973 to 1982, after over ninety weeks of negotiations, the Convention and its four resolutions were opened for signature in Montego Bay, Jamaica on 10 December 1982. On that day signatures from 119 delegations comprising 117 States, the Cook Islands and the United Nations Council for Namibia, were appended to the Convention.

The body entrusted to administer the common heritage of mankind and to regulate its exploration and exploitation was the International Seabed Authority which was to have an Assembly, the supreme body, and a Council with limited representation.
Formation of the Preparatory Commission for the International Seabed Authority and for the International Tribunal for the Law of the Sea

- To protect the preparatory investments by some States and entities in deep seabed mining, two of the four resolutions were adopted to address this and other related matters.
- Resolution 1 created the Preparatory Commission to make arrangements enabling the Authority (and the International Tribunal for the Law of the Sea) to be set up, and to be given limited powers to carry out functions under Resolution II, until the International Seabed Authority was established.
- Resolution II governed preparatory investments in pioneer activities by certain States and entities. Under this resolution, certain protections were granted to qualifying sea-bed miners who applied to the Commission and were registered by it to conduct pioneer activities.
Seven Pioneer Investors were registered during the life of the Preparatory Commission under the interim Pioneer Investor regime. These were, the Government of India, the Institut Francaise de Recherché pour l’exploitation de la Mer (IFREMER/AFERNOD), Deep Ocean Resources Development Company (Japan), the State Enterprise Yuhzmorgeologiya (Russian Federation), China Ocean Minerals Research and Development Association (China), Interoceanmetal Joint Organization (The Republic of Bulgaria, the Republic of Cuba, The Czech and Slovak Federal Republic, The Republic of Poland and the Russian Federation) and the Government of the Republic of Korea (Republic of Korea).
The International Seabed Authority and the Pioneer Regime

- In 1994, upon the entry into force of the Convention, the initial substantive activity of the International Seabed Authority was to transfer the registered pioneer investors from the interim Pioneer Regime, and place them under the regime envisaged by the Convention. This required the Authority to adopt appropriate rules, regulations and procedures for prospecting and exploration for polymetallic nodules in the Area.

- Taking into account the provisions of the Convention, the Implementation Agreement on Part XI of the Convention and the work done by Special Commission 3 of the Preparatory Commission, on 13 July 2000, the Authority adopted ISBA/6/A/18, containing the Regulations. This enabled the Authority to sign exploration contracts with the “pioneer investors” and to bring them into the Convention regime.
Polymetallic Nodules

Regulations for Prospecting and Exploration

ISBA/6/A/18 – Adopted by the Assembly of the Authority on 13 July 2000

- A comprehensive legal framework for prospecting and exploration for polymetallic nodule resources in the international seabed area – the “Area”.

- Forms the basis on which Plans of Work for Exploration for Polymetallic Nodules are approved and contracts issued for exploration activities in the “Area”.

- Consists of 40 regulations and 4 annexes, including a model contact, and is supplemented by guidelines drawn up by the Legal and Technical Commission for the Assessment of the possible environmental impacts arising from exploration, and for the reporting of actual and direct exploration expenditures.
On the basis of the data and information submitted by the applicant, if found satisfactory, and taking into account the recommendations of the LTC, the Council shall designate the part of the area under the application which is to be a reserved area.

The area so designated shall become a reserved area as soon as the plan for work for the non-reserved area is approved and the contract is signed.
Training Obligations of Contractors

- In addition to the payment of a fee for the administrative cost of processing applications, all contractors are required to provide training to personnel of the Authority and to personnel of developing State members of the Authority.

- Normally, if the administrative costs of processing the application is less than the fee, it is to be returned to the contractor. Following consultations with the earlier contractors it was agreed that the surplus from the fee could be used by the Authority to create an endowment fund for marine scientific research for marine scientists from developing countries. Such a fund has been created.

- Training programmes shall focus on training in the conduct of exploration, and shall provide for full participation by such personnel in all activities covered by the contract.

