

# THE INTERNATIONAL LEGAL FRAMEWORK FOR DEEP SEA MINING: A PRIMER

In a radical departure from the tradition of open access and freedom of the high seas, the 1982 United Nations Convention on the Law of the Sea (UNCLOS) declared the seabed area beyond national jurisdiction (the Area) and its mineral resources as the “common heritage of mankind”, to be administered for the benefit of mankind as a whole. All mineral exploration and exploitation activities must be sponsored by a State Party to UNCLOS and approved by the International Seabed Authority (the Authority). In its 20 years of existence, the Authority has adopted regulations and guidance for exploration activities; in 2013 it commenced the development of regulations to govern the future exploitation of seabed minerals, starting with polymetallic nodules.

## UN Convention on the Law of the Sea

UNCLOS in Part XI, together with its 1994 Implementation Agreement relating to Part XI, sets forth the international legal framework for activities related to deep seabed mining and marine scientific research in the Area. The guiding principle of the common heritage of mankind is manifested in many ways: 1) all rights in the resources of the Area are vested in mankind as a whole; 2) no State or natural or juridical persons can claim, acquire or exercise rights in connection to resources in the Area except in accordance with Part XI; 3) all mining and any minerals recovered may only be alienated in accordance with UNCLOS and the rules adopted by the Authority; 4) States are required to ensure that they exercise “effective control” over any activities by their state enterprises and other natural or juridical persons they sponsor; 5) activities in the Area, including marine scientific research, are to be carried out for the benefit of mankind as a whole; and 5) financial and other economic benefits from seabed mining are subject to equitable sharing under rules to be developed by the Authority (UNCLOS articles 133-143).

UNCLOS requires that necessary measures shall be taken to ensure effective protection for the marine environment from harmful effects which may arise from mining-related activities. The Authority is to adopt appropriate rules, regulations and procedures for inter alia: 1) the prevention, reduction and control of pollution and other hazards to the marine environment, and 2) 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 (UNCLOS article 145).

UNCLOS in Part XII requires national rules for pollution from seabed activities in the Area as well as within national jurisdiction to be no less effective than international rules, standards and recommended practices and procedures (UNCLOS articles 208-209). Additionally, all States share a common obligation to protect and preserve the marine environment, including rare or fragile ecosystems as well as the habitat of depleted, threatened or endangered species and other forms of marine life (UNCLOS articles 192 & 194.5).



*The Liliput hydrothermal vent field, Mid-Atlantic Ridge. Image courtesy ROV Kiel600, GEOMAR.*

## Institutions

The main organs for the Authority are the Assembly, the Council, the Legal and Technical Commission (LTC), the Finance Committee and the Secretariat. The Assembly consists of all member States and elects officers (Chairs, Secretary-General etc) and sets the general policies for the Authority. The Council consists of 36 member States which are elected by the Assembly based on varying economic interests and geographic representation. The Council acts as the executive organ and discusses substantive matters. The LTC reviews inter alia applications for approval of a plan of activities in the Area, supervises the contractors and drafts rules and regulations for submission to the Council.

## Regulation of exploration activities for deep sea minerals in the Area

Regulations and recommendations adopted by the Authority to govern exploration for deep sea minerals in the Area include:

- Regulations on Prospecting and Exploration for Polymetallic Nodules in the Area, as amended in 2013 and 2014
- Regulations on Prospecting and Exploration for Polymetallic Sulphides in the Area, 2010, as amended in 2013 and 2014
- Regulations on Prospecting and Exploration for Cobalt-rich Ferromanganese Crusts in the Area, 2012, as amended in 2013
- Environmental Management Plan for the Clarion-Clipperton Zone, 2011 and 2012
- Recommendations for the guidance of contractors for the assessment of the possible environmental impacts arising from exploration for marine minerals in the Area, as amended in 2013.



Exploration regulations already developed for the three mineral types in the Area (polymetallic nodules, polymetallic sulphides, cobalt-rich ferromanganese crusts) require State Parties to apply to the Authority for approval of plans of work before they can receive a 15-year exclusive right to explore a specific area. The applicant must demonstrate that it is financially and technically capable of fulfilling its obligations. It must also submit for approval a proposed exploration programme, including oceanographic and environmental baseline studies to enable an assessment of potential environmental impacts. The regulations specifically provide that if activities would have serious harmful effects on vulnerable marine ecosystems, including hydrothermal vents, seamounts and cold water corals, such activities are to be managed to prevent such

effects or not authorised to proceed. Contractors are expected to apply the precautionary approach and “best environmental practices” to prevent or control pollution and other hazards to the marine environment and to cooperate with the Authority in developing programs for the monitoring and evaluation of impacts.

## Responsibilities and obligations of sponsoring States

The legal requirements of States sponsoring mining entities under UNCLOS were further explained through a special advisory opinion of the Seabed Disputes Chamber of the International Tribunal for the Law of the Sea in 2011. The Chamber advised that sponsoring States were required to exercise a high degree of “due diligence” to ensure that an entity they sponsor - including natural and juridical persons - complied with UNCLOS and the regulations adopted by the Authority.

In defining what is meant by “due diligence”, the Chamber determined that a State is obliged to adopt and enforce laws, regulations and administrative measures at all times that it is acting as a sponsor of an entity. Such measures must be at least as stringent as those adopted by the Authority and no less effective than any other relevant international rules, regulations and procedures for environmental protection. Those rules and standards must give effect to: 1) the precautionary approach based on Principle 15 of the Rio Declaration, requiring actions where scientific evidence is insufficient but “where there are plausible indications of potential risk”; 2) best environmental practices (i.e., more than just best available technology); 3) technical and financial guarantees by a contractor; 4) requirements to provide recourse for compensation; and 5) the obligation to conduct an environmental impact assessment. To prevent the rise of “sponsoring States of convenience” with varying regulatory requirements, the Chamber ruled that the due diligence obligation was the same for both developed and developing States.

Most States may find it necessary to introduce new laws, administrative procedures and resources to provide the requisite rules, regulations and procedures. Otherwise, according to the Chamber, they may be held liable for damage (including to the marine environment) caused by their failure to exercise due diligence.

*Seabed Disputes Chamber of the Int'l Trib. for the Law of the Sea, Responsibilities and Obligations of States Sponsoring Persons and Entities with Respect to Activities in the Area (Feb. 1, 2011), available at [http://www.itlos.org/fileadmin/itlos/documents/cases/case\\_no\\_17/17\\_adv\\_op\\_010211\\_en.pdf](http://www.itlos.org/fileadmin/itlos/documents/cases/case_no_17/17_adv_op_010211_en.pdf)*

