

**China-ASEAN Academy on Ocean Law and Governance**

# **The Evolution And Development of the New Regime of the Area**

**Mao Bin**

Senior Research Fellow

Former Deputy Permanent Representative of P.R. China to the international Seabed  
Authority (ISA)

Former Secretary-General of China Mineral Resources R&D Association (COMRA)  
State Oceanic Administration of China (SOA)

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# I. Introduction



# I. Introduction

1. During the 1960s, the demand for legal regime for exploitation of the mineral resources of the deep ocean floor beyond the areas of national jurisdiction became a newer issue added into the creation of a political climate for a third United Nations Conference on the Law of the Sea (UNCLOS III). Finally, after the United States, the Soviet Union and other maritime nations acceded to the demands of developing nations to include the consideration of an international regime for the resources of the deep seabed, agreement was reached to hold a Third United Nations Conference on the Law of the Sea (UNCLOS III).

The issue of the establishment of legal regime for exploitation of the mineral resources of the deep ocean floor (deep seabed mining) beyond the national jurisdiction was agreed as a newer issue for UNCLOS III

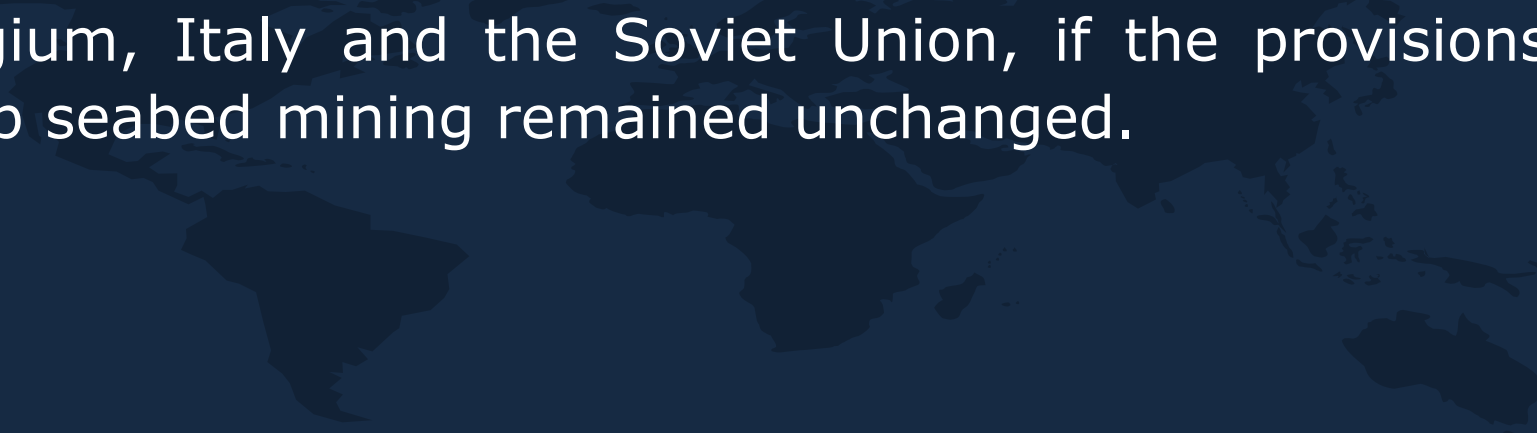
# I. Introduction

2. The Third United Nations Conference on the Law of the Sea (UNCLOS III) was convened during 1973-1982. In 1982, UNCLOS III adopted the United Nations Convention on the Law of the Sea (the Convention) at United Nations Headquarters on 30 April 1982. Part XI of the Convention set out the regime for deep seabed mining in the Area.



# I. Introduction

3. It had been clear from the date of adoption of the Convention in 1982 that it would be impossible to secure the participation of the United States and a number of other industrialized countries, including the United Kingdom, the Federal Republic of Germany, Netherlands, Belgium, Italy and the Soviet Union, if the provisions on deep seabed mining remained unchanged.



# I. Introduction

4. In order to make the Convention universally acceptable, the then Secretary-General of the United Nations took an initiative to convene informal consultation on Part XI of the Convention from 1990 to 1994.

With 4 years' effort of the UN Secretary-General informal consultation, the Agreement Relating to the implementation of Part XI of the United Nations Convention on the Law of the Sea of 10 December (Agreement) was adopted on 28 July 1994 during the resumed forty-eighth session of the General Assembly and came into force on 28 July 1996.

# I. Introduction

5. The UN Secretary-General informal consultation on Part XI of the Convention paved the way for ensuring universal participation of the Convention

Part XI of the Convention and the related annexes, which, together with resolution II of UNCLOS III, and the Agreement, **set out the new regime deep seabed mining in the Area beyond the national jurisdiction (the new regime of “the Area” ) for the first time and provide the legal framework governing activities in the Area.**

# I. Introduction

6. The Agreement introduced significant changes to the regime for deep seabed mining set out in Part XI of the Convention. The Agreement, in essence, removes the obstacles that had stood in the way of universal acceptance by substituting general provisions for the detailed procedures contained in the Convention and **by leaving it to the Authority to determine at a future date the exact nature of the rules it will adopt with respect to the authorization of deep seabed mining operations.**

And thus, after the entry into force of the Convention, the regime was further developed with the making of three regulations on prospecting and exploration for polymetallic nodules, polymetallic sulphides and cobalt-rich crusts in the Area.

## **II. Part XI of the UN Convention on the Law of the Sea Set out the Regime for Deep Seabed Mining in the Area**



## 2.1 The Deep Seabed Mining Regime Set Out by the United Nations Convention on the Law of the Sea

The Third United Nations Conference on the Law of the Sea (UNCLOS III) lasted 9 years from 1973 to 1982. The agenda for UNCLOS III was extremely complex. The United Nations Convention on the Law of the Sea (the Convention) was born from the UNCLOS III. It was approved by the Conference at United Nations Headquarters on 30 April 1982, by a vote of 130 in favor to 4 against, with 17 abstentions, and it was opened for signature at Montego Bay, Jamaica, on 10 December.

Part XI of the Convention set out the regime for deep seabed mining in the Area beyond the national jurisdiction (“the Area”).

## 2.1 The Deep Seabed Mining Regime Set Out by the United Nations Convention on the Law of the Sea

However, the United States and a number of other industrialized countries opposed the deep sea mining regime set out in Part XI of the Convention. They refused to sign the Convention from the date of adoption of the Convention.

In addition to more than 10 years in the making, It took another 12 years for further debating and negotiation (1982-1994). Part XI of the Convention is the largest single part of the Convention and turned to be the most difficult to negotiate and debate.

With 4 years' effort from 1990 to 1994, the UN Secretary-General informal consultation on Part XI of the Convention resulted in the Agreement Relating to the implementation of Part XI of the United Nations Convention on the Law of the Sea of 10 December 1982 (Agreement), which paved the way for universal participation in the Convention **(to be discussed in Part III of this presentation).**

## 2.2 The interim arrangement for the deep sea mining regime pending the entry into force of the Convention

UNCLOS III not only adopted the Convention but also a number of resolutions. Of particular operational importance are Resolution I and Resolution II. Resolution I on the “Establishment of Preparatory Commission for the International Seabed Authority and for the International Tribunal for the Law of the Sea” and Resolution II on the “Governing Preparatory investment in Pioneer Activities relating to Polymetallic Nodules” of UNCLOS III set forth **the interim arrangement for the regime pending the entry into force of the Convention** *desirous of making provision for investments by States and other entities made in a manner compatible with the international regime set forth in Part XI of the Convention and the Annexes relating thereto, before the entry into force of the Convention.*

These arrangements are integrated part of the Regime. Most notable interim arrangements were for:


- The parallel system**

- The arrangement of pioneer investors.**

## 2.2 The interim arrangement for the deep sea mining regime pending the entry into force of the Convention

### The parallel system

Who would mine the mineral and under what rules? Having established that the resources of the seabed beyond the limits of national jurisdiction are the common heritage of mankind, the framers of the treaty faced the question of **who should mine the minerals and under what rules.**



## 2.2 The interim arrangement for the deep sea mining regime pending the entry into force of the Convention

### The parallel system

**The developed countries** took the view that the resources should be commercially exploited by mining companies and that an international authority should grant licenses to those companies.

**The developing countries** objected to this view on the grounds that the resource was unique and belonged to the whole of mankind, and that the most appropriate way to benefit from it was for the international community to establish a public enterprise to mine the international seabed area.

## 2.2 The interim arrangement for the deep sea mining regime pending the entry into force of the Convention

### The parallel system

The solution found was to make possible both the public and private enterprises on one hand and the collective mining on the other, the so-called “parallel system”.



## 2.2 The interim arrangement for the deep sea mining regime pending the entry into force of the Convention

### The parallel system

The then United States Secretary of State Kissinger proposed that the industrialized countries commit themselves to conduct negotiations with a view to providing the finances and technology required by the Enterprise, the international public company under the International Seabed Authority desired by the developing countries. As a condition of this commitment the former countries would, in return, have access to seabed resources on an equal footing with the Enterprise. Furthermore, room would be left for developing countries to come in through participation in joint ventures.

## 2.2 The interim arrangement for the deep sea mining regime pending the entry into force of the Convention

### The parallel system

Under the so-called “banking system”, set out in the Convention, the mining consortium or State enterprise hoping to start seabed mining will be required to submit an application covering a total area sufficiently large and of sufficient estimated commercial value to allow two mining operations. The applicant will have to draw the lines between the two parts, and share with the International Seabed Authority all the data it has collected through mapping and sampling. Within 45 days, the Authority must choose which part it will keep as a “reserved area” for operation by the Enterprise and which it will hand over to the applicant to develop under contract. This was a practical application of the “you divide, I choose” method of negotiation.

## 2.2 The interim arrangement for the deep sea mining regime pending the entry into force of the Convention

### The pioneer investors

Prior to the entry into force of the 1982 Convention, some countries and mining consortia had already made large investments in the survey and location of polymetallic nodules. These entities were accorded a special status as registered pioneer investors.

In 1997 plans of work for exploration by seven registered pioneer investors were formally submitted to the Council of the Authority. Those investors were:

- Government of India
- Institut Français de recherche pour l'exploitation de la mer (IFREMER)/Association française pour l'étude et la recherche des nodules (AFERNOD) (France)
- Deep Ocean Resources Development Co. Ltd. (DORD)(Japan)

## 2.2 The interim arrangement for the deep sea mining regime pending the entry into force of the Convention

### The pioneer investors

- Yuzhmorgeologiya (Russian Federation)
- China Ocean Mineral Resources Research and Development Association (COMRA)
- Interoceanmetal Joint Organization (IOM) (Bulgaria, Cuba, Czech Republic, Poland, Russian Federation and Slovakia)
- Government of the Republic of Korea

These seven entities will be the first to receive contracts from the Authority to undertake exploration activities.

The first priority of the Authority has been to formulate detailed regulations for prospecting and exploration for poly metallic nodules. This process includes elaborating the respective responsibilities of seabed explorers and the Authority in order to ensure environmentally sustainable development of seabed mineral resources.

## **2.2 The interim arrangement for the deep sea mining regime pending the entry into force of the Convention**

### **The pioneer investors**

#### **1) Legal framework for application of registration of pioneer investors**

The United Nations Convention on the Law of the Sea, the Resolution II of the Third United Nations Conference on the Law of the Sea and the Statement on the Implementation of Resolution II of the Preparatory Commission of 5 September 1986 (LOS/PCN/L.41/Rev.1, annex) provide legal framework for registration of pioneer investors and pioneer activities relating to polymetallic nodules.

## **2.2 The interim arrangement for the deep sea mining regime pending the entry into force of the Convention**

### **The pioneer investors**

#### **1) Legal framework for application of registration of pioneer investors**

While UNCLOS (mainly Part XI ) provides general principles, Resolution II sets forth detailed provisions governing preparatory investments in pioneer activities relating to polymetallic nodules. In general, Resolution II covered the modalities of registering the “Pioneer Investors”, the selection of “Reserved Areas” for the future Enterprise, and the implementation of the obligations of the Pioneer Investors in accordance with the Convention, including the establishment of a training program to assist developing countries to acquire the expertise needed to participate effectively in the organs of the Authority - in particular the Enterprise.

## **2.2 The interim arrangement for the deep sea mining regime pending the entry into force of the Convention**

### **The pioneer investors**

#### **1) Legal framework for application of registration of pioneer investors**

The Statement on the Implementation of Resolution II of the Preparatory Commission of 5 September 1986 (LOS/ PCN/ L.43/ Rev. 1 annex) stipulated principle and procedures for implementing Resolution II. It was mainly dealing with the problems encountered by the first group of applicants during their registration process; set forth the principle of equal treatment for both the first group of applicants and the potential applicants, and the procedure for establishing the Group of Technical Experts with the mandate to examine whether the application for registration as a pioneer investor is in conformity with the above described legal framework.

