

Deep Seabed Mining



How can Life in the Deep Sea be Protected?

Symposium on
“Biodiversity and Genetic Resources of the Deep Sea”
IFLOS

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United Nations Convention on the Law of the Sea (UNCLOS)

- Comprehensive framework for the regulation of all ocean space
- Issues ruled on a geographical basis
- Specific legal regime to each maritime area

High Seas: all parts of the sea not included in zones under national jurisdiction (eez, ts, iw, aw)

■ Open to all States → Six Freedoms

■ Freedoms must be exercised with due regard

Conditions UNCLOS
Other rules IL
Interest other States
Rights granted to activities in the Area



The **AREA**: seabed and ocean floor and subsoil thereof, beyond the limits of national jurisdiction

- Definition contained in the first article of UNCLOS
- whole Convention
- Resolution 2749 (XXV) 1970: The Area and its resources are common heritage of mankind
- UNCLOS maintains the concept and develops these principles

■ High Seas → beyond national jurisdiction
= The Area

■ High Seas → geographic zone
≠ boundaries
The Area → legal status

Common heritage of mankind

19th Andrés Bello - Lapradelle - José León Suárez

1967 Arvid Pardo's proposal

1970 UNGA Resolution 2749 (XXV)

- The Area and its resources
- Neither sovereignty nor sovereign rights
- No appropriation
- Rights vested in mankind as a whole
- An international regime has to be established
- Peaceful utilization
- Preservation of the environment
- Scientific cooperation

Common heritage of mankind

1982 → UNCLOS

- MAINTAINS this concept
- PROVIDES one international regime
- CREATES the ISA which shall act on behalf humankind
- DEFINES Resources FOR THE PURPOSES of the international mechanism

Art. 311 → Basic Principle: no amendments

1994 Agreement

Functions of the Authority

- Powers and functions expressly conferred by the Convention
- Not limited to Part XI and its Annexes but in other parts of UNCLOS
- Incidental powers: those implicit in and necessary for the exercise of its powers and functions with respect to activities in the Area
- Initiate studies and make recommendations for the purpose of (...) encouraging the progressive development of international law relating thereto and its codification

Part XI, Article 145

Environmental Protection in the Area

Necessary measures shall be taken in accordance with this Convention with respect to activities in the **Area** to ensure effective protection for the marine environment from harmful effects which may arise from such activities. To this end the **Authority** shall adopt appropriate rules, regulations and procedures for inter alia:

- a) The prevention, reduction and control of pollution and other hazards to the marine environment (...);
- b) The protection and conservation of the natural resources of the Area and the prevention of damage to **the flora and fauna** of the marine environment.

Derives from: Resolution 2749 (XXV) Paragraph 11

Part XI - Article 165

Legal and Technical Commission

...

1. Prepare assessments of the environmental implications of activities in the Area (d);
2. Formulate and submit to the Council the rules, regulations and procedures, taking into account all relevant factors including assessments of the environmental implications of activities in the Area (f).
3. Make recommendations to the Council
 - On the protection of the marine environment (e);
 - Regarding the establishment of a monitoring programme (h)
 - To issue emergency orders (k)
 - To disapprove areas for exploitation when risk of serious harm to the marine environment (l)

Instruments adopted by the Authority

Mandate: elaborate and adopt rules, regulations and procedures for exploration and exploitation

Protection and preservation marine environment

- 2000 –** Regulations for nodules
- 2001 – LTC –** Environmental Guidelines
- 2004 – 2006 -** Draft regulations for sulphides and crusts
- 2007 -** Draft regulations for polymetallic sulphides
Draft regulations for Cobalt ferromanganese crusts

Protection of Marine Environment in Nodule Regulations

Part V

- Periodic review of environmental rules
- Precautionary approach - Principle 15 of the Rio Declaration
- Role of LTC
- Best practicable means

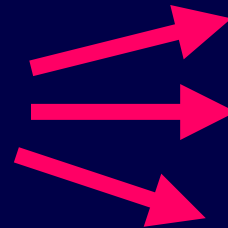
MONITORING

Establishment and implementation of programmes for monitoring and evaluating the potential impacts on the marine environment

Prospectors obligation to cooperate

Contractors, sponsoring States and other interested States or entities shall cooperate

Programmes
may include



Impact reference zones
Preservation reference zones
Environmental baselines

“Impact reference zones”: Areas to be used for assessing effect of activities in the Area on the marine environment and which are representative of the environmental characteristics of the Area.