- Contractors are required to submit a proposal for training to
Training Obligations of Contractors and Award of Traineeships

- Upon receipt of the proposal, the secretariat circulates the training proposal to all members of the Authority. Members of the Authority are invited to submit nominations of up to two candidates each for the traineeships not later than the date specified in the schedule to the programme.

- The criteria for consideration and selection of candidates are detailed in the training proposal.

- Nominations are generally to be accompanied by:
  (a) The curriculum vitae of the candidate, indicating the specific field in which the candidate wishes to receive training;
  (b) Notarized copies of academic diplomas;
  (c) The academic transcripts of the candidate;
(d) A brief explanatory note from the candidate explaining how the training will further her or his career;

(e) A brief explanatory note from the nominating Government indicating how the traineeship will benefit the Government.

- Nominating Governments are also requested to submit assurances that the candidates would be made available for the traineeship, be placed on leave with pay and would be appropriately employed upon successful completion of the training.

- The applications received by the Secretariat are placed before the Legal and Technical Commission to make the selection.

- The last such programme was that offered by the Federal Republic of Germany. The Legal and Technical Commission selected four trainees and four alternates.
Status of Exploration Contracts for Polymetallic Nodules

- Currently, the Authority has ten exploration contracts for polymetallic nodules in two geographic areas: the eastern equatorial Pacific Ocean (in an area known as the Clarion-Clipperton Fracture Zone (CCZ)) and in the Central Indian Ocean basin (CIOB). Both geographical areas also contain reserved areas.
- Nine contractors have exploration contracts for areas in the CCZ, of which two contract areas under the sponsorship of developing States.
- The contractors in the CCZ, their sponsoring States, and the size of their exploration areas are contained in Table 1.
<table>
<thead>
<tr>
<th>Contractor</th>
<th>Date of Signature</th>
<th>Sponsoring State</th>
<th>Size Exploration Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. State Enterprise Yuzhmorgeologiya</td>
<td>29 March 2001</td>
<td>Russian Federation</td>
<td>75,000 km²</td>
</tr>
<tr>
<td>2. Interoceanmetal Joint Organization (IOM)</td>
<td>29 March 2001</td>
<td>Bulgaria, Cuba, Czech Rep., Poland, Russian Fed. and Slovak Rep.</td>
<td>75,000 km²</td>
</tr>
<tr>
<td>3. The Government of the Republic of Korea</td>
<td>27 April 2001</td>
<td>Republic of Korea</td>
<td>75,000 km²</td>
</tr>
<tr>
<td>4. China Ocean Minerals Research and Development Association (COMRA)</td>
<td>22 May 2001</td>
<td>People’s Republic of China</td>
<td>75,000 km²</td>
</tr>
<tr>
<td>5. Institut Francais de Recherche pour l'Exploitation de la Mer (IFREMER)</td>
<td>20 June 2001</td>
<td>France</td>
<td>75,000 km²</td>
</tr>
<tr>
<td>6. Deep Ocean Resource Development Company</td>
<td>20 June 2001</td>
<td>Japan</td>
<td>75,000 km²</td>
</tr>
<tr>
<td>7. Federal Institute of Geosciences and Natural Resources</td>
<td>19 July 2006</td>
<td>Federal Republic of Germany</td>
<td>75,000 km²</td>
</tr>
<tr>
<td>8. Nauru Ocean Resources Inc. (NORI)</td>
<td>22 July 2011</td>
<td>Nauru</td>
<td>75,000 km²</td>
</tr>
<tr>
<td>9. Tonga Offshore Mining Ltd (TOML)</td>
<td>11 January 2012</td>
<td>Kingdom of Tonga</td>
<td>75,000 km²</td>
</tr>
</tbody>
</table>

Reserved areas in the CCZ: China, Japan, Rep. of Korea, France, IOM and the Russian Federation have contributed reserved areas in the amount of 150,000 square kilometers each.
Polymetallic Nodules Exploration in the Clarion-Clipperton Fracture Zone
Areas under contract with the International Seabed Authority and areas reserved for the Authority
07 September 2011