## 2.2 The interim arrangement for the deep sea mining regime pending the entry into force of the Convention

### The pioneer investors

#### 2) Qualification of a pioneer investor

To apply for registration as a pioneer investor, the applicant should meet the requirement set forth in Resolution II. The following is the summary from Chinese application.

1. Certifying state must have signed the United Nations Convention on the Law of the Sea.

2. \$US 30 million spent on seabed activities

The applicant must have expended at least \$US 30 million (United States dollars calculated in constant dollars relative to 1982) in pioneer activities as of 1 January 1983, and expended no less than 10% of that amount in the location, survey and evaluation of the area, except that developing countries (other than India, which is provided for separately) had until 1 January 1985.

## 2.2 The interim arrangement for the deep sea mining regime pending the entry into force of the Convention

### The pioneer investors

#### 2) Qualification of a pioneer investor

3. No overlapping

4. Application area totaling 300,000 km<sup>2</sup>

As required by the Resolution II, every application shall cover a total area which need not be a single continuous area, sufficiently large and of sufficient estimated commercial value to allow two mining operations. The application area should be a part of the international seabed area and beyond the limits of national jurisdiction of any State. In general, the area should meet the following requirement:

- a. a mean sea-bed nodule abundance greater than 5 kg/m<sup>2</sup>;
- b. nodule grade (content of copper, nickel and cobalt combined) greater than 1.8%;
- c. sea - bed slope less than 5° ;

## **2.2 The interim arrangement for the deep sea mining regime pending the entry into force of the Convention**

### **The pioneer investors**

#### **3) Obligation and responsibility**

Applicant should be sufficiently supported and effectively controlled by the certifying state. The above mentioned legal documents set forth detailed obligation and responsibility for a registered pioneer investor. The following are the major ones.

##### **I. Having the exclusive right to carry out pioneer activities in the pioneer area allocated to it**

Pursuant to the Resolution II, a registered pioneer investor shall have the exclusive right to carry out pioneer activities in its pioneer area. The activities should be carried out in accordance with the relevant provisions of the Resolution II and with the principles relating to the preservation and protection of the marine environment as set out in the United Nations Convention on the Law of the Sea.

## **2.2 The interim arrangement for the deep sea mining regime pending the entry into force of the Convention**

### **The pioneer investors**

#### **3) Obligation and responsibility**

**ii. \$US 250,000 registration fee and \$US 250,000 paid upon the approval of its work plan**

The certifying state should ensure that the applicant agrees to make the payment of US\$ 250,000 to the Authority as the fee for registration as a pioneer investor and for the allocation of a pioneer area as soon as the applicant is advised by the Authority. The another US\$ 250,000 will be paid upon the approval of its work plan.

## **2.2 The interim arrangement for the deep sea mining regime pending the entry into force of the Convention**

### **The pioneer investors**

#### **3) Obligation and responsibility**

##### **iii. \$US 1 million annual fixed fee**

\$US 1 million annual fixed fee was considered a big burden for the registered pioneer investor. It was the most contradictory arguing topic during the discussion of the obligations for the first group of applicants. Article 7 (b) of the Resolution II stipulates: “Every registered pioneer investor shall pay an annual fixed fee of \$US 1 million commencing from the date of the allocation of the pioneer area. The payment shall be made by the pioneer investor to the Authority upon the approval of its plan of work for exploration and exploitation.”

## 2.2 The interim arrangement for the deep sea mining regime pending the entry into force of the Convention

### The pioneer investors

#### 3) Obligation and responsibility

However, this provision has been revised by the “Implementation Agreement” in its Annex, Section 8, Article 1 (d): “An annual fixed fee shall be payable from the date of commencement of commercial production. The amount of the fee shall be established by the council.” This is a big change. It has not only changed the date from which the payment shall be payable, that is, the fee will be payable not “**from the date of the allocation of the pioneer area**”, but from the commencement of commercial production, but also changed the “fixed” nature of the annual fixed fee, namely the fixed fee is not fixed, the amount “**shall be established by the Council**”.

## **2.2 The interim arrangement for the deep sea mining regime pending the entry into force of the Convention**

### **The pioneer investors**

#### **3) Obligation and responsibility**

##### **iv. Periodic expenditures with respect to the allocated area**

In order to avoid a registered pioneer investor not to conduct any activities in the allocated area but just occupy it, the Resolution II, Article 7 (c) stipulates: Every registered pioneer investor shall agree to incur periodic expenditures, with respect to the pioneer area allocated to it, until approval of its plan of work. Every registered pioneer investor is requested to submit a periodic report on the activities in its pioneer area to the Authority pursuant to paragraph 5 of the understanding on the fulfillment of obligations by the registered pioneer investors.

## 2.2 The interim arrangement for the deep sea mining regime pending the entry into force of the Convention

### The pioneer investors

#### 3) Obligation and responsibility

**v. To carry out exploration in the area reserved to the Enterprise at the request of the Preparatory Commission**

This exploration shall be conducted on pay basis. But this obligation implies something else than exploration: the area to be allocated to the applicant and the area to be reserved to the Authority should truly be “equal estimated commercial value”.

### **III. The Agreement Relating to the implementation of Part XI of the United Nations Convention on the Law of the Sea of 10 December 1982**



### **3.1 Deep seabed mining regime set out in Part XI of the Convention challenges the universal acceptance and integrity of the Convention**

In 1982, the final text of the new convention was approved by the Conference at United Nations Headquarters on 30 April, by a vote of 130 in favor to 4 against, with 17 abstentions. When it was opened for signature at Montego Bay, Jamaica, on 10 December 1982, the United Nations Convention on the Law of the Sea was signed by 117 States and two other entities, representing the largest number of signatures ever affixed to a treaty on its first day. China signed the Convention on that day. 149 countries and international organizations signed the Final Act of the Third United Nations Conference on the Law of the Sea. One country, Fiji, ratified the Convention.

The United States of America and a number of the industrialized countries such as Germany and United Kingdom refused to sign the Convention because they were against the deep sea mining regime set out in Part XI of the Convention.

### **3.2 The convention was facing a severe challenge of universal acceptance and integrity because of Part XI of the Convention**

From the outset, the United States decided that it would not participate in the work of the Preparatory Commission for the International Seabed Authority and for the International Tribunal for the Law of the Sea (Preparatory Commission). The Preparatory Commission conducted its work against a very difficult political background. The United States of America requested to re-open the negotiation of the Part XI of the Convention.

### **3.3 The situation led to the Secretary-General's consultations initiated with the purpose of making the Convention “universally acceptable”**

It had been clear from the date of adoption of the Convention in 1982 that it would be impossible to secure the participation of the United States and a number of other industrialized countries, including the United Kingdom, the Federal Republic of Germany, Netherlands, Belgium, Italy and the Soviet Union, if the provisions on deep seabed mining remained unchanged.

In order to ensure universal participation in the Convention when it entered into force, the then Secretary-General of the United Nations, Javier Perez de Cuellar, took the initiative in 1990 to convene informal consultations on Part XI of the Convention.

### **3.3 The situation led to the Secretary-General's consultations initiated with the purpose of making the Convention “universally acceptable”**

The consultations were conducted from 1990 to 1994 divided into two phases with a total of 15 rounds of the informal consultations.

The first phase of the informal consultations were conducted from 1990 to 1992 involving a small group of some 30 key States to identify the outstanding issues for consultations;

The second phase of the informal consultations, lasting from 1992 to 1994, was open to all interested delegations. As many as 90 delegations took part in the consultations to identify possible solutions to the implementation of Part XI of the Convention.


## 3.4 The identified outstanding issues for consultation

The objective of the first phase, was to identify the issues which were of most concern to key States and that had prevented widespread ratification or accession to the Convention. Many of these issues were similar to those that had been identified by the Reagan administration in 1981 as factors which would prevent U.S. participation in the Convention. They included:

- (1) costs to States Parties,
- (2) the Enterprise,
- (3) decision-making,
- (4) the Review Conference,
- (5) transfer of technology,
- (6) production limitation,
- (7) compensation fund,
- (8) financial terms of contracts and,
- (9) environmental considerations.

### **3.5 UN General Assembly adopted the Agreement Relating to the Implementation of Part XI of the United Nations Convention on the Law of the Sea of 10 December 1982**

On 28 July 1994, during the resumed forty-eighth session of the General Assembly, the Agreement Relating to the Implementation of Part XI of the United Nations Convention on the Law of the Sea of 10 December 1982 (hereinafter referred to as the Agreement) was adopted by 121 votes in favor and none against, with 7 abstentions.



### 3.6 The regime for deep seabed mining under Part XI of the Convention has undergone significant changes by virtue of the Agreement

The Agreement removed some of the most troublesome elements of the Part XI regime such as the requirements for the compulsory transfer of technology and the subsidization of the activities of the Enterprise.

- It takes a functional and cost-effective approach towards the establishment of the institutions under Part XI;
- It provides for a stable environment for investors in deep seabed minerals under a market-oriented regime;
- It guarantees access to the resources of the seabed to all qualified investors;

### **3.6 The regime for deep seabed mining under Part XI of the Convention has undergone significant changes by virtue of the Agreement**

- It provides for the establishment of a system of taxation that is fair to the seabed miner and from which the international community as a whole may benefit; and
- It makes provision for assistance from the proceeds of mining to developing land-based producers of minerals whose economies may be affected as a consequence of deep seabed mining.

### 3.6 The regime for deep seabed mining under Part XI of the Convention has undergone significant changes by virtue of the Agreement

In addition, it provides for a balance between the powers and functions of the assembly and Council and it establishes a mechanism for decision-making in the Council that enables all groups to protect their interests. In accordance with article 2 of the 1994 Agreement, the Agreement and Part XI “shall be interpreted and applied together as a single instrument”, and in the event of any inconsistency between the two, the provisions of the Agreement shall prevail.

《UNCLOS 1982, A Commentary VI》

### 3.7 The relationship between the Agreement and Part XI of the Convention

Under article 2, paragraph 1, of that Agreement, the provisions of the Agreement and Part XI and related provisions of the Convention are to be “interpreted and applied together as a single instrument.” In the event of any inconsistency between the two, the provisions of the Agreement shall prevail.

The Agreement stipulates that if on 16 November 1994 this Agreement has not entered into force, it shall be applied provisionally pending its entry into force. Provisional application shall terminate upon the date of entry into force of this Agreement , but in any even, provisional application shall terminate on 16 November 1998 .

The Agreement came into force on 28 July 1996.

## **IV. The New Regime of the Area Set out by Both the Convention and the Agreement**



## 4.1 The establishment of the new Regime of the Area

Part XI of the 1982 United Nations Convention on the Law of the Sea (articles 133 to 191) and the related annexes, which, together with resolution II of UNCLOS III and the 1994 Agreement relating to the Implementation of Part XI of the United Nations Convention on the Law of the Sea of 10 December 1982, set out the regime of “the Area” for the first time and provide the legal framework governing activities in the Area.

## 4.2 What the new regime covers

- The Agreement, Part XI of the Convention and the related annexes, and resolutions of UNCLOS III set out the regime of deep seabed mining and provide the legal framework governing activities in the Area;
- The mineral resources of the international seabed area shall be the common heritage of mankind and not subject to appropriation by any State;
- All rights in the mineral resources of the international seabed area shall be vested in mankind as a whole and the economic benefits from deep seabed mining are to be shared on a non-discriminatory basis for the benefit of mankind as a whole;
- The International Seabed Authority is established as the organization to administer such resources and to promote and encourage the conduct of marine scientific research in the international area;

## 4.2 What the new regime covers

- Under the provisions of the Convention, all exploring and exploiting activities in the international seabed Area (the Area) would be under the control of the International Seabed Authority; the Authority would be authorized to conduct its own mining operations through its operating arm, the Enterprise, and also to contract with private and State ventures to give them mining rights in the Area, so that they could operate in parallel with the Authority --- the so called parallel system ;
- The first generation of seabed prospectors, dubbed "pioneer investors" under resolution II of the Third United Nations Conference on the Law of the Sea, would have guarantees of production once mining was authorized---the so called Pioneer Investors .

## 4.3 The institutions created by the Convention

Three institutions created by the Convention:

- The International Seabed Authority
- The International Tribunal for the Law of the Sea
- The Commission on the Limits of the Continental Shelf



## 4.3 The institutions created by the Convention

### Institutions under UNCLOS

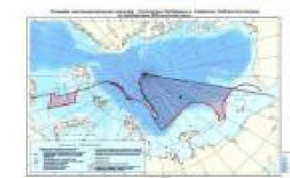
- International Seabed Authority (ISA, ISBA or the Authority)



- International Tribunal for the Law of the Sea (ITLOS)



- Commission on the Limits of the Continental Shelf (CLCS)



- Meeting of States Parties (MSP or SPLOS)



### **4.3.1 The International Seabed Authority created by the Convention to organize and control activities in the Area**

The International Seabed Authority (the Authority) is the first institution created by the Convention. It is an intergovernmental organization through which its members organize and control activities on the deep ocean floor in areas beyond the limits of national jurisdiction, particularly with a view to administering the mineral resources of the area.