“Preservation reference zones”: Areas in which no mining shall occur to ensure representative and stable biota of the seabed in order to assess any changes in the flora and fauna of the marine environment

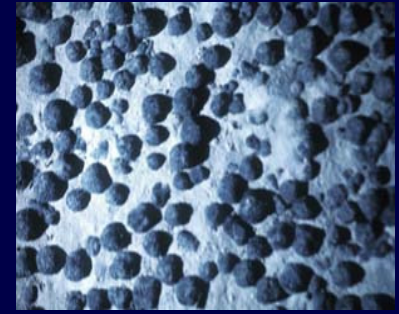
Mineral Resources

RESOURCES for the REGIME PART XI:

All solid, liquid or gaseous mineral resources
in situ in the Area at or beneath the seabed

- Polymetallic Nodules
- Cobalt-rich Crusts
- Polymetallic Sulphides
- Methane Hydrates

Each mineral host different living organisms
inextricably bound to them



The Area and Part XI

The Area regime does not limit itself to mineral exploration and exploitation, the field is broader:

- environmental protection
- marine scientific research
- objects of an archaeological and historical nature
- living resources

The geographical aspect prevails over other aspects.

MARINE SCIENTIFIC RESEARCH

- All States and International Organizations

- BUT \neq High Seas

For Peaceful Purposes

For Benefit of Mankind as a whole

- Not only related to exploration of minerals

- Role of the Authority

Objects of an archaeological and historical nature

- Objects of an archaeological and historical nature found in the Area shall be preserved or disposed of for the benefit of mankind as a whole.
- Preferential rights of the State or country of origin, or the State of cultural origin, or the State of historical or archaeological origin.
- They are not mineral resources.
- Legal effectiveness of the legal status of the space in which activities are taking place.

LIVING RESOURCES

- Fauna is scanty
- Extreme environment
- Minerals host living organisms
inextricable bound to them
- Different living resources in each mineral





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NATURE OF VENT ECOSYSTEM

- Fish and octopuses: share ecosystem but are independent
- Bacteria: come with hot and sulphidic water, cannot survive without it
- Worms, mussels, clams, shrimps: feed from the bacteria and need the warm and sulphidic fluid
- The last two can only live in symbiosis with the vent

**1968-73: Committee on Peaceful Uses
1973-82: III UN Conference LOS**

**Some delegations: seabed resources should be
the same as those of the continental shelf**

**Lack of knowledge about any species at
a substantial depth**

**Important influence of minerals
on importers and exporters**

**Attempt to include living resources
of the water column**

**NO attempt to assimilate sedentary species
to high seas regime**

Chronology

1976 → 4th Session → Definition of Resources for the purposes of Part XI

1977 → Hydrothermal vents were discovered

Living resources of the seabed and subsoil

- **1953 ILC: sedentary species should not be excluded continental shelf regime**
- **1958 Begins the duality of legal regime for living resources whether they are in constant contact with the seabed or subsoil or have the water column as their habitat**
- **Continental shelf beyond 200M**
 - **living resources in constant contact with the seabed are sedentary species – expressly defined**
 - **superjacent waters → high seas**

Living resources of the seabed and subsoil (cont.)

■ The Area

- living resources in constant contact with the seabed and subsoil
- Not expressly defined
- superjacent waters → high seas

■ Do living resources of the seabed and subsoil have a different regime than those which live in the water column?

Mining Activities vs / and Protection of Living Resources of the Area

- Genetic resources of Deep Seabed → fragile
- Protection of living resources not apart from the activities related to mineral resources in the same zone
- UNCLOS → No specific provisions on legal status
- Omission ≠ High Seas legal regime
- Are they completely unregulated?

The protection of genetic resources of deep seabed is contemplated in art. 145

- ✓ ISA must stress the implementation art. 145, specially with regard living resources associated with minerals.
- ✓ ISA must have a more active role in marine scientific research in the Area and take care that the research in the Area is really being done for the benefit of mankind as a Whole.
- ✓ ISA must cooperate with other competent organisms (LOS) in the consideration of the regime that has to be established for the management and protection of the living resources of the Area.

It is urgent to develop, under the Law of the Sea, the legal framework of the living resources of the Area, taking into account their particular characteristics and the geographical space to which they are confined.