Contractor Areas
- COMRA (China)
- DORD (Japan)
- Government of Korea
- IFREMER (France)
- Interoceanmetal
- BGR (Germany)
- Yuzhmorgeologia (Russian Federation)
- Tonga Offshore Mining Limited
- Nauru Ocean Resources Inc
- Reserved Areas

Exclusive Economic Zones
(indicative only; VLIZ, 2011)
There is a single contractor for polymetallic nodules in the Central Indian Ocean basin. This is the Government of India, which also contributed a reserved area. Table 2 contains the particulars of the Government of India’s contract area, and the adjoining figure the contract and reserved areas associated with India’s application.

**Table 2: Polymetallic Nodules Contractor in the CIOB**

<table>
<thead>
<tr>
<th>Contractor</th>
<th>Date of Signature</th>
<th>Sponsoring State</th>
<th>Size Exploration Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>The Government of India</td>
<td>25 March 2002</td>
<td>India</td>
<td>75,000 sq. km</td>
</tr>
<tr>
<td><strong>Reserved Area</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Contributed by the Government of India</td>
<td></td>
<td></td>
<td>150,000 sq. km</td>
</tr>
</tbody>
</table>
POLYMETALLIC NODULES EXPLORATION IN THE INDIAN OCEAN

Map showing areas of interest and exploration contracts in the Indian Ocean. Legends indicate areas under contract with the International Seabed Authority and the Government of India, areas reserved for the International Seabed Authority, and limits of Exclusive Economic Zones.

Key:
- Orange: Areas under contract with the International Seabed Authority and the Government of India
- Green: Areas reserved for the International Seabed Authority
- Limits of Exclusive Economic Zones

Countries and regions marked include India, Maldives, Seychelles, Mauritius, Chagos Archipelago (U.K.), and Komodo (Indonesia).
Polymetallic sulphides and Cobalt-Rich Ferromanganese Crusts deposits in the Area

At the resumed fourth session in 1998, the delegate of the Russian Federation, brought to the attention of the Assembly that two other kinds of minerals had been the subject of scientific and commercial investigation since the early eighties. He identified cobalt-bearing ferromanganese crusts and polymetallic sulphides which he stated had been found in the international seabed area. He pointed out that Russian scientists had carried out investigations on cobalt-bearing crusts in the Magellan Seamount area (13 and 17 degrees North and 154 and 157 degrees East), and also on polymetallic sulphides at the Polyarnoye hydrothermal field in the Mid-Atlantic Ridge. Referring to the market situation of the metals that these resources contained, he requested that the Authority adopt rules, regulations and procedures for prospecting and exploration for these resources. He also referred to article 163, paragraph (o) (ii) which states that rules on exploration for resources other than polymetallic nodules in the Area shall be adopted three years from the date of a request to the Authority by any of its members.
Polymetallic sulphides and Cobalt-Rich Ferromanganese Crusts deposits in the Area

- Unlike polymetallic nodules about which some information and data had been obtained prior to the establishment of the Authority, data and information on polymetallic sulphides and cobalt bearing ferromanganese crusts in the Area were far less. Such data are expensive to obtain, in particular without exclusive rights to search for the minerals in order to commercialize them. With the limited budget at the disposal of the Authority, as had been done for similar matters regarding nodules, technical workshops were convened by the Authority using international experts on both resources with a view to informing the organs of the Authority of the state of knowledge of these resources.
• Workshop on Mining of Cobalt Rich Ferromanganese Crusts and Polymetallic Sulphides - Technological and Economic Considerations *31 July - 4 August 2006*

• Workshop for the Establishment of Environmental Baselines at Deep Seafloor Cobalt-Rich Crusts and Deep Seabed Polymetallic Sulphide Mine Sites in the Area For the Purpose of Evaluating the Likely Effects of Exploration and Exploitation on the Marine Environment. *6-10 September 2004*