The Authority came into existence on 16 November 1994, upon the entry into force of the 1982 Convention. The headquarters of the Authority is in Kingston, Jamaica. All states Parties to the 1982 convention are members of the Authority.

There are 168 members of the International Seabed Authority as at 25 July 2016.

# Headquarters of the International Seabed Authority Kingston, Jamaica



# The former ISA's Secretary-General Mr. Satya N. Nandan(1996-2008)



# The current ISA's Secretary-General Mr. Nii Allotey Odunton (2008 -)



### 4.3.1 The International Seabed Authority created by the Convention to organize and control activities in the Area

## The elected Secretary-General Mr. Michael Lodge

- Mr. Michael Lodge
- Office of Legal Affairs
- Legal Counsel & Deputy
- to the Secretary-General



## 4.3.1 The International Seabed Authority created by the Convention to organize and control activities in the Area

### (1) The Assembly

#### The International Seabed Authority Assembly in Session



### 4.3.1 The International Seabed Authority created by the Convention to organize and control activities in the Area

#### (1) The Assembly

The Assembly, the supreme body of the Authority, consists of all members of the Authority. It has the following powers, among others:

- it elects the members of the Council and other bodies, as well as the Secretary-General, who heads the Secretariat.
- It sets the two-year budgets of the Authority as well as the rates by which members contribute towards the budget, based on the assessment scale established by the United Nations for that body's activities.

## **4.3.1 The International Seabed Authority created by the Convention to organize and control activities in the Area**

### **(1) The Assembly**

- Following adoption by the Council, it approves the rules, regulations and procedures that the Authority may establish from time to time, governing prospecting, exploration and exploitation in the Area. The Assembly took its first such action in 2000 by approving Regulations on Prospecting and Exploration for Polymetallic Nodules in the Area, as drawn up by the Council.
- It examines reports from other bodies, notably the annual report by the Secretary-General on the work of the Authority. This periodic examination gives members the opportunity to comment and make proposals on any aspect of the Authority work.

### **4.3.1 The International Seabed Authority created by the Convention to organize and control activities in the Area**

#### **(1) The Assembly**

The Convention assigns several other powers to the Authority, which will come into play once deep-sea mineral exploitation gets under way. These include decisions on the equitable sharing of financial and other economic benefits deriving from activities in the Area, and on compensation or other economic adjustments to developing countries whose export earnings from their land-based mineral extraction are diminished by seabed production.

## 4.3.1 The International Seabed Authority created by the Convention to organize and control activities in the Area

### (2) The Council

- Composition

In accordance with paragraph 15, of section 3, of the annex to the Agreement, the Council shall consist of 36 members elected by the Assembly in the following order:

Group A

Group B

Group C

Group D

Group E

### **4.3.1 The International Seabed Authority created by the Convention to organize and control activities in the Area**

#### **(2) The Council**

- Group A: The largest consumers group

Four members from among those States Parties which, during the last five years for which statistics are available, have either consumed more than 2 per cent in value terms of total world consumption or have had net imports of more than 2 per cent in value terms of total world imports of the commodities produced from the categories of minerals to be derived from the Area, provided that the four members shall include one State from the Eastern European region having the largest economy in that region in terms of gross domestic product and the State, on the date of entry into force of the Convention, having the largest economy in terms of gross domestic product, if such States wish to be represented in this group;

## 4.3.1 The International Seabed Authority created by the Convention to organize and control activities in the Area

### (2) The Council

- Group B: The largest investors group

Four members from among the eight States Parties which have made the largest investments in preparation for and in the conduct of activities in the Area, either directly or through their nationals;



### 4.3.1 The International Seabed Authority created by the Convention to organize and control activities in the Area

#### (2) The Council

- Group C: The largest net exporters group

Four members from among States Parties which, on the basis of production in areas under their jurisdiction, are major net exporters of the categories of minerals to be derived from the Area, including at least two developing States whose exports of such minerals have a substantial bearing upon their economies;



### 4.3.1 The International Seabed Authority created by the Convention to organize and control activities in the Area

#### (2) The Council

- Group D: The special interest group

Six members from among developing States Parties, representing special interests. The special interests to be represented shall include those of States with large populations, States which are land-locked or geographically disadvantaged, island States, States which are major importers of the categories of minerals to be derived from the Area, States which are potential producers for such minerals and least developed States;

### 4.3.1 The International Seabed Authority created by the Convention to organize and control activities in the Area

#### (2) The Council

- Group E: The equitable geographical distribution group

Eighteen members elected according to the principle of ensuring an equitable geographical distribution of seats in the Council as a whole, provided that each geographical region shall have at least one member elected under this subparagraph. For this purpose, the geographical regions shall be Africa, Asia-Pacific, Eastern Europe, Latin America and the Caribbean and Western Europe and Others.

### 4.3.1 The International Seabed Authority created by the Convention to organize and control activities in the Area

#### (2) The Council

- Decision-making in the Council

The Agreement specifies that if all efforts to reach a decision by consensus have been exhausted, decision by voting in the Council on questions of substance shall be taken by a two-thirds majority of the members present and voting, provided that such decisions are not opposed by a majority in any one group of the abovementioned five groups. It expresses that the voting system gives a veto to three members of Groups A, B and C over any decision in the Council.

### **4.3.1 The International Seabed Authority created by the Convention to organize and control activities in the Area**

#### **(2) The Council**

The Council is the executive body of the Authority. The Council establishes specific policies in conformity with the Convention and the general policies set by the Assembly. It supervises and coordinates implementation of the elaborate regime established by the Convention to promote and regulated exploration for and exploitation of deep seabed minerals by States, corporations and other entities. Under this system, no such activity may legally take place until contracts have been signed between each interested entity and the Authority.


The Council's task is to draw up the terms of contracts, approve contract applications, oversee implementation of the contracts, and establish environmental and other standards. Its specific functions include the following:

### **4.3.1 The International Seabed Authority created by the Convention to organize and control activities in the Area**

#### **(2) The Council**

In case where an environmental threat arises from seabed activities, it may issue emergency orders to prevent harm, including orders to suspend or adjust operations.

It exercises control over activities in the Area, and supervises and coordinates implementation of the seabed provisions of the Convention.



### **4.3.1 The International Seabed Authority created by the Convention to organize and control activities in the Area**

#### **(2) The Council**

It plays a role in various aspects of the regular functioning of the Authority, for example by proposing candidates for Secretary-General, submitting the Authority's budget for approval by the Assembly, and making recommendations to the Assembly on any policy matter.

The Council will assume additional responsibilities once deep-sea mining commences in earnest. These include the issuance of directives to the Enterprise, action (including compensation) to protect land-based mineral producers in the third world from adverse economic effects of seabed production, and the establishment of mechanisms for a staff of inspectors who would ensure compliance with the Authority's regulations and contracts.

### **4.3.1 The International Seabed Authority created by the Convention to organize and control activities in the Area**

#### **(2) The Council**

It adopts and applies provisionally, pending approval by the Assembly, the rules, regulations and procedures by which the Authority controls prospecting, exploration and exploitation in the Area. Its initial set of regulations, adopted by consensus in 2000 and covering prospecting and exploration for polymetallic nodules, is intended as the first part of a mining code that will eventually deal also with exploitation and with other deep-sea mineral resources. The Council has begun work on a second set of regulations, concerning cobalt crusts and metal-bearing sulphides.

## 4.3.1 The International Seabed Authority created by the Convention to organize and control activities in the Area

### (2) The Council

#### COMPOSITION OF THE COUNCIL (2011-2014)

2011	2012	2013	2014
<b>GROUP A (4 members)</b>			
China	China		
Italy	Italy	Italy	Italy
Japan	Japan		
Russian Federation	Russian Federation	Russian Federation	Russian Federation
<b>GROUP B (4 members)</b>			
France	France	France	France
Germany	Germany	Germany	Germany
India	India		
Republic of Korea	Republic of Korea	Republic of Korea	Republic of Korea
<b>GROUP C (4 members)</b>			
Australia	Australia	Australia	Australia
Canada	Canada		
Indonesia	Indonesia	Chile	Chile
South Africa	South Africa		
<b>GROUP D (6 members)</b>			
Bangladesh	Bangladesh		
Brazil	Brazil		
Egypt	Egypt	Egypt	Egypt
Fiji	Fiji	Fiji	Fiji
Jamaica	Jamaica	Jamaica	Jamaica
Sudan	Sudan		

## 4.3.1 The International Seabed Authority created by the Convention to organize and control activities in the Area

### (2) The Council

2011	2012	2013	2014
<b>GROUP E (18 members)</b>			
Angola	Angola		
Argentina	Argentina		
Cameroon	Cameroon	Cameroon	Cameroon
Chile	Chile	Indonesia	Indonesia
Côte d'Ivoire	Côte d'Ivoire	Côte d'Ivoire	Côte d'Ivoire
Czech Republic	Czech Republic		
Guyana	Guyana		
Kenya	Kenya		
Mexico	Mexico	Mexico	Mexico
Namibia	Namibia		
Netherlands	Netherlands		
Nigeria	Nigeria	Nigeria	Nigeria
Poland	Poland		
Qatar	Qatar	Sri Lanka	Sri Lanka
Senegal	Senegal		
Spain	Spain		
Trinidad & Tobago	Trinidad & Tobago		
United Kingdom	United Kingdom		
Viet Nam	Viet Nam	Viet Nam	Viet Nam

## **4.3.1 The International Seabed Authority created by the Convention to organize and control activities in the Area**

### **(2) The Council**

#### **-- Legal and technical commission**

The Council has a subsidiary body—Legal and Technical Commission, which provides technical advice to the Council. The Council has relied heavily on this body to draft regulations and recommendations designed to guide seabed exploration. The members of this body, currently numbering 24, are elected by the Council in their personal capacity for a five-year term, on the nomination of governments.

This Commission elaborated the draft regulations approved by the Council in 2000 on polymetallic nodule exploration, based on an initial draft by the Secretariat. It is currently engaged in similar work on draft regulations for polymetallic sulphides and crusts. On its own authority (subject to Council review) it has drawn up recommendations to guide contractors in assessing any environmental impacts resulting from nodule exploration. In 2002 it examined the first set of reports by contractors on their seabed activities, and recommended improvements in the reporting.

## **4.3.1 The International Seabed Authority created by the Convention to organize and control activities in the Area**

### **(2) The Council**

#### **-- Legal and technical commission**

Its tasks also include the review of contractors' plans of work for seabed activities, the preparation of environmental assessments and of an environmental monitoring programme, the review of approved regulations with the option of proposing amendments, and the eventual calculation of production ceilings for seabed minerals.

## **4.3.1 The International Seabed Authority created by the Convention to organize and control activities in the Area**

### **(2) The Council**

#### **-- Legal and technical commission**

The Commission has been holding most of its meetings in private, given the fact that it sometimes deals with confidential information submitted by contractors. However, in line with suggestions by many members of the Council, it has begun opening its meetings to attendance by any interested delegations when it deals with matters of general interest, such as the drafting of regulations.

24 Members, elected by the Council.

### **4.3.1 The International Seabed Authority created by the Convention to organize and control activities in the Area**

#### **(2) The Council**

##### **-- Economic Planning Commission**

Another expert body envisaged by the Convention, the Economic Planning Commission, will advise the Council on supply, demand and price factors once seabed production begins. It is also empowered to propose a compensation or economic adjustment system to aid developing States suffering economic harm from seabed production. The Council has not yet acted to constitute this 15-member body. Its functions are currently exercised by the Legal and Technical Commission.

## **4.3.1 The International Seabed Authority created by the Convention to organize and control activities in the Area**

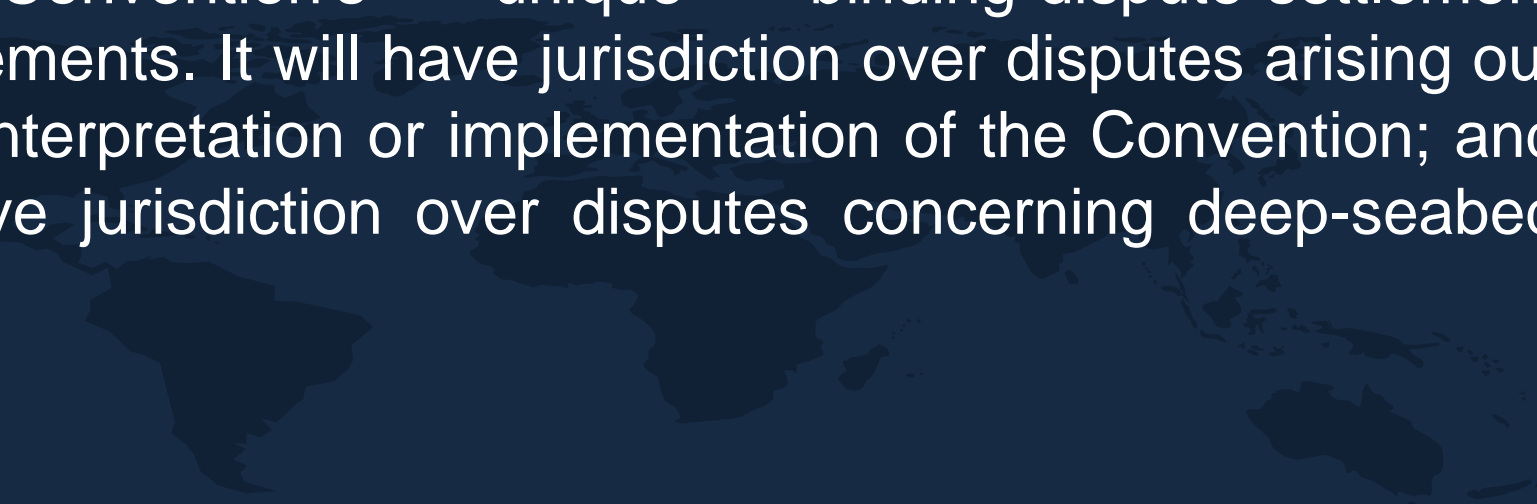
### **(2) The Council**

#### **-- Finance Committee**

The 15-member Finance Committee, composed of experts appointed by governments and elected by the Assembly for a five-year term, examines the Secretary-General's biennial budget proposals and makes recommendations to the Assembly on his and other financial matters. Its membership must include at least one from each of the special interest groups of the Council, as well as from each of the five largest budgetary contributors. Decisions on substantive matters must be taken by consensus.

### 4.3.2 The International Tribunal for the Law of the Sea

The second major institution has been created by the Convention is the International Tribunal for the Law of the Sea headquartered in Hamburg, Germany. The Tribunal embodies the Convention's unique binding-dispute-settlement arrangements. It will have jurisdiction over disputes arising out of the interpretation or implementation of the Convention; and exclusive jurisdiction over disputes concerning deep-seabed mining.



### 4.3.3 The Commission on the Limits of the Continental Shelf

The third institution created by the Convention is the Commission on the Limits of the Continental Shelf. The Convention provides for the establishment of this Commission to study and make recommendations to States on matters related to the establishment of the outer limits of the continental shelf in those cases where it reaches beyond 200 nautical miles from their baselines. The establishment and servicing of this Commission is entrusted to the Secretary-General.

This Commission has been entrusted with a significant function. In view of the importance of the resources to be derived from the continental shelf the significance of the Commission could only grow with time. This fact is further underscored by the various conflicting claims to shelf jurisdiction throughout the world.

## **V. The Development of the Regime after the Entry into Force of the Convention**



## VII. The development of the regime after the entry into force of the Convention

The Regime created by Part XI of the Convention and the Agreement set up “basic conditions of prospecting, exploration and exploitation” with respect to the resources of the Area, but no specific regulations (mining codes) were made at the time when the Convention came into force. The Agreement specifies that “leaving it to the Authority to determine at a future date the exact nature of the rules it will adopt with respect to the authorization of deep seabed mining operations.”

## VII. The development of the regime after the entry into force of the Convention

After the entry into force of the Convention, the International Seabed Authority concentrated its efforts on the making of “mining code”. To date, the Authority has worked out and issued:

- Regulations on Prospecting and Exploration for Polymetallic Nodules in the Area (adopted 13 July 2000);
- Regulations on Prospecting and Exploration for Polymetallic Sulphides(2010);
- Regulations on Prospecting and Exploration for Cobalt-Rich Crusts (2012).

These regulations include the forms necessary to apply for exploration rights as well as standard terms of exploration contracts.

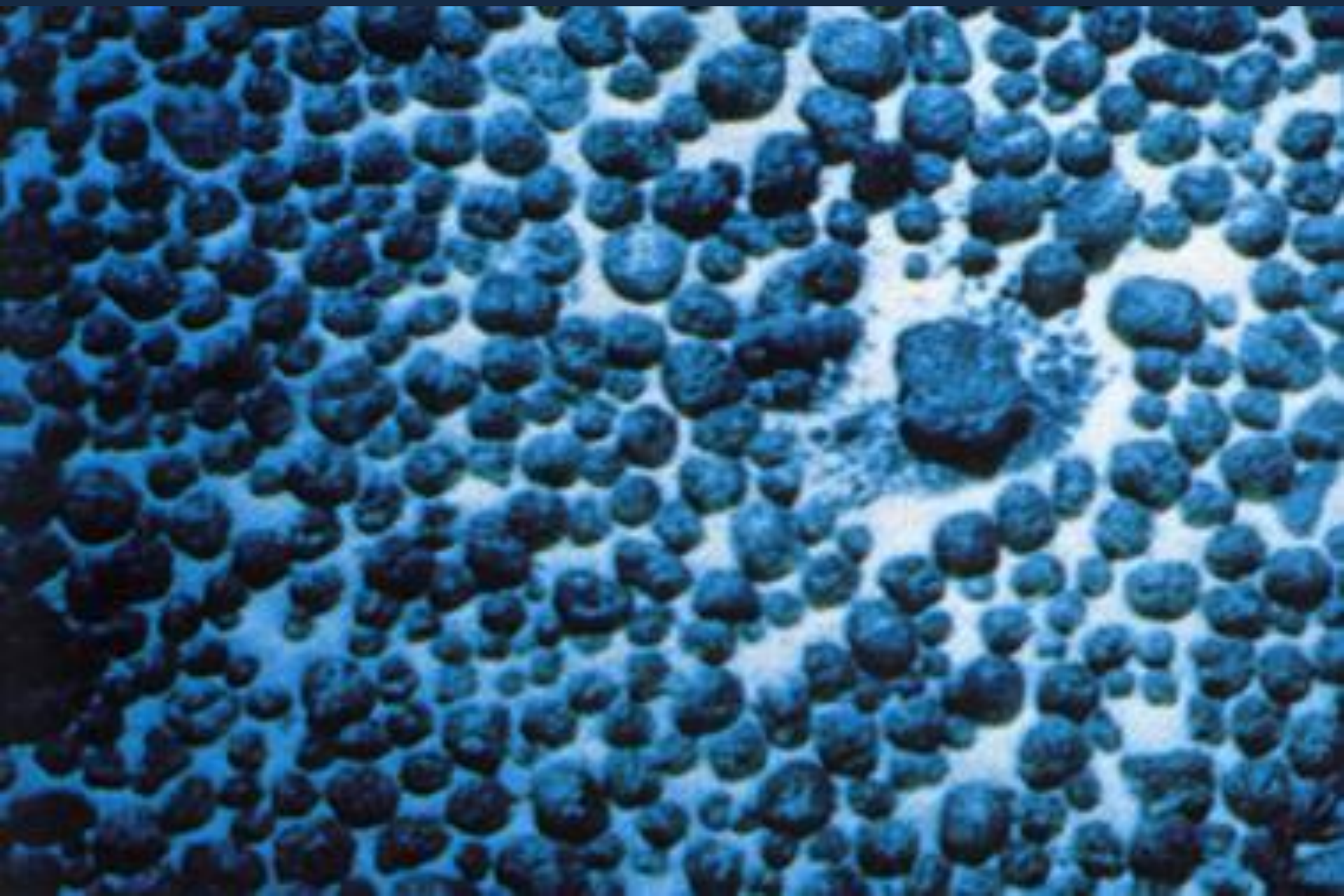
## 5.1 Regulations on Prospecting and Exploration for Polymetallic Nodules

The Regulations on Prospecting and Exploration for Polymetallic Nodules was the first set regulations, the member states of the Authority attached great importance to it. The debates were made mainly on the provisions of protection and preservation of the marine environment. It took 4 years (from 1997 to 2000) of intensive debates before it was adopted by the Assembly of the Authority in 2000.

Now 16 countries/entities including China have made contracts with the ISA for prospecting and exploration of polymetallic nodules. They are: Russia, France, Japan, India, China, Republic of Korea, Interoceanmetal Joint Organization (IOM), Germany, Nauru, Tonga, Kiribati, Belgium and UK . Singapore, UK, Cook Islands.

The Regulations were revised in 2013

# Polymetallic Nodules



# Polymetallic Nodules



## 5.2 Regulations on Prospecting and Exploration for Polymetallic Sulphides

In August 1998, at the fourth session of the ISA's Assembly, the Russian Delegation requested the Authority to make regulations on prospecting and exploration for the other resources than polymetallic nodules, namely for polymetallic sulphides and cobalt-rich crusts.

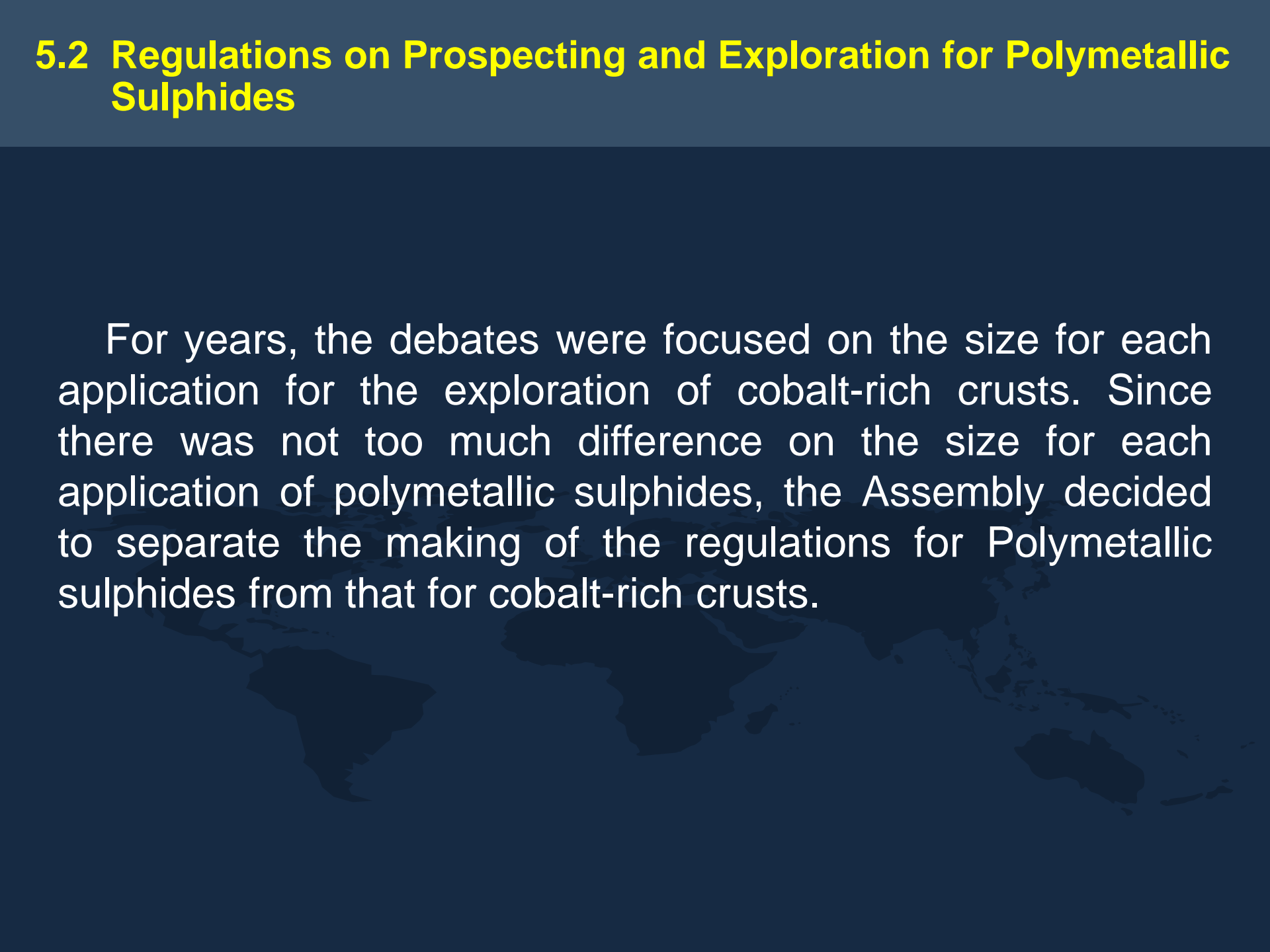
During 1997-2000, the Authority was engaged in the making of the “mining code” for polymetallic nodules. In 2001, the Assembly made a decision at its seventh session to start the making of the regulations for the two resources.

## 5.2 Regulations on Prospecting and Exploration for Polymetallic Sulphides

There was a view of point that the regulations on prospecting and exploration for both polymetallic sulphides and cobalt-rich crusts should be as close as the regulations for prospecting and exploration of polymetallic nodules. Initially, the Authority started the making of the regulations for both resources. Marine environmental protection also was one of the major issues for debates, but most difficult and time consuming debates were on the issue of the size covered by each application and the size of exploration.