• Mineral Resources of the International Seabed Area other than polymetallic nodules, eg: polymetallic sulphides, cobalt-rich crusts, gas hydrates. *26 – 30 June 2000*
Polymetallic Sulphides and Cobalt-Rich Ferromanganese Crusts Deposits

- At the seventh session of the Authority, the Secretariat provided the Council with document ISBA/7/C/2, on “Considerations relating to the regulations for prospecting and exploration for hydrothermal polymetallic sulphides and cobalt-rich ferromanganese crusts in the Area.” The document provided information on the characteristics of both deposits, considerations relating to the regime for prospecting and exploration for polymetallic sulphides and cobalt crusts, the size of exploration areas and relinquishment, site banking, overlapping claims, and model clauses that could be used in a contract.
At the tenth session of the Authority, the Legal and Technical Commission proposed document ISBA/10/LTC/WP1 Draft regulations on prospecting and exploration for *polymetallic sulphides and cobalt-rich ferromanganese crusts* in the Area, for the consideration of Council.

At the thirteenth session of the Authority, following a second workshop on polymetallic sulphides and cobalt-rich ferromanganese crusts, as well as a series of explanatory notes on the draft regulations requested by Council, a decision by Council to consider separate regulations for each of the resources, the Legal and Technical Commission submitted document ISBA/13/LTC/WP1 - Draft regulations on prospecting and exploration for polymetallic sulphides in the Area to the Council for its consideration.
Following its consideration of the draft regulations, at the 16th session, the Assembly decided to approve the draft Regulations adopted by the Council.
Polymetallic Sulphides
Regulations for Prospecting and Exploration
ISBA/16/C/L5-Adopted by the Authority on 6 May 2010

- A comprehensive legal framework for prospecting and exploration for polymetallic sulphides in international seabed areas - the “Area”
- Forms the basis upon which Plans of Work for exploration for Polymetallic Sulphides are approved and contracts issued for activities in the “Area”
- Consists of 44 regulations and 3 annexes, including a model contract.
- Provides for an applicant to elect a reserved area contribution to the Authority or to offer an equity interest in a joint venture arrangement with the Enterprise.
The total area allocated to the contractor shall not exceed 10,000 square kilometres. The contractor shall relinquish parts of the area allocated to it in accordance with the following schedule:

(i) 50% by the end of the 8th year from the date of the contract;

(ii) 75% of the allocated to it by the end of the 10th year
Contracts with the Authority for Exploration for Polymetallic Sulphides

- On 7 May 2010, an application for approval of a plan of work for exploration for polymetallic sulphides in the Area was submitted by China Ocean Minerals Research and Development Association (COMRA).

- On 24 December 2010, an application for approval of a plan of work for polymetallic sulphides deposits in the Area was submitted by the Government of the Russian Federation.

- Both applications were approved on 19 July 2011
Cobalt-rich iron-manganese crusts occur throughout the global ocean on seamounts, ridges and plateaux where currents have kept the rocks swept clean of sediments for millions of years. Crusts precipitate from cold ambient seawater onto rock substrates, forming pavements up to 250 mm but also for titanium, cerium, nickel, platinum, manganese, thallium, tellurium, tungsten, bismuth, zirconium and other metals.

Crusts form at water depths of about 400-4,000 m, with the thickest and most cobalt-rich crusts occurring at depths of about 800-2,500 m. Gravity processes such as landslides, as well as sediment cover, submerged and emergent reefs, and currents control the distribution and thickness of crusts.
Following the decision to separate the regulations into the two resource types, and taking into account technical adjustments consistent with the recommendations that emerged from the discussions during the Authority’s workshop on technical and economic considerations relating to mining polymetallic sulphides and cobalt-rich crusts in the Area held from 31 July to 4 August 2006, the Legal and Technical Commission submitted the draft regulations for prospecting and exploration for cobalt-rich ferromanganese crusts in the Area to the Council at the 16th session. The draft regulations are contained in document ISBA/16/C/WP2.