## 5.2 Regulations on Prospecting and Exploration for Polymetallic Sulphides

For years, the debates were focused on the size for each application for the exploration of cobalt-rich crusts. Since there was not too much difference on the size for each application of polymetallic sulphides, the Assembly decided to separate the making of the regulations for Polymetallic sulphides from that for cobalt-rich crusts.



## 5.2 Regulations on Prospecting and Exploration for Polymetallic Sulphides

### --- Total area covered by the application

Though the joint efforts, an agreement was reached on the size covered by each application for exploration for polymetallic sulphides: The area covered by each application for approval of a plan of work for exploration for polymetallic sulphides shall be comprised of not more than 100 polymetallic sulphide blocks, a “polymetallic sulphide block” means a cell of a grid as provided by the Authority, which shall be approximately 10 kilometres by 10 kilometres and no greater than 100 square kilometres. Namely, each application covers a size no great than 10,000 km<sup>2</sup>.

## 5.2 Regulations on Prospecting and Exploration for Polymetallic Sulphides

### --- The exploration area after relinquishment

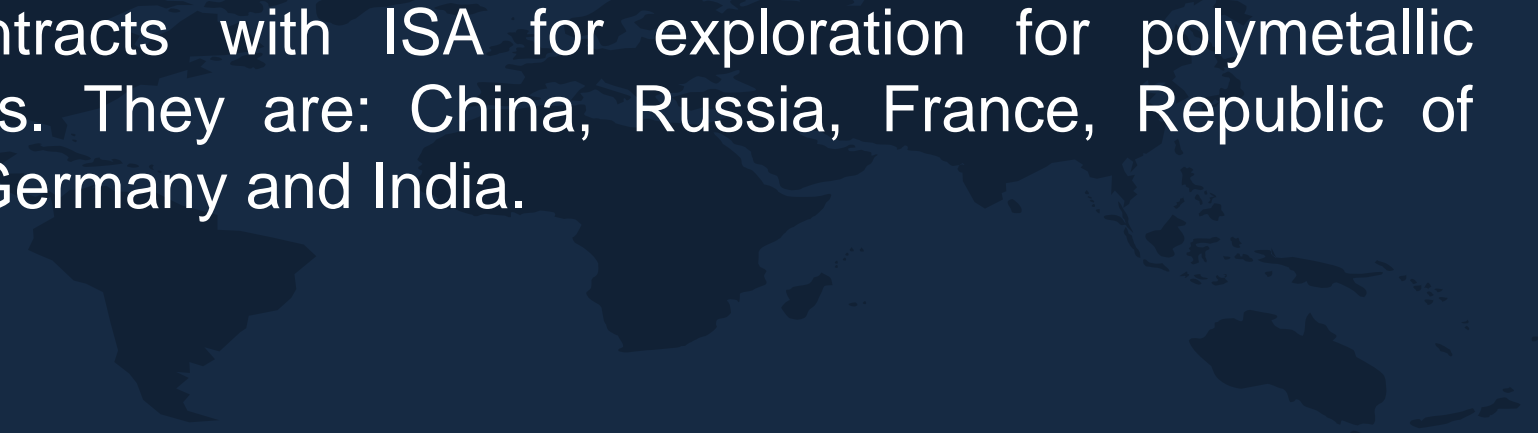
By the end of the tenth year from the date of the contract, the contractor shall have relinquished at least 75 per cent of the original area allocated to it. The remaining area allocated to it for exploration does not exceed 2,500 km<sup>2</sup>.

### --- The relinquished areas shall revert to the Area

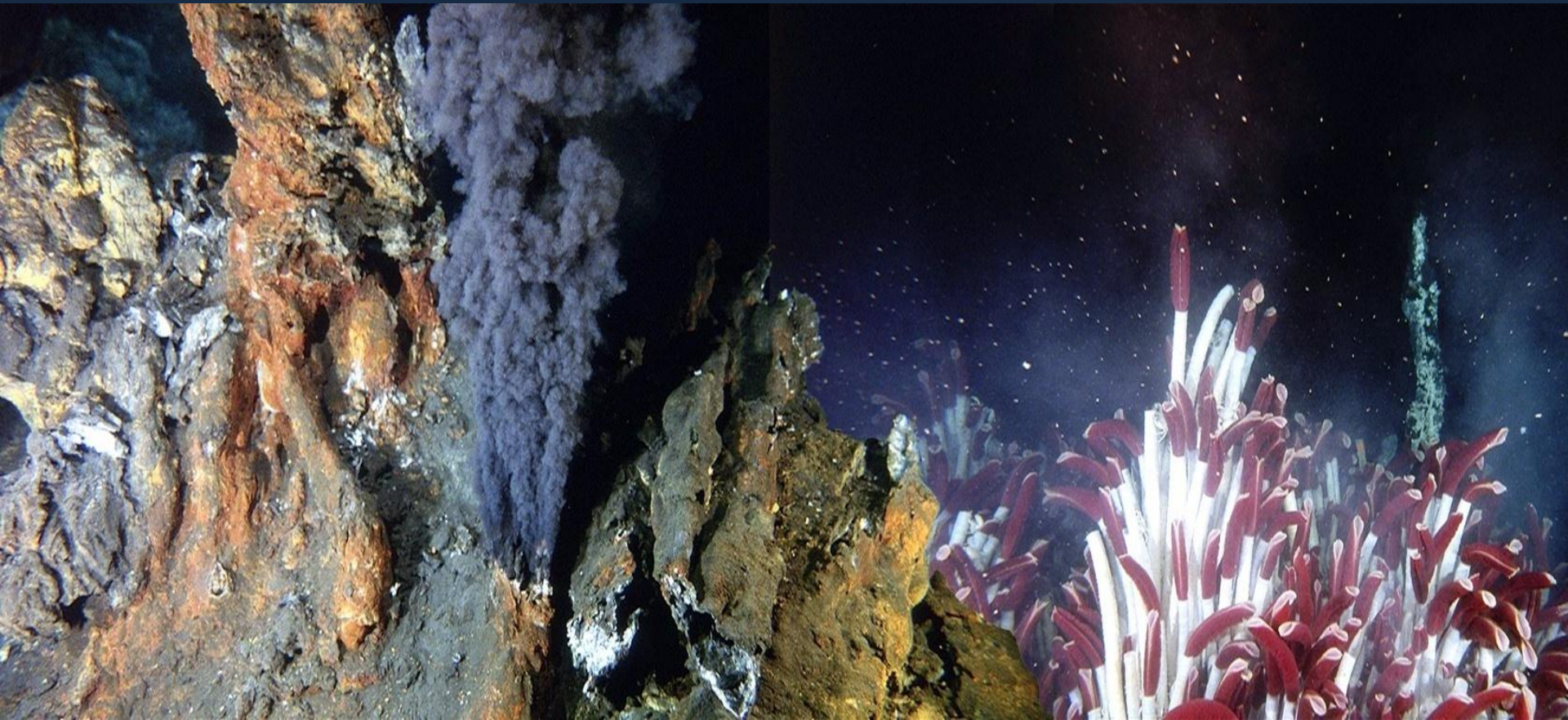
## 5.2 Regulations on Prospecting and Exploration for Polymetallic Sulphides

On the 7 May 2010, at its 16 Session, the Assembly of the International Seabed Authority adopted the Regulations on Prospecting and Exploration for Polymetallic Sulphides.

Under the regulations, 6 countries/entities have entered into contracts with ISA for exploration for polymetallic sulphides. They are: China, Russia, France, Republic of Korea, Germany and India.



# Polymetallic Sulphides



# Hydrothermal vent ecosystems associated with polymetallic sulphides



# Hydrothermal vent ecosystems associated with polymetallic sulphides



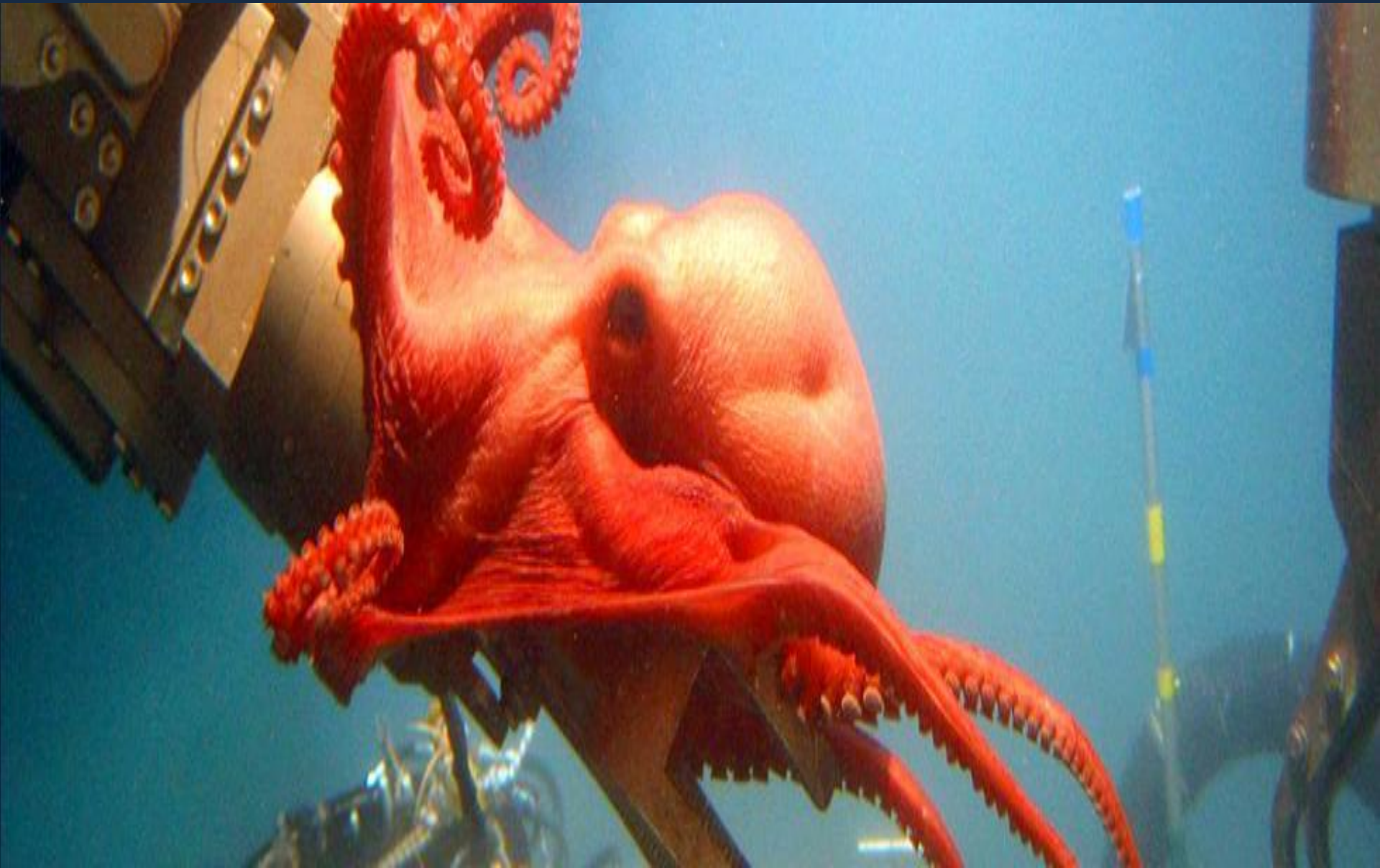
# Hydrothermal vent ecosystems associated with polymetallic sulphides



# Hydrothermal vent ecosystems associated with polymetallic sulphides



# Deep sea fauna: Pink Octopus on deep submergence Vehicle Alvin



## Deep ocean fauna : White crab



## 5.3 Regulations on Prospecting and Exploration for Cobalt-Rich Crusts

The issue of the size covered by each application and the size of exploration for cobalt-rich crusts was also the most difficult and time consuming debates.

The size for each application for prospecting and exploration of cobalt-rich crusts was as the same as that for polymetallic sulphides from very beginning. But later on, some delegations were strongly against the original size and requested to dramatically reduce the size which caused intense debates for years. As the regulations for polymetallic sulphides was adopted in 2010 at the 16th session of the Authority's Assembly, it was decided to take up the regulations on prospecting and exploration for cobalt-rich crusts at the Authority's 17th Session in 2011.

## 5.3 Regulations on Prospecting and Exploration for Cobalt-Rich Crusts

On 26 July 2012, the Assembly adopted the third set of the Regulations on Prospecting and Exploration for Cobalt-Rich Crusts.

### --- Total area covered by an application

The total area covered by each application for approval of a plan of work for exploration for cobalt crusts shall be comprised of not more than 150 cobalt crust blocks, each of the “cobalt crust block” is no greater than 20 square kilometres in size, that means the size covered by each application is no great than 3,000 km<sup>2</sup>.