The draft regulations are still under consideration by the Council, which will take it up at the forthcoming 18th session.
Functions:

*Protect and conserve the natural resources of the Area and prevent damage to the flora and fauna of the marine environment*

- All of the Authority’s regulations emphasize the need to protect and conserve the natural resources of the Area. In this regard, during exploration, the contractor is requested to collect environmental baseline data against which to assess the impact of its activities on the environment. The resource for which the most has been done is polymetallic nodules.

- With regard to environmental protection, the Authority’s objectives are to:
• Compile databases of specialized environmental parameters, including physical, chemical and biological data;
• Standardize these data, produce standardized sampling strategies and report on the state of the marine environment resulting from activities in the Area
• Promote Marine Scientific Research in connection with these efforts
A major challenge for the Authority has been the dearth of knowledge of the fauna associated with the different mineral resources in the Area. Since nodule prospecting and exploration started before the establishment of the Authority, there were no requirements for pioneer investors, marine scientific researching organization and other interests to standardize their data collection techniques or the data that they collected. For example, in the Clarion Clipperton Fracture Zone (CCZ) where there were six pioneer investors before the Authority was established and for which there are now nine contractors for polymetallic nodule exploration, it has proven difficult to compare information and data on associated fauna in the absence of standardized taxonomy.

To help rectify this situation, the Authority collaborated with a number of organisations and contractors, and undertook research in the CCZ. One such collaboration was the Kaplan Project.
The objective of the Kaplan project was to study the distribution of organisms on the seabed in order to facilitate the establishment of environmental guidelines.

Its aims were to determine the number of various faunal groups at a number of stations in the CCZ using modern molecular methods that can facilitate standardization, and to use state-of-the-art molecular and morphological techniques to evaluate levels of species overlap and rates of gene flow for key faunal components.

Collaborators in the project were the British Natural History Museum, the Southampton Oceanography Centre (United Kingdom), JAMSTEC (Japan), IFREMER (France) and the University of Hawaii.
The Kaplan project has spurred a number of other initiatives including an Environmental Management Plan for the CCZ. A big stumbling block in this regard is the availability of standardized data.

The Authority has taken steps in this regard by exchanging views with contractors on how to proceed. There is agreement on how to review the data that has been collected and determine their comparability, as well as undertaking workshops among contractor scientists and others to select a standardized taxonomy for associated fauna.

Similar efforts will be undertaken for fauna associated with polymetallic sulphides and cobalt-rich ferromanganese crusts.
Other substantive activities.

- *Since its establishment, the Authority has created a Central Data Repository that contains information and data on marine mineral resources in the Area Its objectives are to:*
  - Collect and centralize all public and private data and information on marine mineral resources and their associated environments;
  - Provide interested prospectors and explorers with the available data, and
  - Disseminate the available data
Other Substantive Activities

- Geological models: The Authority has also completed a geological model of polymetallic nodule resources in the CCZ. An outstanding feature of this endeavour was the cooperation from the exploration contractors. A similar effort is planned for the Central Indian Ocean basin.

- As data and information become available for the two other resources, similar efforts will be undertaken.

- Resource assessment of reserved areas: The Authority has undertaken a resource assessment of the polymetallic nodule deposits in the reserved areas of the CCZ. This shows that in situ resources are beyond the scale of any similar deposits on land. It will continue to monitor developments and update the assessment as more data are made available.
Future Activities

• Monitoring of contracts for exploration (especially environmental aspects).
• Development of regulations and guidelines for exploitation of polymetallic nodules, polymetallic sulphides and cobalt-rich crusts.
• Further development of:
  • The Central Data Repository.
  • Resource assessment of reserved areas and
• Promotion of marine scientific research in the deep seabed to facilitate the work of the various organs of the Authority, and
Establishment of an internship programme to expose students around the world to the work of the Authority and opportunities to participate in the development of the common Heritage of Mankind.
Thank you very much

I wish to thank all of you for this opportunity to inform you about progress with the administration of the “Common Heritage of Mankind” as we commemorate the 30th anniversary of the opening for signature of the 1982 United Nations Convention on the law of the sea.