## 5.3 Regulations on Prospecting and Exploration for Cobalt-Rich Crusts

### --- Exploration area after the relinquishment

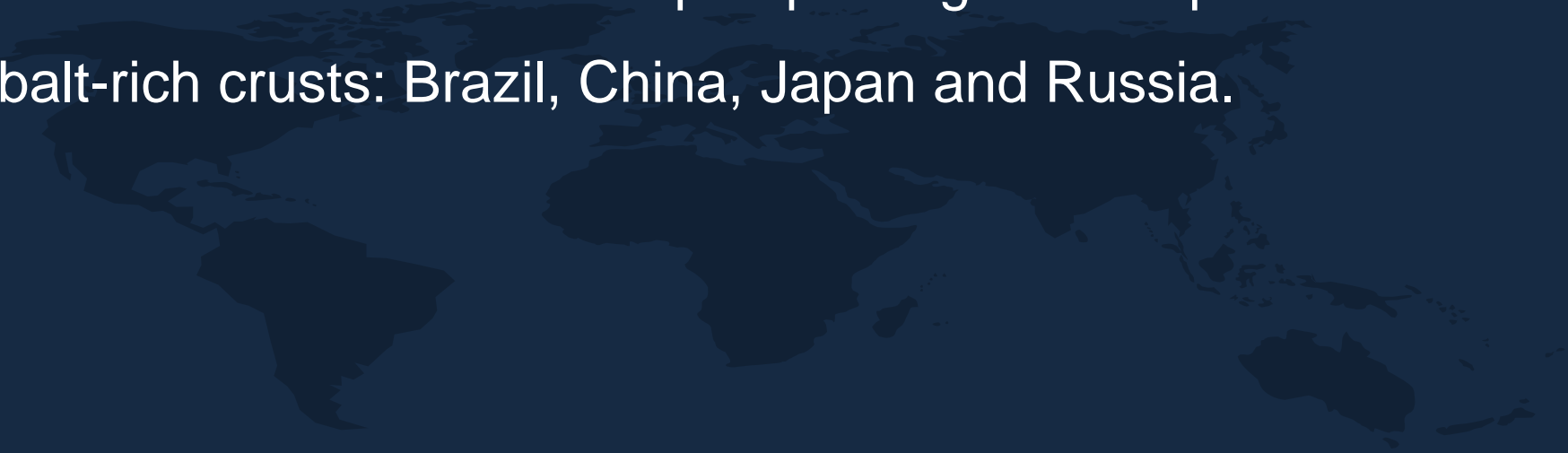
By the end of the eighth year from the date of the contract, the contractor shall have relinquished at least one third of the original area allocated to it. By the end of the tenth year from the date of the contract, the contractor shall have relinquished at least two thirds of the original area allocated to it. The remaining area allocated to it for exploration does not exceed 1,000 km<sup>2</sup>.

---The relinquished areas shall revert to the Area.

## 5.3 Regulations on Prospecting and Exploration for Cobalt-Rich Crusts

### --- Contracts with ISA for prospecting and exploration for cobalt-rich crust

Under the regulations, 4 countries/entities have entered into contracts with ISA for prospecting and exploration for cobalt-rich crusts: Brazil, China, Japan and Russia.



# Cobalt-Rich Crusts



# Cobalt-Rich Crusts



## **VI. China's Practice in the Implementation of the Regime**



## 6.1 China's initiatives and investment for deep seabed resources development


China conducted exploration for mineral resources on the deep seabed starting from the mid - 1970s by various institutions and departments. The total expenditure incurred up to 1984 in this activity was at least US\$ 30 million (United States dollars calculated in constant dollars relative to 1982), more than 10% of which has been expended in the field exploration. However, at that time, the area was not sufficient to be delineated as an application area. Thus, after China signed the United Nations Convention on the Law of the Sea, a national program was established for survey, research and development of deep sea mineral resources.

## 6.2 Institutional Arrangement : Establishment of COMRA

In order to efficiently conduct exploration in the Area, the State Council of China decided to establish the China Ocean Mineral Research and Development Association (COMRA) to organize and coordinate China's activities in the Area. COMRA is a state-owned enterprise consisting of a number of universities and research institutions . It has been sufficiently supported and effectively controlled by the State Oceanic Administration, the then Ministry of Geology and Mineral Resources, Ministry of Metallurgical Industry and China National Nonferrous metals Industry Corporation. It is of independent capacity of juridical person to conduct exploration activities of deep ocean mineral resources.

## 6.3 COMRA was registered as Pioneer Investor

On 20 August 1990, the Permanent Representative of the People's Republic of China to the United Nations submitted, on behalf of the Chinese Government, to the PrepCom the Application of the Government of the People's Republic of China for Registration of the China Ocean Mineral Resources Research and Development Association (COMRA) as A Pioneer Investor Under the Resolution II of the Third United Nations Conference on the Law of the Sea.





# Certificate of registered pioneer investor



## 登记证书

兹证明

依照

《联合国海洋法公约》

第三次联合国海洋法会议关于多金属结核开辟活动的预备性投资的决议二以及1986年9月5日关于执行决议二的声明，

注意到

中华人民共和国政府

于1982年12月10日签署了《联合国海洋法公约》，并且作为证明国于1990年8月22日代表中国大洋矿产资源研究开发协会的国营企业提出了登记为先驱投资者的申请，

承诺履行决议二及上述声明所规定的义务，又

承诺确保开辟活动以符合《联合国海洋法公约》的方式进行，并

依照1991年3月5日国际海底管理局和国际海洋法法庭筹备委员会

总务委员会根据筹备委员会规则将中国大洋矿产资源研究开发协会登记为先驱投资者的决定

中国大洋矿产资源研究开发协会

承诺履行决议二及上述声明所规定的义务，并已向筹备委员会缴纳先驱投资者登记费，从而

登记为先驱投资者

并依照决议二及

上述声明，获得分配依附表划定的开辟区；并且

凭上述决定和登记

中国大洋矿产资源研究开发协会

作为先驱投资者

按照决议二应有在开辟区进行开辟活动的专属权利

我兹代表国际海底管理局和国际海洋法法庭筹备委员会在联合国总部签名并加盖联合国公章

1991年8月28日



*Teie adriano*

联合国秘书长

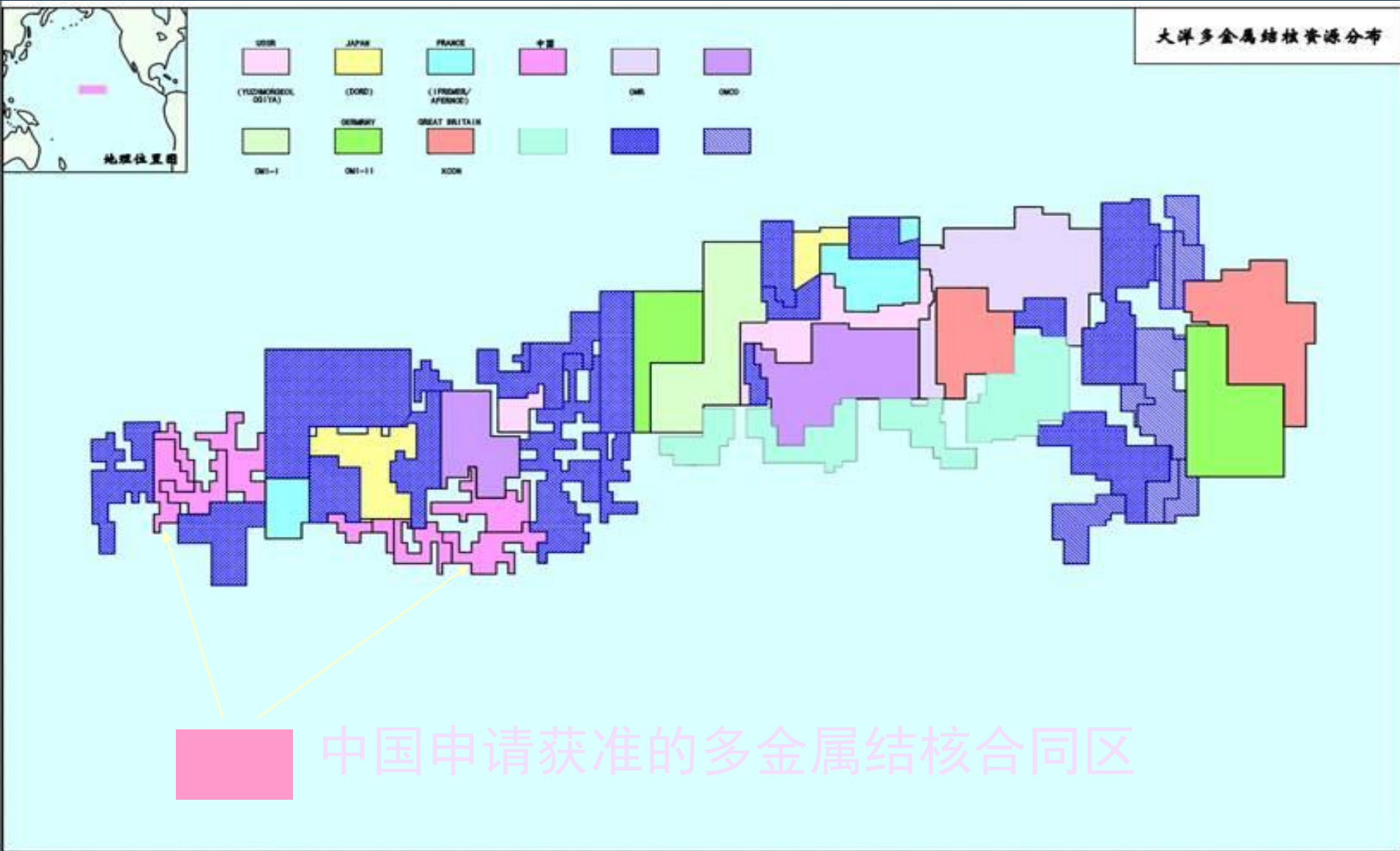
哈维尔·佩雷斯·德奎利亚尔

表

开辟区划定以连接下列各转折点的界线为范围，各转折点的坐标开列如下：

转折点	纬度 (北)	经度 (西)	转折点	纬度 (北)	经度 (西)	转折点	纬度 (北)	经度 (西)	转折点	纬度 (北)	经度 (西)
80-1	10°52'30"	154°52'30"	80-39	08°10'00"	151°02'30"	80-18	08°10'00"	149°10'00"	80-96	08°07'30"	141°17'30"
80-2	10°52'30"	154°22'30"	80-40	08°10'00"	151°02'30"	80-19	08°17'30"	149°10'00"	80-97	08°07'30"	141°17'30"
80-3	11°07'30"	154°22'30"	80-41	08°22'30"	151°02'30"	80-20	08°17'30"	149°10'00"	80-98	07°52'30"	142°07'30"
80-4	11°07'30"	154°02'30"	80-42	08°22'30"	151°02'30"	80-21	08°22'30"	149°10'00"	80-99	08°07'30"	142°07'30"
80-5	10°52'30"	154°02'30"	80-43	09°10'00"	152°22'30"	80-22	08°22'30"	149°10'00"	80-60	08°07'30"	142°52'30"
80-6	10°52'30"	153°52'30"	80-44	09°10'00"	152°35'20"	80-23	07°52'30"	149°22'30"	80-61	07°52'30"	142°52'30"
80-7	10°22'30"	153°52'30"	80-45	08°52'30"	152°35'20"	80-24	07°52'30"	149°22'30"	80-62	07°52'30"	142°52'30"
80-8	10°22'30"	153°37'30"	80-46	08°52'30"	153°37'30"	80-25	08°07'30"	149°37'30"	80-63	07°52'30"	142°52'30"
80-9	10°07'30"	153°37'30"	80-47	08°07'30"	153°37'30"	80-26	08°07'30"	149°37'30"	80-64	07°52'30"	142°52'30"
80-10	10°07'30"	153°22'30"	80-48	08°07'30"	153°37'30"	80-27	08°22'30"	149°37'30"	80-65	07°52'30"	142°52'30"
80-11	08°57'30"	153°22'30"	80-49	08°52'30"	153°37'30"	80-28	08°22'30"	149°37'30"	80-66	07°52'30"	142°52'30"
80-12	08°57'30"	153°07'30"	80-50	08°52'30"	154°00'00"	80-29	08°52'30"	149°22'30"	80-67	07°52'30"	143°07'30"
80-13	08°22'30"	153°07'30"	80-51	08°57'30"	154°00'00"	80-30	08°52'30"	149°10'00"	80-68	07°52'30"	143°07'30"
80-14	08°22'30"	152°52'30"	80-52	08°57'30"	154°37'30"	80-31	08°57'30"	149°10'00"	80-69	07°52'30"	143°07'30"
80-15	08°57'30"	152°52'30"	80-53	08°22'30"	154°37'30"	80-32	08°57'30"	149°22'30"	80-70	07°52'30"	143°07'30"
80-16	08°57'30"	152°37'30"	80-54	08°22'30"	154°37'30"	80-33	08°52'30"	149°22'30"	80-71	07°52'30"	143°07'30"
80-17	08°52'30"	152°37'30"	80-55	08°52'30"	154°37'30"	80-34	08°52'30"	149°22'30"	80-72	07°52'30"	143°07'30"
80-18	08°52'30"	152°34'48"	80-56	08°52'30"	154°37'30"	80-35	08°07'30"	149°22'30"	80-73	08°07'30"	143°07'30"
80-19	10°07'30"	152°34'48"	80-57	08°07'30"	154°37'30"	80-36	08°07'30"	149°22'30"	80-74	08°07'30"	143°07'30"
80-20	10°07'30"	152°37'30"	80-58	08°07'30"	154°37'30"	80-37	08°22'30"	149°22'30"	80-75	08°07'30"	143°07'30"
80-21	10°22'30"	152°37'30"	80-59	10°52'30"	154°37'30"	80-38	08°22'30"	149°22'30"	80-76	08°07'30"	143°07'30"
80-22	10°22'30"	152°37'30"	80-60	08°52'30"	149°22'30"	80-39	08°57'30"	149°22'30"	80-77	08°07'30"	143°07'30"
80-23	10°57'30"	152°37'30"	80-61	08°52'30"	149°22'30"	80-40	08°57'30"	149°22'30"	80-78	08°07'30"	143°07'30"
80-24	10°57'30"	152°37'30"	80-62	08°57'30"	149°22'30"	80-41	08°52'30"	149°12'30"	80-79	08°22'30"	143°07'30"
80-25	10°52'30"	152°37'30"	80-63	08°52'30"	149°22'30"	80-42	08°52'30"	149°00'00"	80-80	08°22'30"	143°07'30"
80-26	10°52'30"	152°22'30"	80-64	08°45'00"	147°22'30"	80-43	10°00'00"	149°00'00"	80-81	08°07'30"	143°07'30"
80-27	11°22'30"	152°22'30"	80-65	08°45'00"	146°00'00"	80-44	10°00'00"	149°00'00"	80-82	08°07'30"	143°07'30"
80-28	11°22'30"	151°52'30"	80-66	08°30'00"	146°00'00"	80-45	10°15'00"	149°00'00"	80-83	08°22'30"	143°07'30"
80-29	11°07'30"	151°52'30"	80-67	08°30'00"	146°00'00"	80-46	08°15'00"	148°45'00"	80-84	08°22'30"	143°07'30"
80-30	11°07'30"	152°07'30"	80-68	08°57'30"	146°00'00"	80-47	08°22'30"	148°45'00"	80-85	08°57'30"	143°07'30"
80-31	10°52'30"	152°07'30"	80-69	08°57'30"	146°00'00"	80-48	08°22'30"	148°45'00"	80-86	08°57'30"	143°07'30"
80-32	10°52'30"	151°52'30"	80-70	08°07'30"	146°22'30"	80-49	08°07'30"	148°22'30"	80-87	08°57'30"	143°07'30"
80-33	10°52'30"	151°22'30"	80-71	08°07'30"	146°00'00"	80-50	08°07'30"	148°07'30"	80-88	08°07'30"	143°07'30"
80-34	10°52'30"	151°07'30"	80-72	08°10'00"	146°00'00"	80-51	08°17'30"	148°00'00"	80-89	08°17'30"	143°07'30"
80-35	08°52'30"	151°07'30"	80-73	07°52'30"	145°37'30"	80-52	08°17'30"	148°12'30"	80-90	08°17'30"	143°07'30"
80-36	08°52'30"	151°37'30"	80-74	08°07'30"	145°37'30"	80-53	08°22'30"	148°12'30"	80-91	08°22'30"	143°07'30"
80-37	08°57'30"	151°37'30"	80-75	08°07'30"	145°37'30"	80-54	08°22'30"	148°12'30"	80-92	08°22'30"	143°07'30"
80-38	08°57'30"	151°00'00"	80-76	08°10'00"	145°37'30"	80-55	08°07'30"	148°12'30"	80-93	08°07'30"	143°07'30"

# Location of China's pioneer area



## 6.4 COMRA entered into three contracts with the International Seabed Authority

COMRA entered into three contracts with the International Seabed Authority:

- for exploration of polymetallic nodules in 2001;**
- for exploration of polymetallic sulphides in 2011;**
- for exploration of polymetallic crusts in 2013.**

## 6.5 COMRA's activities in the Area

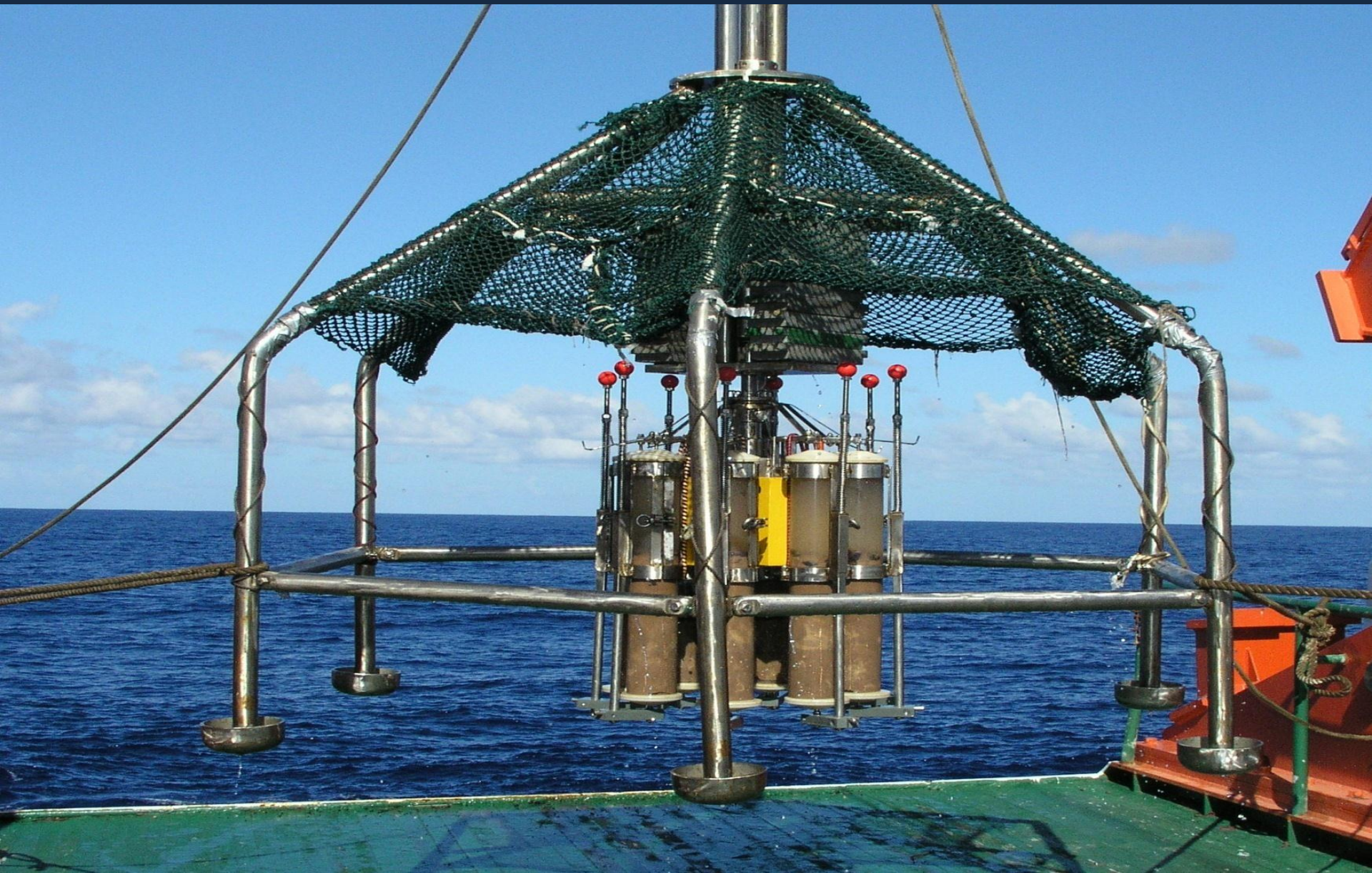
At the present, COMRA's activities in the Area focus on resources exploration and assessment, environment research and protection, and technology development. In the meantime, COMRA is carrying out some activities related to scientific research and technical development for deep sea mining.

These programs have been undertaken by various universities and research institutions all over the country with the financial support of COMRA.

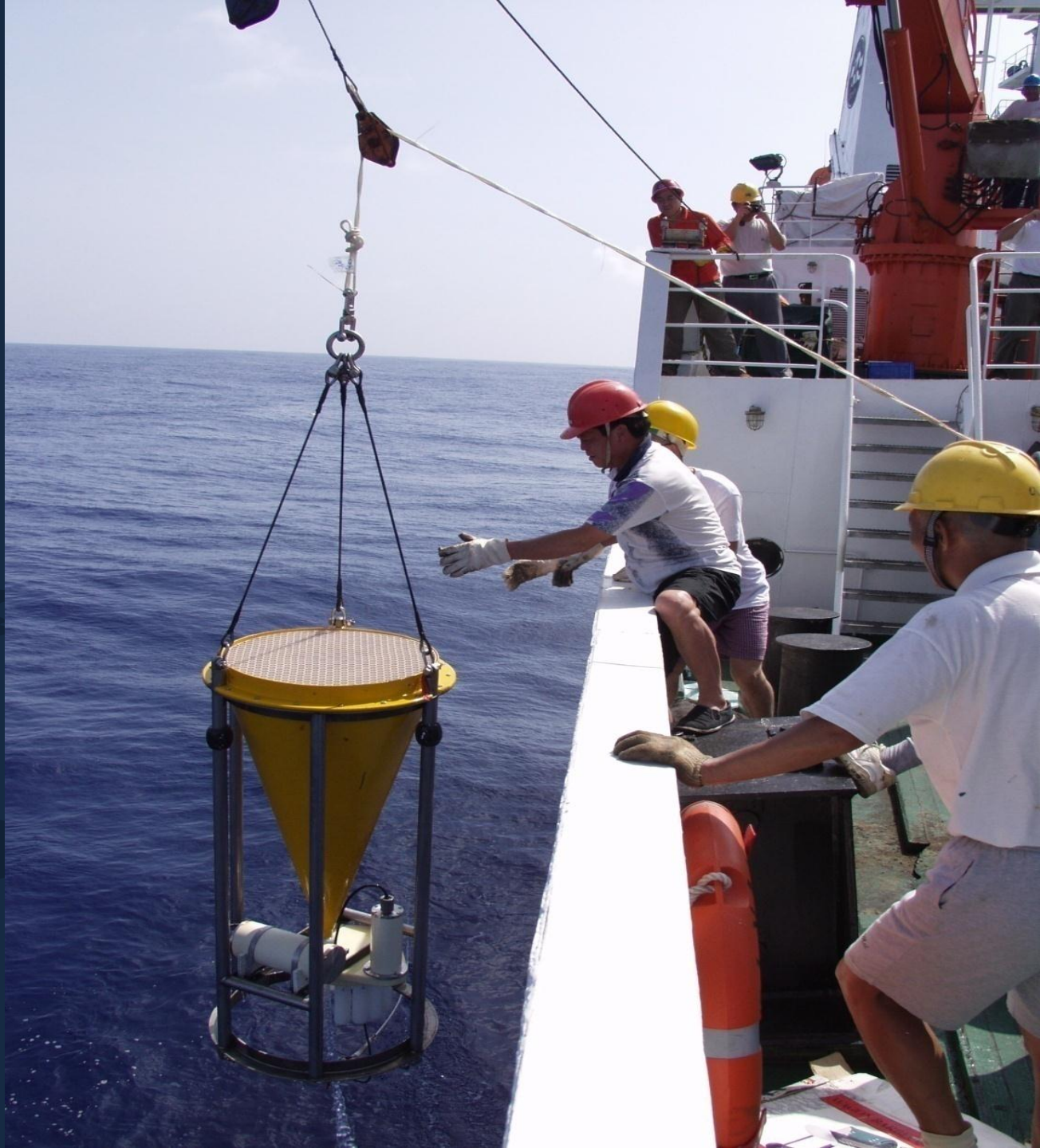
# CTD+ADCP+Water Samplers



# Multicorer with sediments



# Sediment Trap



# TV-monitored grab



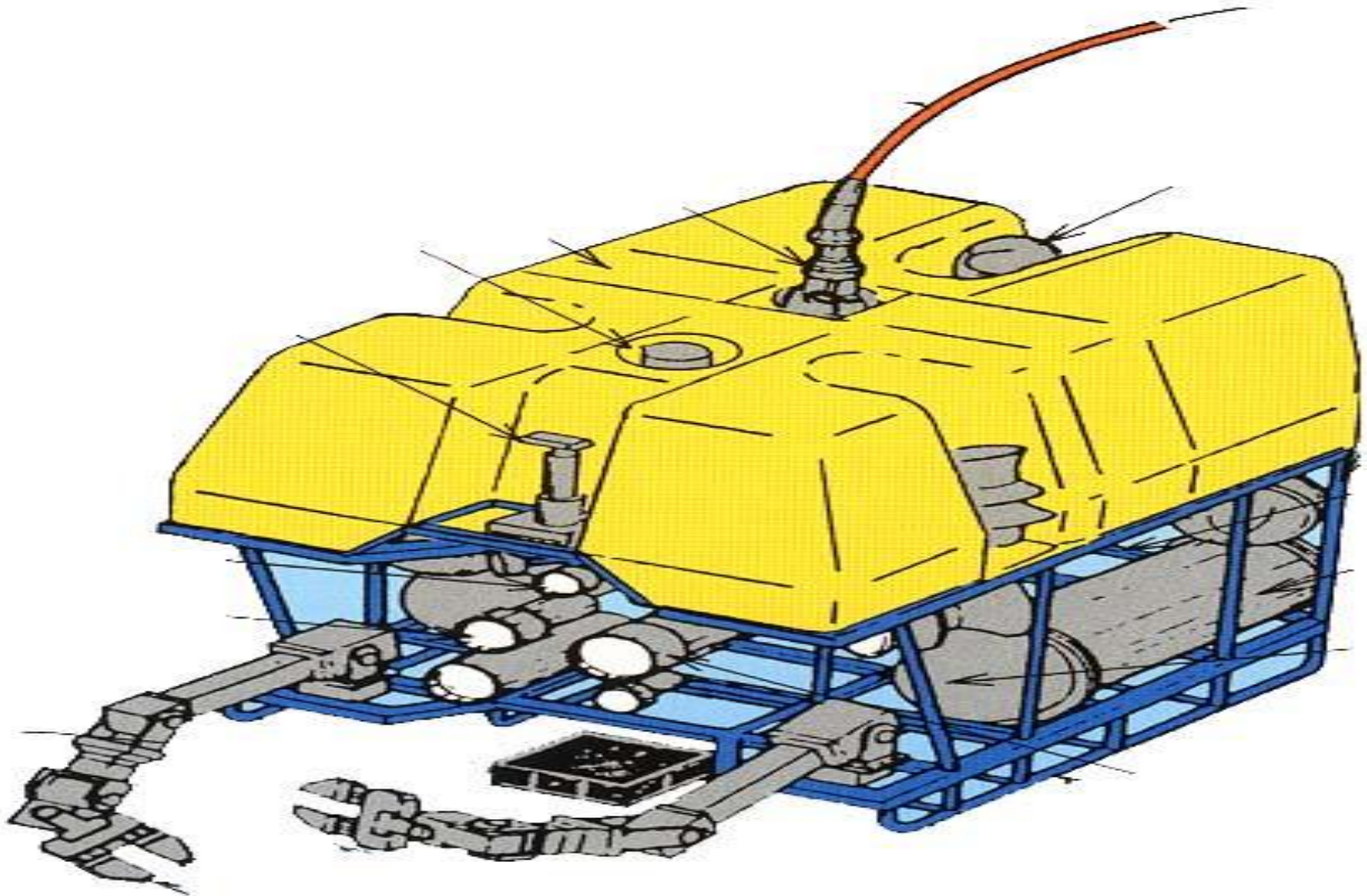
# Sediment rig



# AUV



# ROV





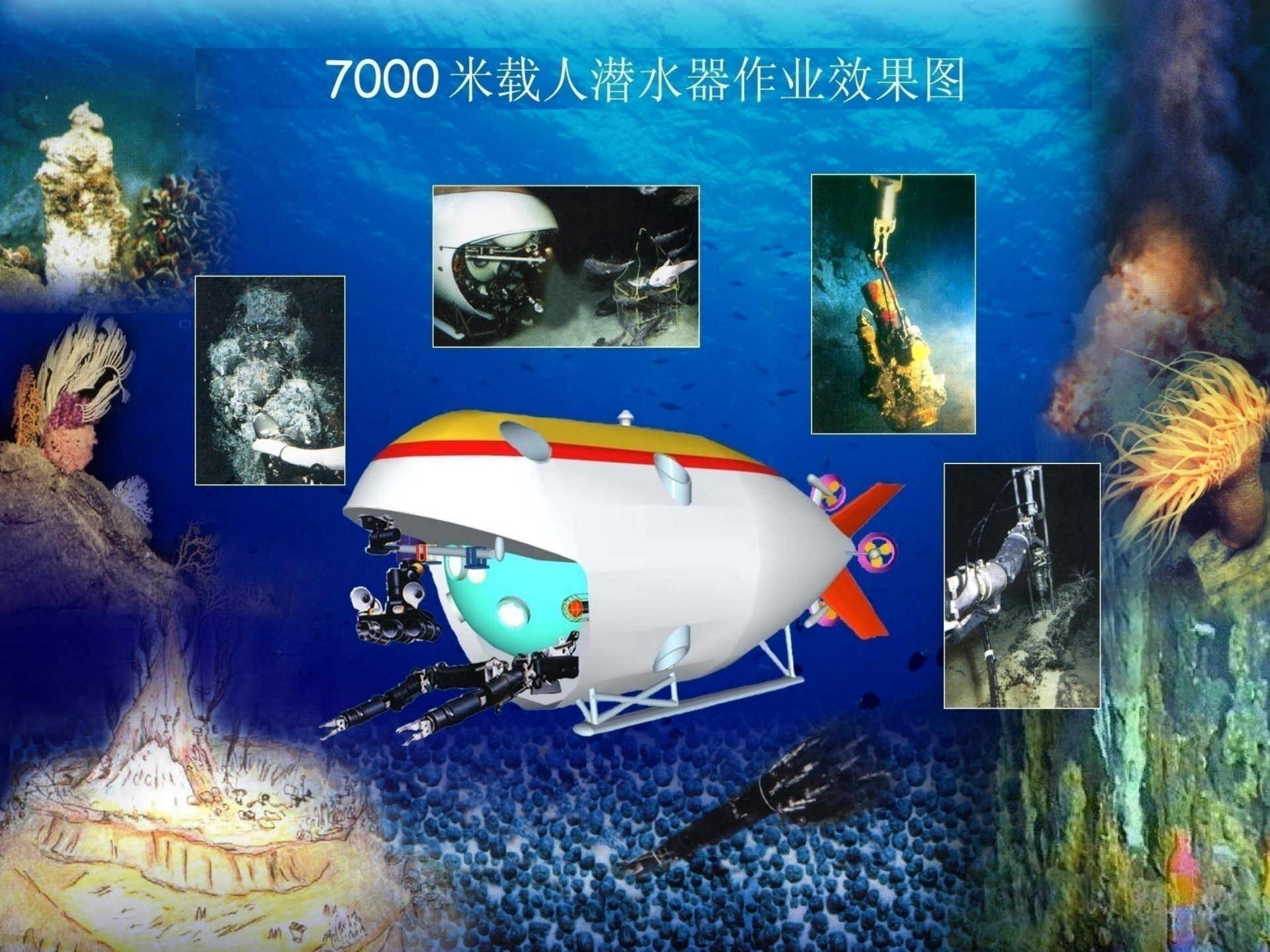
中继器

ROV

# 7000M HOV



# 7000 米载人潜水器作业效果图

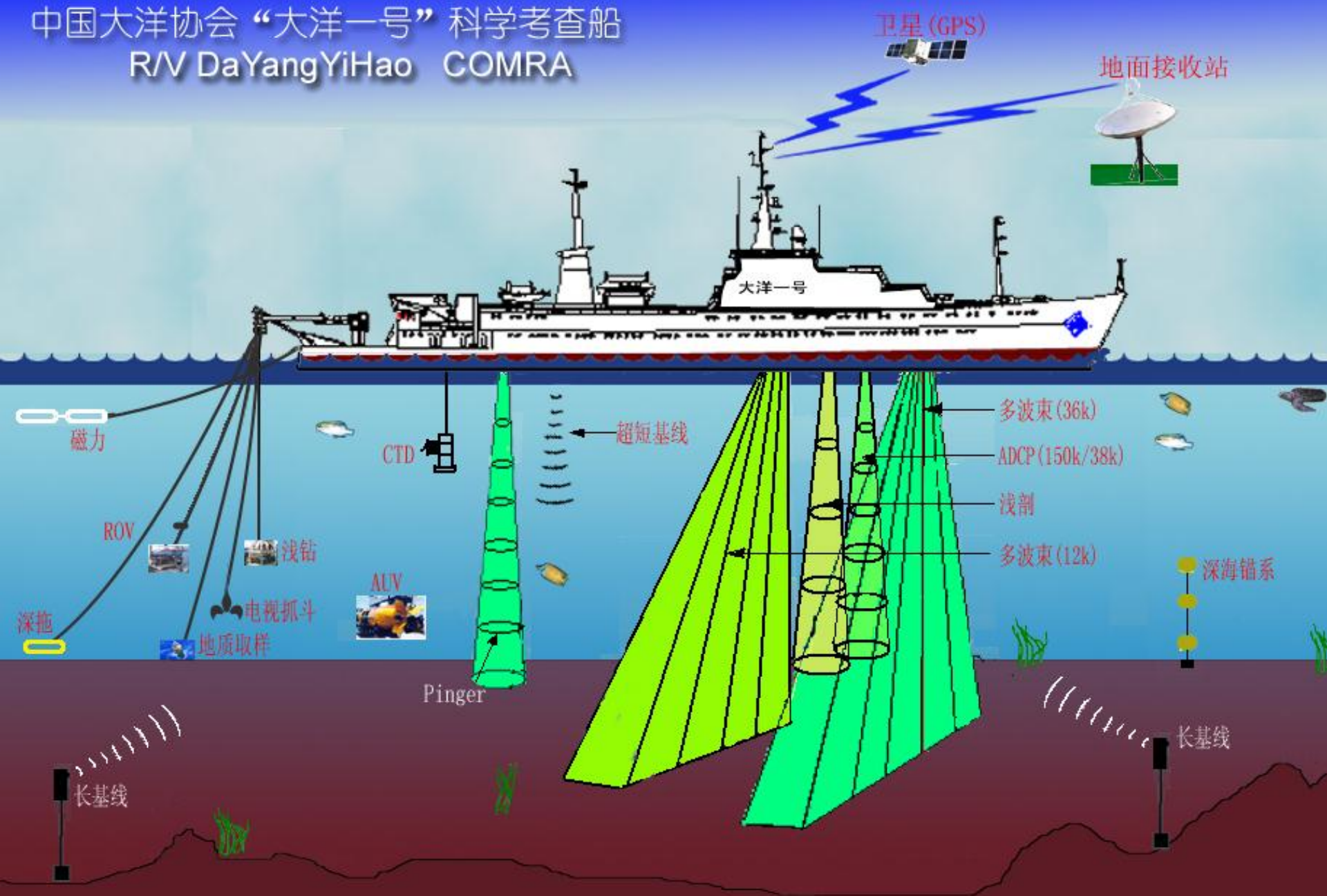


# R/V Dayang Yihao



# 中国大洋协会“大洋一号”科学考查船

## R/V DaYangYiHao COMRA



# Ming system



# Ming system



# **Extractive Metallurgy of polymetallic nodules**

- Pre-pilot tests of metallurgical processes;**
- Studies of the new metallurgical technologies for polymetallic nodules;**
- Comparison tests on metallurgical processing of polymetallic nodules;**
- The direct utilization of nodules;**
- Studies of the nodules' characteristics in the adsorption and degradation of organics in waste water.**

# Leaching facilities



# Configuration of solvent extractions



## VII. Conclusions



## VII. Conclusions

The uniform regime for the Area established by the Convention and the Agreement under the spirit of the principle of the common heritage of mankind has created a new era of peaceful utilization of the mineral resources on the seabed.

The making of the three sets of regulations for prospecting and exploration of the resources in the Area is a hard work but it has pushed forward the development of the regime. Within the framework of the regulations, altogether, 26 countries/entities have entered into contracts with the International Seabed Authority for prospecting and exploration of the resources in the Area, which is a significant contribution to the peaceful utilization of the resources in the Area for humankind as a whole.

## VII. Conclusions

China played a significant role in the establishment of the new regime of the resources exploration in the Area, in particularly in the making of the three regulations for prospecting and exploration of the resources in the Area in cooperation with developing countries.

With the progress of science and technology, other resources in the Area may be discovered in the future, and thus need to develop new prospecting and exploration regulations to further enrich and develop the regime of the international seabed—the Area. China and all developing countries will have broad prospects for cooperation in this field and to make even greater contribution to the development of the Regime.

# Sources

- United Nations Convention on the Law of the Sea 1982 and related annexes and resolutions;
- Agreement Relating to the Implementation of Part XI of the United Nations Convention on the Law of the Sea of 10 December 1982 and its annexes and appendix;
- United Nations Convention on the Law of the Sea 1982 ---A Commentary: Volume II, Volume III, Volume VI;
- Related documents issued by the International Seabed Authority;
- Website of the International Seabed Authority;
- Elisabeth Mann Borgese, Ocean Governance and the United Nations, 1995.



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